

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
AGROCHEMICAL AND PEST MANAGEMENT
Analysis of Agrochemicals (MSC26312)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- 1) In Paper chromatography paper acts as _____ phase.
 - a) solid
 - b) liquid
 - c) stationary
 - d) support
- 2) HPLC is used in _____.
 - a) pharmaceutical chemistry
 - b) biochemical analysis
 - c) chemical analysis
 - d) All of these
- 3) Sulphur dioxide is analysed by _____ method.
 - a) IR
 - b) GC
 - c) Polarography
 - d) Spectrophotometry
- 4) Electron donating groups often _____ fluorescence.
 - a) Enhance
 - b) decrease
 - c) quenching
 - d) Remains same
- 5) In acetone _____ set of proton are observed.
 - a) one
 - b) two
 - c) three
 - d) six
- 6) The R_f value depend upon _____.
 - a) solvent system
 - b) temperature
 - c) size of vessel
 - d) All of these
- 7) The intensity of fluorescence depend upon _____ of solution.
 - a) volume
 - b) pressure
 - c) concentration
 - d) polarity
- 8) Due to hydrogen bonding the IR absorption band becomes _____.
 - a) sharp
 - b) weak
 - c) broad
 - d) narrow
- 9) The absorption of radio frequency radiation by organic molecule is accompanied by _____.
 - a) electronic level change
 - b) vibrational level change
 - c) nuclear spin change
 - d) molecular weight change
- 10) The method of separation of volatile substance by using gas as a mobile phase is called _____.
 - a) IR
 - b) GC
 - c) NMR
 - d) Mass

- B) Fill in the blanks.** **06**
- 1) The Rf value is always _____.
 - 2) The wavelength range for UV region of the electromagnetic radiation is _____.
 - 3) When λ_{max} value of certain molecule shift towards longer wavelength region, then this phenomenon is known as _____.
 - 4) Gas chromatography is used for separation of _____.
 - 5) _____ transition is more energetic.
 - 6) The carbonyl stretching frequency in ketone is _____ cm^{-1} .

- Q.2 Answer the following** **16**
- a) Define wavelength, frequency and wave number. Give units of each.
 - b) Distinguish between fluorescence and phosphorescence.
 - c) Describe vibrational modes in UV spectroscopy.
 - d) Describe the methods used for evaluation of polarographic waves.

- Q.3 Answer the following.**
- a) Describe the principle, theory and application of GC. **08**
 - b) Explain different types of electronic transitions. **08**

- Q.4 Answer the following.**
- a) What is radioactivity? What are radioisotopes? Give applications of radioisotopes in agriculture. **08**
 - b) Give principle, instrumentation and application of TLC. **08**

- Q.5 Answer the following.**
- a) Write note on types of vibration. **08**
 - b) Give schematic diagram of NMR spectroscopy. Write note on TMS. **08**

- Q.6 Answer the following.**
- a) Give basic principle, methodology and application of fluorescence. **08**
 - b) Draw schematic diagram of mass spectroscopy. Give applications of mass spectroscopy. **08**

- Q.7 Answer the following.**
- a) Give principle, instrumentation and application of HPLC. **08**
 - b) Give principle, instrumentation and application of paper chromatography. **08**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
APPLIED GEOLOGY
Research Methodology (MSC019310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- 1) The essential qualities of a researcher are _____.
 - a) Spirit of free enquiry
 - b) Reliance on observation and evidence
 - c) Systematization or theorizing of knowledge
 - d) All the above
- 2) A research paper is a brief report of research work based on _____.
 - a) Primary Data only
 - b) Secondary Data only
 - c) Both Primary and Secondary Data
 - d) None of the above
- 3) What is Bibliometry?
 - a) Function of Library Network
 - b) Information Management Service
 - c) Information Management Tool
 - d) Library Service
- 4) Article published in research journal are _____.
 - a) Primary sources
 - b) Secondary sources
 - c) Reference sources
 - d) Tertiary sources
- 5) Reference sources are those.
 - a) Which are large in size?
 - b) Which are read at home easily?
 - c) Which used to obtain particular information?
 - d) Which are costly?
- 6) What is the meaning of E-Documents?
 - a) All Documents other than printed
 - b) Non-Paper documents
 - c) . Audio visual tools
 - d) In electronic form such as Cassettes, CD-ROMs, etc
- 7) How many digits have in the ISSN _____.
 - a) 10
 - b) 8
 - c) 13
 - d) 15
- 8) MS-Word is an example of _____.
 - a) An operating system
 - b) A processing device
 - c) Application software
 - d) An input device

- 9) 'Find' command is in which menu?
a) Edit b) View
c) File d) Tools
- 10) _____ will help in finding out a problem for research.
a) Professor b) Tutor
c) HOD d) Guide

B) Fill in the blanks OR Write True/False: 06

- 1) Google is a search engine. (True/false)
2) Case study is type of qualitative research? (True/false)
3) HTTP is a markup language. (True/False)
4) CTRL+ P is Shortcut key to Open a _____ command is MS-Word?
5) _____ is main part of experimental research.
6) The glossary is the list of _____.

Q.2 Answer the following 16

- a) calculation of Impact factor
b) Patent filling
c) Google
d) research problem.

Q.3 Answer the following. 08

- a) Write a full note on MS-word. 08
b) Give a full account on planning of experiment. 08

Q.4 Answer the following. 08

- a) Discuss ISSN and ISBN number. 08
b) What is plagiarism. Discuss most common types of plagiarism. 08

Q.5 Answer the following. 08

- a) Discuss how to present research outcome as a research paper. 08
b) Write full note on results and discussion 08

Q.6 Answer the following. 08

- a) What is internet. Explain various services provided by internet. 08
b) What is meant by data collection? Give different methods of data collection. 08

Q.7 Answer the following. 08

- a) Discuss objectives of research. 08
b) Discuss in detail abstract writing. 08

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: oct/Nov-2023
PHYSICS (APPLIED ELECTRONICS)
Communication & Digital Electronics (MSC5310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions. 10

- 1) What should be the value of modulation index for under modulation?
 - a) <1
 - b) 0
 - c) >1
 - d) Infinity
- 2) Which is called as on-off keying?
 - a) Amplitude shift
 - b) PAM
 - c) Frequency shift keying
 - d) None of the mentioned
- 3) Time division duplexing uses _____ to provide both a forward and reverse link.
 - a) Frequency
 - b) Time
 - c) Time and frequency
 - d) Cell spacing
- 4) The main function of a communications satellite is as _____.
 - a) Repeater
 - b) Reflector
 - c) Beacon
 - d) Observation platform
- 5) What is the full form of CDMA _____?
 - a) Code division multiple access
 - b) Code Dividend much access
 - c) Check diode multiple access
 - d) None of these
- 6) Which of the following are not used in mobile communication?
 - a) Wires
 - b) Cables
 - c) Wired antenna
 - d) All the above
- 7) Which number system has a base 16 _____.
 - a) Hexadecimal
 - b) Octal
 - c) Binary
 - d) Decimal
- 8) 1's complement of 1011001 is _____.
 - a) 0100111
 - b) 0101100
 - c) 0100110
 - d) 0110110
- 9) DeMorgan's theorem states that _____.
 - a) $(AB)' = A' + B'$
 - b) $(A + B)' = A' * B'$
 - c) $A' + B' = A'B'$
 - d) $(AB)' = A' + B$
- 10) The logical sum of two or more logical product terms is called _____.
 - a) SOP
 - b) POS
 - c) OR operation
 - d) NAND operation

- B) State true or false.** **06**
- 1) 1G supports analog type of mobile communication.
 - 2) An orbit that is 36,000 km away from the geocenter of the earth is called Geosynchronous orbit.
 - 3) FDMA allocates a single time per frame to different users.
 - 4) According to boolean law: $A + 1 = A$.
 - 5) GSM belongs to 2G technology.
 - 6) Frequency reuse is the process of using the same radio frequencies on radio transmitter sites within a geographic area.

- Q.2 Answer the following** **16**
- a) Describe satellite communication.
 - b) Explain Hand-off mechanism with it's types.
 - c) Write a note on PAM.
 - d) State and Explain sampling theorem.

- Q.3 Answer the following.**
- a) What is QPSK? With a neat block diagram, explain its modulator and demodulator. **10**
 - b) Explain modulation index with its different cases: **06**
 - 1) Under modulation
 - 2) Over modulation
 - 3) Perfect modulation

- Q.4 Answer the following.**
- a) Explain the following generations of communication system: **10**
 - 1) 2nd generation
 - 2) 3rd generation
 - b) Describe briefly cellular concept. **06**

- Q.5 Answer the following.**
- a) Explain the following with its advantages and disadvantages: **10**
 - 1) TDM
 - 2) FDM
 - b) Briefly describe Bluetooth with its different architecture. **06**

- Q.6 Answer the following.**
- a) Explain in detail binary to decimal and decimal to binary conversion. Find the decimal value of 111001. **10**
 - b) Explain Boolean operators. **06**

- Q.7 Answer the following.**
- a) What is logic gate? Explain different gate with its classification. **10**
 - b) Explain canonical and standard form. **06**

- B) Write true/false. 06**
- 1) Plus and minus sequencing is the other name for Sanger sequencing.
a) True b) False
 - 2) The function of urea in the sequencing gels is to promote adherence.
a) True b) False
 - 3) If a gene is large, it may be cut more than once by an endonuclease.
a) True b) False
 - 4) When the process is fully automated, a number of priming sites may be used to obtain sequencing results that give optimal separation of bands in each region of the sequence.
a) True b) False
 - 5) Once the correct map has been obtained, unique overlapping clones are chosen for sequencing.
a) True b) False
 - 6) Southern blotting cannot be used for RNA molecules.
a) True b) False

- Q.2 Answer the following. 16**
- a) Explain what is meant by genome sequencing primers and mention how it is designed
 - b) What is polymerase chain reaction and mention its applications
 - c) Write a note on the amplification of DNA
 - d) Write a note on autoradiography

- Q.3 Answer the following.**
- a) Mention different methods of protein sequencing **08**
 - b) Explain the application of protein sequencing **08**

- Q.4 Answer the following.**
- a) What is PCR and explain its types **08**
 - b) What is Sanger sequencing mention its applications **08**

- Q.5 Answer the following.**
- a) What is meant by the cDNA library **08**
 - b) Explain the genomic library and mention the shotgun sequencing **08**

- Q.6 Answer the following.**
- a) Write a short note on DNA fingerprinting **08**
 - b) Restriction fragment length polymorphism (RFLP) **08**

- Q.7 Answer the following.**
- a) Explain the term RFLP, SNP, SSLP **08**
 - b) Elaborate on the northern blotting technique **08**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
BIOSTATISTICS
Applied Statistics (MSC16308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.
 4) Use of calculator is allowed.

Q.1 A) Multiple choice questions.

10

- 1) Selection of Indian Cricket team for World cup is _____ sampling.
 - a) random
 - b) systematic
 - c) stratified
 - d) none of these
- 2) Non-sampling error can be reduced by _____.
 - a) increasing the sample size
 - b) decreasing the sample size
 - c) reducing amount of data
 - d) none of these
- 3) Laspeyre's index formula uses weights of the _____.
 - a) base year
 - b) current year
 - c) average of the weights of a number of years
 - d) none of these
- 4) The condition for the time reversal test to hold good with usual notations is _____.
 - a) $P_{01} \times P_{10} = 1$
 - b) $P_{10} \times P_{01} = 0$
 - c) $P_{01}/P_{10} = 1$
 - d) $P_{01} + P_{10} = 1$
- 5) Fertility rates mainly depends on _____.
 - a) total female population
 - b) total population
 - c) female population in child bearing age
 - d) number of newly born babies
- 6) The value of $NRR > 1$ indicative of _____.
 - a) increase in population
 - b) reduction in population
 - c) constancy in population
 - d) all the above
- 7) Assignable causes are _____.
 - a) not as important as natural causes
 - b) within the limits of control chart
 - c) also referred to as chance causes
 - d) causes of variation that can be identified and removed
- 8) The control limits of the p chart are based on the assumption that the number of defective items follows _____ distribution.
 - a) normal
 - b) binomial
 - c) poisson
 - d) geometric

- 9) Irregular variation in time series are caused by _____.
 a) lockout and strike b) epidemics
 c) floods d) all the above
- 10) A border check post stops every passenger van. The procedure adopted is _____.
 a) random sampling b) purposive sampling
 c) complete enumeration d) systematic sampling

B) Fill in the blanks:

06

- 1) Stratified sampling is preferred when the population is _____.
 2) Fisher's price index number is _____ mean of Laspeyre's price index and Paasche's price index.
 3) _____ fertility rate is generally used to measure the fertility between two towns.
 4) The variation due to _____ causes cannot be identified and removed from the process.
 5) Increasing in population of India represents _____ component of time series.
 6) If sample size increases, the sampling error will _____.

Q.2 Answer the following

16

- a) Describe a procedure for obtaining a sample of size n from a population of size N using SRSWOR method.
 b) What is base shifting? When one come across the problem of base shifting and how can it be tackled?
 c) During a examination of equal length of cloth, the following are the number of defects observed: 2, 3, 4, 0, 5, 6, 7, 4, 3, 2. Compute the control limits of the C chart.
 d) Explain with illustration seasonal variation in the context of time series.

Q.3 Answer the following.

- a) Explain sampling method and census method. Give advantages of sampling method over census method. **08**
 b) What is stratified sampling? Explain the problem of allocating the sample size in stratified random sampling. **08**

Q.4 Answer the following.

- a) Explain the need of index numbers? What are the problems in construction of index numbers? **08**
 b) From the following data compute price index number by **08**
 (i) Simple aggregate method
 (ii) Average of price relative method using arithmetic mean.

Commodities	A	B	C	D	E	F
Price in 1995 (Rs)	40	60	20	50	80	100
Price in 1990 (Rs)	50	60	30	70	90	120

Q.5 Answer the following.

- a) Explain the meaning of the following rates in vital statistics and discuss their importance. **08**
- i) Crude death rate
 - ii) Crude birth rate
 - iii) General fertility rate.
- b) Compute CDR and STDR for the population A and population B from following data and compare them. Use direct method of standardization taking population B as standard. **08**

Age Group	Population A		Population B	
	No. of Persons	No of Deaths	No. of persons	No of Deaths
0-10	600	18	400	16
10-20	1000	5	1500	6
20-60	3000	24	2400	24
60-100	400	20	700	21

Q.6 Answer the following.

- a) What is control chart? Explain how it helps to control the quality of manufactured product. **08**
- b) Twenty subgroup samples of each of size 5 are taken from a manufacturing process and certain quality characteristic is measured. The sample mean (\bar{X}) and sample range (R) for each subgroup are computed. After 20 subgroups, $\Sigma \bar{X} = 0.87632$ cms and $\Sigma R = 0.2410$ cms. Compute the control limits of \bar{X} chart and R chart. Given for $n = 5$, $A_2 = 0.58$, $D_3 = 0$ and $D_4 = 2.11$. **08**

Q.7 Answer the following.

- a) Define time series. Describe the moving average method for determining the trend. **08**
- b) Find out the trend values of the following time series assuming three yearly cycle. **08**

Year	1963	64	65	66	67	68	69	70	71	1972
Value	20	24	22	25	28	30	33	30	36	37

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
BIOTECHNOLOGY
Advanced Pharmaceuticals (MSC33311)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions. 10

- 1) Polyethylene is an example for _____.
 a) Block polymer b) Co-polymer
 c) Graft Polymer d) Photopolymer
- 2) Hydroxypropyl methyl cellulose (HPMC) possesses one of the following.
 a) Amphiphilic ion b) Anionic
 c) Cationic d) Non-Ionic
- 3) The mass transfer of solid in to liquid this process is called as _____.
 a) Drug Dissolution b) Drug Diffusion
 c) Drug Absorption d) Drug Excretion
- 4) Flocculated suspension exhibits the flow of a type:
 a) Dilatant b) Newtonian
 c) Plastic d) Pseudoplastic
- 5) Cool Place temperature is in between
 a) 10°C to 20°C b) 8°C to 25°C
 c) 30°C to 40°C d) 2°C to 8°C
- 6) One micrometre is equal to:
 a) 10⁻⁶ centimetre b) 10⁻³ centimetre
 c) 10⁻⁶ meter d) 10⁻³ meter
- 7) Which one of these distributions is more important in the design of dosage forms?
 a) Gaussian b) Normal
 c) Number d) Weight
- 8) Andreasen apparatus consists of:
 a) Balance b) Electrodes
 c) Hydrometer d) Pipette
- 9) Which of the following is example of Ampholytic surfactant?
 a) Alkyl Sulphate b) Cetrimide
 c) Lecithin d) Sorbitan
- 10) The concentration at which micelle formation occurs is termed as _____.
 a) Kraft Point b) Cloud Point
 c) Isoelectric point d) CMC

- B) Fill in the blanks OR Write true/false. 06**
- 1) Greater the surface area lesser is the dissolution.
a) True b) False
 - 2) Particle Size can be determined by coulter-counter method.
 - 3) Flocculated suspension exhibits the Pseudoplastic flow.
a) True b) False
 - 4) Cetrimide is cationic surfactant.
a) True b) False
 - 5) Coulter counter is used for determination of surface tension.
a) True b) False
 - 6) Amphiphilic surfactants in water lead to aggregation.
a) True b) False

- Q.2 Answer the following 16**
- a) Discuss in detail physicochemical properties of drugs.
 - b) Define Dissolution of drug. Give its Mechanism.
 - c) Elaborate the different factors affecting on Critical Micelle Concentration (CMC)
 - d) What are the Applications of polymers?

- Q.3 Answer the following. 16**
- a) Explain in detail methods used for determination of particle size and its distribution.
 - b) Discuss in detail characterization of granules and compacts.

- Q.4 Answer the following. 16**
- a) Define Critical Micelle Concentration (CMC). Give its mechanism.
 - b) Define Solubility of Drug. Discuss in detail mechanism of Solubilization in Non-Aqueous system.

- Q.5 Answer the following. 16**
- a) Define Polymer. Give its classification in details.
 - b) Give the importance of particle size of drug in pharmaceuticals.

- Q.6 Answer the following. 16**
- a) Write Note on Cyclodextrin inclusion Complexes and Co-Solvents.
 - b) Explain in detail thermodynamics of polymer solutions.

- Q.7 Answer the following. 16**
- a) What do you mean by self-life of drug? Explain in detail Stability testing of Solid dosage forms.
 - b) What are the different methods for enhancement of drug dissolution?

Seat No.	
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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
BIOTECHNOLOGY**

Computational Structure Biology and Drug Designing (MSC33310)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below 10

- 1) _____ is a Pathway database.
 - a) NCBI
 - b) ENA
 - c) Biocarta
 - d) PDB
- 2) _____ tool is used to predict the active site residues in proteins.
 - a) RAS
 - b) CSA
 - c) CAS
 - d) ASR
- 3) PSSM stands for _____.
 - a) position-specific scoring Molecule
 - b) position-specific sequence matrix
 - c) position-specific sequence modifications
 - d) position-specific scoring matrix
- 4) Chou-Fasman method is used to predict _____ protein structures.
 - a) Primary
 - b) Secondary
 - c) Tertiary
 - d) Quaternary
- 5) Ramachandran plot shows the statistical distribution of the combinations of _____ angles.
 - a) Phi & Psi
 - b) Alpha & Beta
 - c) Alpha & Omega
 - d) Beta and Theta
- 6) In homology modeling _____ steps carry out energy minimization of the protein structure.
 - a) Target template alignment
 - b) model building
 - c) Loop Modeling
 - d) Model optimization
- 7) _____ is *in vivo* technique useful in detecting DNA-Protein Interactions.
 - a) electrophoretic mobility shift assay
 - b) DPI-ELISA
 - c) X-ray
 - d) Yeast one-hybrid System
- 8) Carbohydrate recognition domains are found in _____.
 - a) DNA
 - b) Protein
 - c) Carbohydrates
 - d) Lipid

- 9) Relationships between chemical structure and property can be predicted by _____.
 a) QSPR b) QSAR
 c) QSTR d) QSBR
- 10) Lipinski's rule of five states that the hydrogen bond donor must be _____.
 a) >5 b) <10
 c) <5 d) <8

B) Fill in the blanks.**06**

- 1) Procheck is used to predict _____.
- 2) MINT is a database of _____.
- 3) Garnier Osguthorpe- Robson method is used to predict _____.
- 4) TMHMM 2.0 is used to predict _____.
- 5) Drugs are approved by _____.
- 6) what the body does to a drug is known as _____.

Q.2 Answer the following.**16**

- a) Write a note on architectures and topologies of protein.
- b) Give an account on transmembrane helices and its Importance in vaccine design.
- c) Describe protein- Lipid interaction in detail.
- d) Describe Pharmacophore in detail.

Q.3 Answer the following.**16**

- a) Give a detailed account on Human Pathway Database.
- b) Describe the PDBe resources.

Q.4 Answer the following.**16**

- a) Explain in detail the protein folding classes.
- b) Describe in details Neural network method.

Q.5 Answer the following.**16**

- a) Describe molecular visualization softwares.
- b) Explain RNA structure prediction methods.

Q.6 Answer the following.**16**

- a) Explain in detail protein-protein interaction databases.
- b) Write a note on protein-carbohydrate interaction.

Q.7 Answer the following.**16**

- a) Explain in detail steps of *in-silico* drug discovery process.
- b) Write a note on protein-ligand docking steps using AUTODOCK.

Seat
No.**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023**
BOTANY**Plant growth and Development (MSC24314)**Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7.
3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.**10**

- 1) Metabolic precursor for the synthesis of ethylene is _____.
a) citric acid b) α -ketoglutaric acid
c) succinic acid d) methionine
- 2) Jasmonate plays role in _____.
a) inhibition of growth of plants
b) enhancement of growth of plants
c) root initiation
d) breaking of seed dormancy
- 3) CCC is inhibitor of _____.
a) GA biosynthesis b) auxin biosynthesis
c) kinetin biosynthesis d) none of the above
- 4) _____ has become an important research tool for plant molecular biologists in recent years.
a) *Arabidopsis thaliana* b) *Brassica napus*
c) *Solanum tuberosum* d) *Xanthium species*
- 5) Ripening of fruits can be fastened by treatment of _____.
a) GA b) Cytokinin
c) Ethylene d) Auxin
- 6) _____ ion play an important role in pollen tube growth.
a) Calcium b) Zinc
c) Nickel d) Phosphorus
- 7) Polyamines are synthesized from amino acids _____ and _____.
a) lysine and arginine b) glycine and serine
c) alanine and aspartate d) none of these
- 8) _____ is a climacteric fruit.
a) Banana b) Apple
c) Mango d) all of these
- 9) The term phytochrome was introduced by _____.
a) Borthwick b) Borthwick and Hendricks
c) Moore d) Garner and Allard
- 10) Programed cell death is scientifically known as _____.
a) Automy b) cell lysis
c) apoptosis d) none of these

B) True or False.**06**

- 1) Gibberlic acid is a fruit ripening hormone.
- 2) During senescence Expression of senescence associated genes (SAGs) increases.
- 3) Brassinosteroids are biosynthesized in plants from campesterol.
- 4) Plant growth retardants prevent gibberellins promoted plant growth.
- 5) Type II type of phytochrome is predominates in etiolated seedlings.
- 6) Cocklebur is a long day plant.

Q.2 Answer the following**16**

- a) Give role of mutant in plant physiology
- b) Metabolism of stored seeds
- c) Write a note on Climacteric fruits.
- d) Paclobutrazol

Q.3 Answer the following.**16**

- a) Explain in brief discovery and role of Brassinosteroids.
- b) Give an account of discovery, properties and role of phytochrome in plants

Q.4 Answer the following.**16**

- a) Describe in brief polyamines.
- b) Describe in brief secondary messengers.

Q.5 Answer the following.**16**

- a) Describe the biochemical changes seen during leaf senescence.
- b) Explain in brief discovery and mechanism action of salicylic acid.

Q.6 Answer the following.**16**

- a) Explain in brief ripening of fruit.
- b) What are Plant growth retardants? Explain role of any two growth retardants.

Q.7 Answer the following.**16**

- a) Explain signaling mechanism of Ethylene in plants.
- b) Describe the physiological and biochemical changes during seed germination.

Set
No.

M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
BOTANY

Herbal and Drug Technology (MSC24315)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Choose the correct alternative. 10

- 1) The word "Herb" is derived from _____
 - a) Herbarium
 - b) Herba
 - c) Herbaum
 - d) Harba
- 2) The first having the concept of Ayurveda is _____
 - a) Athurveda
 - b) Charka samhita
 - c) Shushruta samhita
 - d) Samveda
- 3) Moisturising gel is obtained from _____
 - a) *Aloe vera*
 - b) *Saraca indica*
 - c) *Acacia vistina*
 - d) *Zingiber officinale*
- 4) Holy basil (Tulsi) is a member of family _____
 - a) Lamiaceae
 - b) Asclepiadaceae
 - c) Umbelliferae
 - d) Mimosae
- 5) Identification test includes _____
 - a) Macroscopic character
 - b) Chemical reaction
 - c) Microscopic character
 - d) All of these
- 6) Which of the following characteristics is **NOT** of much importance in a screening test?
 - a) Low cost
 - b) High safety margin
 - c) High sensitivity
 - d) High specificity
- 7) At low speed _____ Crushing is obtained.
 - a) High
 - b) Low
 - c) Optimum
 - d) Total
- 8) Filtration is a unit operation that is commonly used for collecting _____
 - a) Filtrate
 - b) particulate matter
 - c) Precipitate
 - d) slurry
- 9) All are physical method of evaluation of drugs except _____
 - a) Stomatai index
 - b) Ash value
 - c) Extractive value
 - d) Viscosity
- 10) Chromatography involves two mutually _____
 - a) Immiscible phases
 - b) Miscible phases
 - c) Soluble phases
 - d) Insoluble phases

B) Fill in the blanks.**06**

- 1) Siddha system of medicine originates from _____
- 2) Powder made by calcification is also known as _____
- 3) While screening, the material which is left on the screen is called as _____
- 4) A centrifugal method is used for _____
- 5) Wagner test is used to detect the presence of _____
- 6) The process of separation of insoluble particles from suspension or slurry is called as _____

Q.2 Answer the following.**16**

- a) Define herb & explain drug preparation.
- b) What are the chemical constituents & uses of *Aloe vera*?
- c) Define screening & write a short note on its types.
- d) Define chromatography & explain thin layer chromatography.

Q.3 Answer the following.

- a) What are the good agricultural practices in cultivation of medicinal plants? **08**
- b) What are crushers and describe different types of crushers? **08**

Q.4 Answer the following.

- a) Define bio pesticides & explain pest management in medicinal plants. **08**
- b) What are the basic principles involved in Ayurveda & Homeopathy Indian system of medicines? **08**

Q.5 Answer the following.

- a) Explain morphology, systemic, useful parts, chemical constituents & uses of *ocimum sanctum*. **08**
- b) Write the preparation & standardization of Ghutika & churna. **08**

Q.6 Answer the following.

- a) What is filtration and add a note on types of filter? **08**
- b) Define chromatography & explain gas chromatography. **08**

Q.7 Answer the following.

- a) Define drug evaluation & what are the different methods of drug evaluation? **08**
- b) Define distillation & explain in brief fractional distillation. **08**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ORGANIC CHEMISTRY
Applied Organic Chemistry (MSC07310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

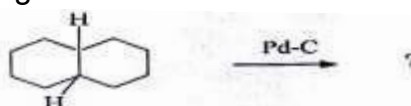
Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- Which of the following reaction is more atom economical?
 - Addition reaction
 - Rearrangement reaction
 - Elimination reaction
 - Both A & B
- _____ is a organic salt in the liquid state whose M.P. is below 100°C.
 - Ionic liquid
 - Coordinate liquid
 - DMS'O
 - Chloroform
- The term mutarotation is related to _____.
 - Interconversion of anomers
 - conversion of glucose to fructose
 - conversion of fructose to glucose
 - Chain lengthening
- _____ on hydrolysis give three moles of the same or different monosaccharides.
 - Disaccharides
 - Trisaccharide
 - Starch
 - Maltose
- Product of the following reaction is:

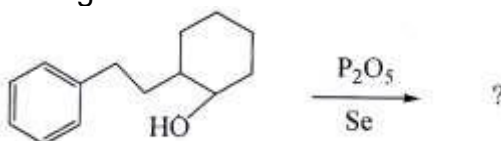


- -
 -
 -
- In polycyclic aromatic compounds aromatic rings should share _____.
 - at least one side
 - at least two side
 - all sides
 - None of these
 - According to _____ as the enzyme and substrate approach each other, the binding site of enzyme changes shape, resulting in a more precise fit.
 - Emil Fischer
 - Alfred Werner
 - Paul Ehrlich
 - Daniel Koshland
 - The fastest reacting substance get binded by host is the determining factor for _____.
 - macrocyclic effect
 - thermodynamic selectivity
 - solvent effect
 - kinetic selectivity

- 9) Two strands in DNA are held together by _____.
 a) Covalent bond b) Vander Waal's forces
 c) Hydrogen bond d) Electrostatic force of attraction
- 10) Valinomycin is a natural ionophore, acts as antibiotic and it coordinates with metal cation in a manner similar to that of _____.
 a) cyclodextrin b) calixarene
 c) crown ether d) spherand

B) Fill in the blanks.**06**

- 1) Cycloaddition or Pericyclic reactions have _____% atom economy.
 2) The principal sugar in blood is _____.
 3) _____ is defined as the extra preference for an axial orientation of an electronegative substituent at the anomeric carbon atom.
 4) Pyrene is a _____ Fused compound.
 5) Product of the following reaction is:



- 6) Host molecule possess _____ binding sites.

Q.2 Answer the following**16**

- a) What is mutarotation? Explain with suitable example.
 b) Write a note on classification of carbohydrate.
 c) Write note on Ultrasonic reactions
 d) Explain Microwave assisted reactions.

Q.3 Answer the following.**16**

- a) Explain the various basic principles of green chemistry.
 b) What are glycosides? Explain the conformations of Methyl α -D and Methyl β -D-glycosides

Q.4 Answer the following.**16**

- a) Explain the Fittig reaction and Ullmann diaryl Synthesis of Phenanthrene.
 b) What is molecular recognition? Explain the concept of complementarity.

Q.5 Answer the following.**16**

- a) Explain the concept of Preorganization and macrocyclic effect in supramolecular chemistry.
 b) Explain
 1) epimerization
 2) Anomeric effect

Q.6 Answer the following.**16**

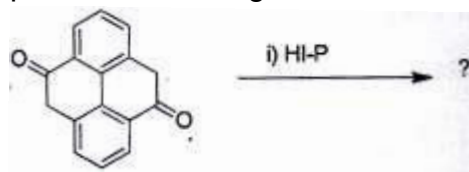
- a) What is Cyclodextrin? Write a note on structure, characteristics and applications of Cyclodextrin.
 b) Give one synthesis of each of the following
 1) Picene
 2) Chrysene
 3) Pyrene
 4) Perylene

Q.7 Answer the following.

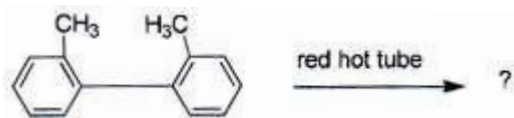
a) Write a note on applications of supramolecular chemistry.

b) Complete the following reactions

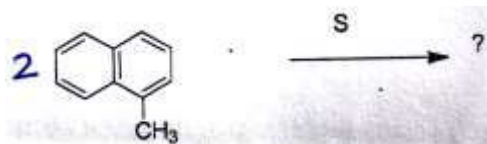
1)



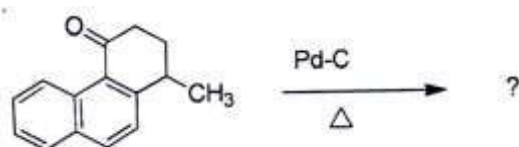
2)



3)



4)



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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ORGANIC CHEMISTRY
Biochemistry (MSC07311)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative. 10

- 1) 1- 4 glycosidic linkage is present in _____ sugars.
 - a) lactose & sucrose
 - b) maltose & fructose
 - c) maltose & sucrose
 - d) maltose & lactose
- 2) _____ compound is used for salting out of protein in purification method.
 - a) $(\text{NH}_4)_2\text{SO}_4$
 - b) NH_4Cl
 - c) NaCl
 - d) KCl
- 3)

$$6 \text{CO}_2 + 12 \text{H}_2\text{O} \xrightarrow{\quad ? \quad} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{H}_2\text{O} + 6\text{O}_2$$
 - a) Chlorophyll
 - b) sunlight and chlorophyll
 - c) Mitochondria
 - d) Sunlight
- 4) In nucleic acid _____ is not hydrolyzed rapidly under alkaline conditions.
 - a) DNA
 - b) RNA
 - c) DNA & RNA
 - d) None of these
- 5) According to Watson & Crick model, the strands of DNA should be _____.
 - a) Antiparallel
 - b) Parallel
 - c) Vertical
 - d) Horizontal
- 6) Plants use _____ to store water, cellular waste and help to maintain the Necessary turgor pressure in plant.
 - a) golgi body
 - b) vacuole
 - c) cell wall
 - d) lysosome
- 7) _____ is a more water soluble vitamin.
 - a) Vitamin E
 - b) Vitamin D
 - c) Vitamin C
 - d) Vitamin A
- 8) _____ are the types of Lipoprotein.
 - a) LDL
 - b) HDL
 - c) Waxes
 - d) both a & b
- 9) The biological functions of potassium metal ion is _____.
 - a) Charge carrier
 - b) osmotic balance
 - c) Hydrogenase
 - d) both a & b
- 10) _____ monosaccharide is the reference carbohydrate.
 - a) Maltose
 - b) Fructose
 - c) Glucose
 - d) Glyceraldehyde

- B) Fill in the blanks.** **06**
- 1) Proteins consist of unbranched chains of amino acids joined by _____ bond.
 - 2) Glucose and mannose are _____ of each other.
 - 3) A nucleotide has _____ characteristic components in their structure.
 - 4) HIO_4 oxidative cleavage involves the degradation of 1 eq. glucose in to _____ eq. of formic acid.
 - 5) High density lipoprotein are mostly synthesized in _____.
 - 6) All the amino acid have optical isomers except _____
- Q.2 Answer the following.** **16**
- a) Define Beta oxidation of fatty acids and write down the steps involved in Beta oxidation.
 - b) Define term isoelectric pH of amino acid and describe the physical properties of amino acid.
 - c) Define cell and give the detailed characteristic difference between eukaryotes and prokaryotes.
 - d) Explain why the alkaline hydrolysis in ribonucleotides is rapid but deoxyribonucleotides is not.
- Q.3 Answer the following.**
- a) Classify the carbohydrate and describe polysaccharides in details with examples. **08**
 - b) Define the monosaccharides with suitable examples and describe osazone formation with mechanism. **08**
- Q.4 Answer the following.**
- a) Write an overview on alpha helix and beta plated sheet structure of secondary proteins. **08**
 - b) Define protein. Explain in details the ion exchange chromatography and affinity chromatography for purification of protein. **08**
- Q.5 Answer the following.**
- a) Define nucleic acid and write any two chemical structures of deoxyribonucleotides. Explain how DNA stores the genetic information. **08**
 - b) Describe in details the A, B, and Z forms of DNA double helix structure with their comparison. **08**
- Q.6 Answer the following.**
- a) Define and classify the lipids. Write down the properties of triglycerols and function of lipids. **08**
 - b) Write detailed metabolism, biochemical function and dietary sources of vitamin D. **08**
- Q.7 Answer the following.**
- a) Write in details about Iron- Sulfur clusters. **08**
 - b) Explain the enzymes involved in mercury detoxification and write the metalloregulation of the mercury detoxification genes. **08**

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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
INDUSTRIAL CHEMISTRY

Advanced Topics in Industrial Chemistry-I (MSC06309)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and 2 are compulsory.
2) Attempt any three questions from Q.No.3 to Q.No.7.
3) Figure to right indicate full marks.

Q.1 A) Choose correct options**10**

- 1) The method used for the determination of nitrogen content in coal sample is _____.
 - a) Bomb calorimeter
 - b) total phosphorus method
 - c) Kjeldhal's method
 - d) Redwood method
- 2) Sodium tetraphenyl borate method is used for the determination of ____ fertilizer.
 - a) P
 - b) K
 - c) N
 - d) C
- 3) N, P and K comes under which category of plant nutrients?
 - a) non mineral nutrients
 - b) primary nutrients
 - c) secondary nutrients
 - d) all of the above
- 4) A chemical compound that affects human metabolism and provides cure from diseases is called as _____.
 - a) Poison
 - b) Drug
 - c) Hormone
 - d) enzyme
- 5) The study of absorption, distribution, metabolism and excretion of drug is known as _____.
 - a) Pharmacokinetics
 - b) Pharmacy
 - c) Pharmacodynamics
 - d) pharmacopoeia
- 6) Drugs are excreted from the body through _____.
 - a) Kidney
 - b) Sweat
 - c) Intestine
 - d) All of these
- 7) A _____ is an abstract description of molecular features that are necessary for molecular recognition of ligand by a biological macromolecule.
 - a) Docking
 - b) kinetic data
 - c) Pharmacophore
 - d) none of these
- 8) Capsules in which powders are enclosed are made up of _____.
 - a) Gelatin
 - b) Plastic
 - c) Rubber
 - d) metallic material
- 9) The subscription is represented by a symbol _____.
 - a) R_x
 - b) R_a
 - c) R_y
 - d) R_z

- 10) Controlled-release tablets, in which their drug release is controlled over a _____ period.
- a) Long
 - b) Short
 - c) both a & b
 - d) all of these

B) Write true or false**06**

- 1) Suppositories are semisolid formulations which are taken via vagina.
- 2) In content uniformity test, the uniformity of excipients is determined.
- 3) Benzene is greenest solvent used for synthesis of organic chemical industries.
- 4) An acoustic cavitation is a typical phenomenon in sonochemistry.
- 5) An ultrasound is defined by the American National Standard Institute as the sound at frequencies greater than 20 kHz.
- 6) An absorption is a process of entering a drug into the blood stream of the patient.

Q.2 Answer the following**16**

- a) Explain the terms lethal dose (LD_{50}) and median effective dose (ED_{50}).
- b) Write any four principles of green chemistry.
- c) Explain disintegration test used in pharmacopoeial analysis of tablets.
- d) Define: i) Aniline point ii) Flash point iii) Fire point iv) Octane number.

Q.3 Answer the following.**16**

- a) Enlist the role of nitrogen in plants and discuss Kjeldahl's method that is used for the determination of nitrogen.
- b) Discuss calorific value and its units. Explain Bomb calorimeter method for the determination of calorific value of a fuel sample.

Q.4 Answer the following.**16**

- a) Explain in detail what is drug, its need and the pharmacokinetics (ADME) of drug.
- b) What is pharmacophore? Describe its model development and applications in detail.

Q.5 Answer the following.**16**

- a) Discuss in detail the synthesis and pharmaceutical applications of chloroquine and ibuprofen.
- b) Describe the receptors and explain the G-protein-coupled receptors along with its diagram.

Q.6 Answer the following.**16**

- a) Write in detail various types of pharmaceutical dosage forms on the basis of physical form.
- b) What is formulation of drug? Discuss its need and explain different excipients that are added during formulation.

Q.7 Answer the following.**16**

- a) Discuss in detail the assay and dissolution test of aspirin by HPLC method.
- b) Explain in detail the use of ultrasound in organic synthesis with suitable examples.

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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
POLYMER CHEMISTRY**

Spectral and Instrumental Analysis of Polymers (MSC05312)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Choose the correct alternative. (Each question carries one mark) 10

- 1) Which of the following characteristics of a sample affect the thermo gravimetric result?
 - a) Particle size
 - b) Previous history of the sample
 - c) Compactness of sample
 - d) All of these
- 2) The Fourier transformation is a mathematical conversion of _____
 - a) Time domain to Frequency domain
 - b) Frequency domain to time domain
 - c) Time domain to Concentration domain
 - d) Concentration domain to time domain
- 3) In SEM and TEM _____ is used as a source of illumination.

a) Light	b) Electrons
c) X-rays	d) Infra-red
- 4) In IR Spectroscopy Nylon-6 shows broadband peak when temperature increases, this is due to _____
 - a) formation of hydrogen bonding
 - b) increase in intermolecular forces
 - c) breaking of hydrogen bonding which leads to a decrease in crystallinity
 - d) breaking of hydrogen bonding which leads to the increase in crystallinity
- 5) In FT-NMR the irradiation of the sample with constant radio frequency while the magnetic field varied is called as the _____ method

a) Field Sweep	b) NMR sweep
c) Frequency sweep	d) Velocity sweep
- 6) In UV-Visible spectroscopy the unsaturated compound show transition.

a) $n - \pi^*$	b) $\pi - \pi^*$
c) $n - \sigma^*$	d) $\sigma - \sigma^*$
- 7) XRD analysis of polymers is used to estimate _____.

a) Thermal stability	b) Solubility in solvent
c) Crystallinity	d) Molecular weight

- 8) The XPS technique is also known as _____.
 - a) ESCA
 - b) ESPA
 - c) ESDA
 - d) ESBA
- 9) By DEPT-90° _____ group can be identified.
 - a) -CH
 - b) -CH₃
 - c) -CH₂
 - d) -C
- 10) ATR spectra generally shows the same band pattern of sample like as _____ spectrum.
 - a) transmission
 - b) absorption
 - c) reflection
 - d) refraction

B) Fill in the blanks. (Each question carries one mark) 06

- 1) In ATR, for solid sample _____ is applied to ensure good contact between sample & ATR.
- 2) UV-Visible spectroscopy is also called as _____ spectroscopy.
- 3) Raman Spectroscopy shows _____ of light by molecules.
- 4) For analytical purpose the wavelength of X-ray is _____ Å°.
- 5) HETCOR technique shows correlation between _____ .
- 6) The spin quantum number (I) for C¹³ carbon is _____ .

Q.2 Answer the Following. (Each question carries four marks) 16

- a) Describe the % component of monomers in co-polymer & orientation of polymers done by IR-spectroscopy.
- b) Describe solid state CMR & it' s limitations.
- c) Write down the difference between H¹ NMR & ³C NMR spectroscopy.
- d) Explain in brief DEPT technique.

Q.3 Answer the following. 16

- a) Describe any three applications of Raman spectroscopy for polymers with an example.
- b) Explain any three applications of UV-Visible spectroscopy for determination of polymers with an example.

Q.4 Answer the following. (Each question carries eight marks) 16

- a) What is the meaning of 2D NMR spectroscopy? Explain COSY technique.
- b) Define Pyrolysis & Give details about Pyrolysis in GC- MS technique.

Q.5 Answer the following. (Each question carries eight marks) 16

- a) Define Spherulites & Give details about POM technique for study of spherulites.
- b) What is the principle of XPS technique? Describe it's instrumentation technique.

Q.6 Answer the following. (Each question carries eight marks) 16

- a) Define Thermal Analysis & Describe factors affecting on TGA curves.
- b) What is the Principle of DTA? Explain the curves of Calcium oxalate monohydrate.

Q.7 Answer the following. (Each question carries eight marks) 16

- a) Describe Bragg's X-ray diffraction method.
- b) Explain FT-NMR technique & Give its advantages.

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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
PHYSICAL CHEMISTRY
Solid State Chemistry (MSC11310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- 1) Quantum dots can be used in _____.
 a) Crystallography b) Optoelectronics
 c) Mechanics d) Quantum physics
- 2) Schottky-defect in ceramic material is _____.
 a) Interstitial impurity
 b) Vacancy- interstitial pair of cations
 c) Pair of nearby cation and anion vacancies
 d) Substitutional impurity
- 3) Collimators used in XRD are made up of _____.
 a) thin quartz tube b) thin glass plates
 c) thin metal plates d) All of the above
- 4) The reaction between solid silver and molten sulphur is also known as _____.
 a) decomposition reaction b) structure sensitive reaction
 c) additive reaction d) tarnish reaction
- 5) Electron sea exists in _____.
 a) Polar bonds b) Ionic bond
 c) Covalent bond d) Metallic bond
- 6) Repeatable entity of a crystal structure is known as _____.
 a) Crystal b) Lattice
 c) Unit cell d) Miller indices
- 7) A total number of space groups in crystal is _____.
 a) 7 b) 14
 c) 32 d) 230
- 8) What is the advantage of using Czochralski, Bridgman- Stockbarger and Verneuil method?
 a) Gives small crystals b) High tech apparatus
 c) Rapid growth rates d) Uses plasma torch
- 9) The rate of solid state reaction is inversely proportional to _____.
 a) Time b) concentration of reactants
 c) thickness of the reactants d) pressure
- 10) Nanoparticles are surface functionalized for _____.
 a) Preventing aggregation b) Specific drug targeting
 c) Diagnosis and sensing d) All of the above

B) Write Fill in the blanks OR Write true false. 06

- 1) In a NaCl crystal, Cl^- ions are surrounded by _____ number of Na^+ ions.
- 2) When the layer deposition is done on an already existing substrate surface is called as _____.
- 3) Bragg's X-ray diffraction equation is represented as _____.
- 4) Miller indices and Weiss indices are always same. (true/false)
- 5) The creating of nanoscale materials by chemically or physically breaking down the larger materials is known as _____ approach in nanotechnology.
- 6) Spherical gold nanoparticles are zero dimensional nanomaterials. (true/false)

Q.2 Answer the following 16

- a) Write a note on Kirkendall effect.
- b) What are composite materials? Describe any one method for its synthesis.
- c) Illustrate zone refining technology of purification of materials.
- d) Mention different types of crystal systems and Give their characteristics.

Q.3 Answer the following. 16

- a) Discuss the optical and electrical properties of metal nano particles.
- b) Explain various possible chemical bonding in solids.

Q.4 Answer the following. 16

- a) Discuss the tarnish reactions with reference to its mechanism by considering suitable example.
- b) Describe the top-down synthesis strategy/approach of nanoparticles.

Q.5 Answer the following. 16

- a) Write in detail on sintering of solids w. r. to successive stages in solid state sintering.
- b) Explain with a neat diagram TEM setup and its use in analyzing nanostructures.

Q.6 Answer the following. 16

- a) Mention different types of atomic imperfections. Describe Schottky defect with suitable example.
- b) What is homogeneous nucleation? How this nucleation affects the single crystal growth.

Q.7 Answer the following. 16

- a) Illustrate grain boundary diffusion of silver in copper.
- b) Give an overview of sol gel method for synthesis of nanomaterial.

Set No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ANALYTICAL CHEMISTRY
Analytical Spectroscopy (MSC013310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ) 10

- 1) Mossbauer performed an experiment of recoilless _____ absorption and emission in solids.
 - a) gamma rays
 - b) beta rays
 - c) delta rays
 - d) all of these
- 2) The temperature below which the single Mossbauer line splits into six lines because sharp decrease in electron density at the nucleus is called _____.
 - a) Curie point
 - b) Neel point
 - c) Transition point
 - d) none of these
- 3) Mossbauer study is the study of g-rays _____ and subsequent reabsorption.
 - a) Transmission
 - b) Absorption
 - c) Emission
 - d) none of these
- 4) The electron spin resonance, also frequently called _____.
 - a) EPR
 - b) FTIR
 - c) NMR
 - d) ESR
- 5) The number of ESR lines for triphenyl methyl radical are
 - a) 7
 - b) 20
 - c) 3
 - d) 196
- 6) Which of the following sensor is used in ESR spectrometer?
 - a) Hall-effect sensor
 - b) Load cell
 - c) Strain gauge
 - d) Bourdon gauge
- 7) Raman effect is _____.
 - a) Inelastic scattering of light
 - b) Elastic scattering of light
 - c) Absorption of light
 - d) All of these
- 8) Raman lines on the low frequency side of the excitation frequency are called _____.
 - a) Stokes lines
 - b) Anti-stokes lines
 - c) Rayleigh line
 - d) all of these
- 9) PAS provides a means for obtaining UV, visible and IR absorption spectra of _____.
 - a) Solids
 - b) Semi solids
 - c) Liquids
 - d) all of these

- 10) PAS is comparable to _____
- a) NMR
 - b) Phosphorescence
 - c) Fluorescence
 - d) IR

B) Fill in the blanks OR Write true/false**06**

- 1) Raman lines are _____
- 2) In Raman spectroscopy, the radiation lies in the _____
- 3) Two equivalent protons will exhibit _____ Mossbauer lines.
- 4) The simplest molecule with a low potential barrier to inversion is _____
- 5) A fairly _____ quadrupole splitting is also observed in oxyhaemoglobin.
- 6) _____ of the following is also known as reflex oscillator.

Q.2 Answer the following.**16**

- a) Atomic force microscopy (AFM)
- b) Photoelectron spectrometer
- c) Applications of resonance Raman spectroscopy.
- d) Quadrupole interaction

Q.3 Answer the following.**16**

- a) Explain the Principle of photoacoustic spectroscopy (PAS).
- b) Discuss the comparisons between ESCA and UPS spectroscopy.

Q.4 Answer the following.**16**

- a) Explain the occurrence of stokes and antistoke lines in Raman spectrum of molecule.
- b) Explain in brief working of scanning electron microscope.

Q.5 Answer the following.**16**

- a) Explain the principle and instrumentation of Mössbauer spectroscopy.
- b) Difference between normal and resonance Raman spectrum.

Q.6 Answer the following.**16**

- a) Explain in brief the quantum mechanical approach of Raman spectroscopy.
- b) Discuss the spectra of iron and tin compounds.

Q.7 Answer the following.**16**

- a) Explain the use of chemical isomer shift in understanding molecular structure.
- b) What do you understand by NQR group frequencies? Explain its use in molecular structure determination.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
INORGANIC CHEMISTRY
Environmental Chemistry (MSC14310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and 2 are compulsory.
 2) Attempt any three questions from Q.No.3 to Q.No.7.
 3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative. (MCQ) 10

- 1) Which of the following diseases are caused by smog?
 - a) Headache
 - b) Anxiety
 - c) Breathing Problems
 - d) none of the above
- 2) Which of the following agents is mainly responsible for the secondary pollutants?
 - a) Smog and Ozone
 - b) Sulphur trioxide
 - c) Nitrogen dioxide
 - d) All of the above
- 3) Isotopes of bismuth and lead have been found to form colloidal solution in
 - a) Water
 - b) H₂S
 - c) Acetone
 - d) Dioxane
- 4) Which of the following is called the secondary air pollutant?
 - a) PANs
 - b) Ozone
 - c) Carbon monoxide
 - d) Nitrogen Dioxide
- 5) The gaseous layer which protects earth from harmful ultraviolet radiation.
 - a) Argon
 - b) Nitrogen
 - c) Ozone
 - d) Carbon dioxide
- 6) Which of the following pollutants are responsible for the cause of SMOG?
 - a) From incinerators
 - b) Emissions from vehicles
 - c) Both incinerators and emissions from vehicles
 - d) None of the above
- 7) The first laboratory produced radio nucleus is _____
 - a) ³⁰P
 - b) ³H
 - c) ¹⁴C
 - d) ²³²Th
- 8) Industrial activities discharge many of the toxic metals in
 - a) Air
 - b) Water
 - c) Soil
 - d) all of these
- 9) The dispersion of radioactive isotopes solution can be investigated by
 - a) Dialysis
 - b) Electrophoresis
 - c) Autoradiography
 - d) All of these

10) Chlorofluorocarbon are nonflammable chemicals mainly used in _____.

- a) Perfumes
- b) Refrigerators
- c) Air conditioners
- d) All of the above

B) Fill in the blanks OR Write true/false

06

- 1) Electrostatic Precipitators are used to control _____
- 2) The main sources of Arsenic in water are _____
- 3) _____ techniques are used for reducing the total dissolved solids in the water.
- 4) _____ metal is associated with hate's shakes.
- 5) _____ of the following is the product anaerobic biological decay.
- 6) _____ of the following agents is responsible for turning the Taj Mahal yellow.

Q.2 Answer the following.

16

- a) Acid rain
- b) Adsorption of gaseous effluent
- c) Disinfection of water.
- d) Bhopal gas tragedy.

Q.3 Answer the following.

16

- a) Describe Sources and sinks of gaseous pollutants.
- b) Explain effects of water pollutants on life and environment.

Q.4 Answer the following.

16

- a) Explain construction and working of wet and dry scrubbers.
- b) Describe about ozone depletion and their consequences on Environment.

Q.5 Answer the following.

16

- a) Explain about the aerobic and anaerobic waste water treatment.
- b) Write about construction and working principle of bag filters, cyclone separator.

Q.6 Answer the following.

16

- a) Describe the analysis methods of toxic heavy metals like Cr and As.
- b) What are the Sources of pesticides residue in the Environment? How can you analyse pesticides residue.

Q.7 Answer the following.

16

- a) Discuss about Chemical solutions to environmental problems biodegradability.
- b) Discuss about the ionizing and non-ionizing radiations on living things.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
PHARMACEUTICAL CHEMISTRY
Medicinal Chemistry (MSC012310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and. 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative (MCQ) 10

- 1) The P. Ovale parasite uses the host haemoglobin as a source of ____
 - a) Heam
 - b) Lysozome
 - c) Amino acids
 - d) All of the above
- 2) ____ is the main inhibitory transmitter in the brain.
 - a) Gamma aminobutyric acid
 - b) Ca²⁺ channels
 - c) K⁺ channels
 - d) None of the above
- 3) Tetracycline inhibits protein synthesis by binding on ____
 - a) 30s ribosomal subunit
 - b) 60s ribosomal subunit
 - c) Topoisomerase III
 - d) None of the above
- 4) The aminoglycoside antibiotics contain one or more amino sugars linked to aminocytitol ring by ____
 - a) Ionic bonding
 - b) Glycosidic bond
 - c) Covalent bond
 - d) Deoxyglycosidic bond
- 5) Sulphonamides are bacteriostatic antibiotics found to be metabolic product of ____
 - a) Protosil
 - b) PABA
 - c) Sulphanilamide
 - d) Both a & b
- 6) What are the pharmacological action of NSAID?
 - a) Prevent blood clots
 - b) Reduce pain
 - c) Decrease fever and inflammation
 - d) All of the above
- 7) A compound among the following that can be used as an anti-histamine is ____
 - a) Diphenylhydramine
 - b) Norethindrone
 - c) Fever
 - d) Sweating
- 8) The most serious adverse effect of insulin is ____
 - a) Hypoglycemia
 - b) Nephrotoxicity
 - c) Fever
 - d) Sweating
- 9) Which of the following is beta blocker?
 - a) Sodium nitroprusside
 - b) Dillrazem
 - c) Propranolol
 - d) Digitalis
- 10) Among the following, ____ is an example of ACE inhibitor.
 - a) Captopril
 - b) Carvedilol
 - c) Valsartan
 - d) All of the above

- B) Write True or False.** **06**
- 1) Antidepressants increases the availability of catecholamines at the appropriate receptor site of the brain.
 - 2) In Chloromycetin, shifting of nitro group to o-position increases the antibacterial activity.
 - 3) The antibacterial activity of Sulphonamides depends upon direct linkage of Sulphur from sulphonic acid with benzene ring.
 - 4) The chemical name of a Paracetamol is 2-Acetoxybenzoic acid.
 - 5) Ketoconazole is available in oral form, a shampoo and a cream.
 - 6) Verapamil is a more potent vasodilator than Nifedipine.
- Q.2 Answer the following.** **16**
- a) What is antibiotic? Give the MOA of Ampicillin.
 - b) Explain the SAR of Diazepam.
 - c) Give classification and uses of antifungal drugs.
 - d) Discuss the SAR of Anti-hypertensive drugs.
- Q.3 Answer the following.** **16**
- a) Describe in detail mode of action and structure activity relationship of Tetracyclines.
 - b) What are Cephalosporins? Explain how they differ from penicillins chemically? Write the SAR of Cephalosporins.
- Q.4 Answer the following.** **16**
- a) Give the MOA and metabolism of lidocaine.
 - b) What is neoplasm? Describe one of the drug from alkylating agents and metabolites.
- Q.5 Answer the following.** **16**
- a) Explain in detail the pharmacology of Metformin.
 - b) Explain in detail the pharmacology of Propranolol.
- Q.6 Answer the following.** **16**
- a) Write a detail note on synthesis and SAR of Paracetamol.
 - b) Explain in detail the pharmacology of Aspirin.
- Q.7 Answer the following.** **16**
- a) Explain the following.
 - i) Mode of action and metabolism of Barbiturates
 - ii) Describe the synthesis of chloroquine.
 - b) Describe the MOA and SAR of Diphenhydramine.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MEDICINAL CHEMISTRY
Applied Organic Chemistry (MSC07310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- 1) Which of the following reaction is more atom economical?
 a) Addition reaction b) Rearrangement reaction
 c) Elimination reaction d) Both A & B
- 2) _____ is a organic salt in the liquid state whose M.P. is below 100°C.
 a) Ionic liquid b) Coordinate liquid
 c) DMS'O d) Chloroform
- 3) The term mutarotation is related to _____.
 a) Interconversion of anomers
 b) conversion of glucose to fructose
 c) conversion of fructose to glucose
 d) Chain lengthening
- 4) _____ on hydrolysis give three moles of the same or different monosaccharides.
 a) Disaccharides b) Trisaccharide
 c) Starch d) Maltose
- 5) Product of the following reaction is:

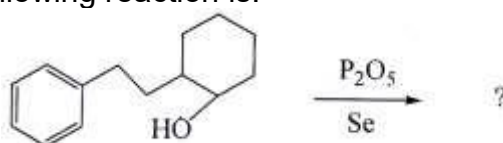


- a)
 - b)
 - c)
 - d)
- 6) In polycyclic aromatic compounds aromatic rings should share _____.
 a) at least one side b) at least two side
 c) all sides d) None of these
 - 7) According to _____ as the enzyme and substrate approach each other, the binding site of enzyme changes shape, resulting in a more precise fit.
 a) Emil Fischer b) Alfred Werner
 c) Paul Ehrlich d) Daniel Koshland
 - 8) The fastest reacting substance get binded by host is the determining factor for _____.
 a) macrocyclic effect b) thermodynamic selectivity
 c) solvent effect d) kinetic selectivity

- 9) Two strands in DNA are held together by _____.
 a) Covalent bond b) Vander Waal's forces
 c) Hydrogen bond d) Electrostatic force of attraction
- 10) Valinomycin is a natural ionophore, acts as antibiotic and it coordinates with metal cation in a manner similar to that of _____.
 a) cyclodextrin b) calixarene
 c) crown ether d) spherand

B) Fill in the blanks.**06**

- 1) Cycloaddition or Pericyclic reactions have _____% atom economy.
 2) The principal sugar in blood is _____.
 3) _____ is defined as the extra preference for an axial orientation of an electronegative substituent at the anomeric carbon atom.
 4) Pyrene is a _____ Fused compound.
 5) Product of the following reaction is:



- 6) Host molecule possess _____ binding sites.

Q.2 Answer the following**16**

- a) What is mutarotation? Explain with suitable example.
 b) Write a note on classification of carbohydrate.
 c) Write note on Ultrasonic reactions
 d) Explain Microwave assisted reactions.

Q.3 Answer the following.**16**

- a) Explain the various basic principles of green chemistry.
 b) What are glycosides? Explain the conformations of Methyl α -D and Methyl β -D-glycosides

Q.4 Answer the following.**16**

- a) Explain the Fittig reaction and Ullmann diaryl Synthesis of Phenanthrene.
 b) What is molecular recognition? Explain the concept of complementarity.

Q.5 Answer the following.**16**

- a) Explain the concept of Preorganization and macrocyclic effect in supramolecular chemistry.
 b) Explain
 1) epimerization
 2) Anomeric effect

Q.6 Answer the following.**16**

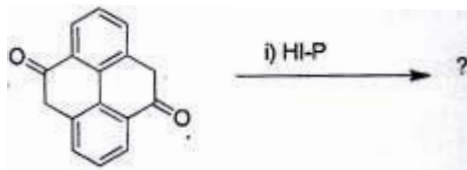
- a) What is Cyclodextrin? Write a note on structure, characteristics and applications of Cyclodextrin.
 b) Give one synthesis of each of the following
 1) Picene
 2) Chrysene
 3) Pyrene
 4) Perylene

Q.7 Answer the following.

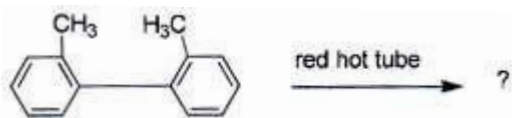
a) Write a note on applications of supramolecular chemistry.

b) Complete the following reactions

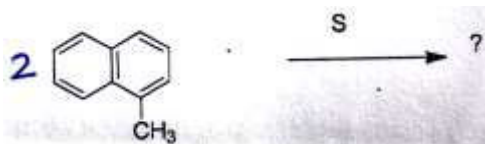
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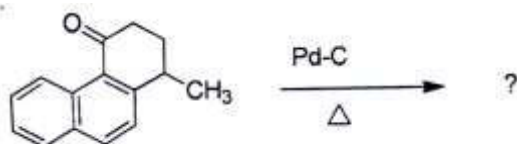
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3)



4)



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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MEDICINAL CHEMISTRY
Biochemistry (MSC07311)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative.**10**

- 1) 1- 4 glycosidic linkage is present in _____ sugars.
 - a) lactose & sucrose
 - b) maltose & fructose
 - c) maltose & sucrose
 - d) maltose & lactose
- 2) _____ compound is used for salting out of protein in purification method.
 - a) $(\text{NH}_4)_2\text{SO}_4$
 - b) NH_4Cl
 - c) NaCl
 - d) KCl
- 3)

$$6 \text{CO}_2 + 12 \text{H}_2\text{O} \xrightarrow{\quad ? \quad} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{H}_2\text{O} + 6\text{O}_2$$
 - a) Chlorophyll
 - b) sunlight and chlorophyll
 - c) Mitochondria
 - d) Sunlight
- 4) In nucleic acid _____ is not hydrolyzed rapidly under alkaline conditions.
 - a) DNA
 - b) RNA
 - c) DNA & RNA
 - d) None of these
- 5) According to Watson & Crick model, the strands of DNA should be _____.
 - a) Antiparallel
 - b) Parallel
 - c) Vertical
 - d) Horizontal
- 6) Plants use _____ to store water, cellular waste and help to maintain the Necessary turgor pressure in plant.
 - a) golgi body
 - b) vacuole
 - c) cell wall
 - d) lysosome
- 7) _____ is a more water soluble vitamin.
 - a) Vitamin E
 - b) Vitamin D
 - c) Vitamin C
 - d) Vitamin A
- 8) _____ are the types of Lipoprotein.
 - a) LDL
 - b) HDL
 - c) Waxes
 - d) both a & b
- 9) The biological functions of potassium metal ion is _____.
 - a) Charge carrier
 - b) osmotic balance
 - c) Hydrogenase
 - d) both a & b
- 10) _____ monosaccharide is the reference carbohydrate.
 - a) Maltose
 - b) Fructose
 - c) Glucose
 - d) Glyceraldehyde

- B) Fill in the blanks.** **06**
- 1) Proteins consist of unbranched chains of amino acids joined by _____ bond.
 - 2) Glucose and mannose are _____ of each other.
 - 3) A nucleotide has _____ characteristic components in their structure.
 - 4) HIO₄ oxidative cleavage involves the degradation of 1 eq. glucose in to _____ eq. of formic acid.
 - 5) High density lipoprotein are mostly synthesized in _____.
 - 6) All the amino acid have optical isomers except _____

- Q.2 Answer the following.** **16**
- a) Define Beta oxidation of fatty acids and write down the steps involved in Beta oxidation.
 - b) Define term isoelectric pH of amino acid and describe the physical properties of amino acid.
 - c) Define cell and give the detailed characteristic difference between eukaryotes and prokaryotes.
 - d) Explain why the alkaline hydrolysis in ribonucleotides is rapid but deoxyribonucleotides is not.

- Q.3 Answer the following.**
- a) Classify the carbohydrate and describe polysaccharides in details with examples. **08**
 - b) Define the monosaccharides with suitable examples and describe osazone formation with mechanism. **08**

- Q.4 Answer the following.**
- a) Write an overview on alpha helix and beta plated sheet structure of secondary proteins. **08**
 - b) Define protein. Explain in details the ion exchange chromatography and affinity chromatography for purification of protein. **08**

- Q.5 Answer the following.**
- a) Define nucleic acid and write any two chemical structures of deoxyribonucleotides. Explain how DNA stores the genetic information. **08**
 - b) Describe in details the A, B, and Z forms of DNA double helix structure with their comparison. **08**

- Q.6 Answer the following.**
- a) Define and classify the lipids. Write down the properties of triglycerols and function of lipids. **08**
 - b) Write detailed metabolism, biochemical function and dietary sources of vitamin D. **08**

- Q.7 Answer the following.**
- a) Write in details about Iron- Sulfur clusters. **08**
 - b) Explain the enzymes involved in mercury detoxification and write the metalloregulation of the mercury detoxification genes. **08**

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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
COMPUTER SCIENCE
Fundamental of Web Designing (MSC18310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below 10

- 1) Web pages contain _____, which are specially formatted words or phrases that enable you to access another page on the Web.
 - a) Hyperlinks
 - b) Higherlinks
 - c) Hidden links
 - d) Hexalinks
- 2) The document's _____, meta information, and, in most cases, document scripts are all contained in the section
 - a) Table name
 - b) File name
 - c) Body
 - d) Title
- 3) <p> is used to delimit entire _____ of text.
 - a) Headings
 - b) Body
 - c) Page
 - d) Paragraphs
- 4) There are six predefined levels of _____.
 - a) Headings
 - b) HTML
 - c) Website
 - d) Graphics
- 5) Use _____ tag for the small size of the text.
 - a) <i>
 - b) <u>
 - c) <t>
 - d) <a>
- 6) Rows of data are defined and delimited by _____ tags.
 - a) <tc>
 - b) <tk>
 - c) <tr>
 - d) <tt>
- 7) HTML _____ provide the standard of GUI elements, including text boxes, check boxes, pull down lists, and more.
 - a) Forms
 - b) Forum
 - c) Focus
 - d) Famous
- 8) Using _____, users can select from multiple question types, drag-and-drop to reorder questions, and customize values as easily as pasting a list.
 - a) Google Slides
 - b) Google Forms
 - c) Google Sheets
 - d) Google Docs
- 9) Using _____, users can establish a ground truth for data in online spreadsheets, with easy sharing and real-time editing.
 - a) Microsoft access
 - b) Libreoffice
 - c) Ubuntu office
 - d) Google Sheets

- 10) Google Drive can provide encrypted and secure access to your ____.
- a) Files
 - b) Firmware
 - c) Messages
 - d) Mails

B) Write True or False.**06**

- 1) WWW stands for World Wide Web.
- 2) HTML stands for HighLevel Team Management Lead.
- 3) There are lots of tags and they are all in pairs; there are opening tags and closing tags.
- 4) The text inside the curly brackets explains the purpose of the tag.
- 5) Whole document is contained between opening < html > and closing < /html > tags.
- 6) Google Classroom is a free blended learning platform developed by Google for educational institutions that aims to simplify creating, distributing, and grading assignments.

Q.2 Answer the following.**16**

- a) What do you mean by Web page?
- b) What is a Web browser?
- c) What is </body> tag?
- d) Describe Gmail?

Q.3 Answer the following.

- a) What are the various types of list? State and explain related HTML tags to create a list with examples? **08**
- b) Enlist Google Apps for Education? Explain components of Google Forms Design with suitable example? **08**

Q.4 Answer the following.

- a) What do you mean by heading in HTML? State heading tag in HTML with suitable example? **08**
- b) Define Hyperlinks. Explain in detail working with Hyperlinks in HTML? **08**

Q.5 Answer the following.

- a) What is HTML? Explain in detail the basic structure of a HTML Document. **08**
- b) Discuss in detail five golden rules of website design? **08**

Q.6 Answer the following.

- a) Illustrate the use of font tag for formatting font styles such as font name, color, size? **08**
- b) Explain in detail the Table tags for creating tables in HTML with suitable example? **08**

Q.7 Answer the following.

- a) Discuss various applications of Google for teaching, learning and research? **08**
- b) Explain in detail different types of Websites with suitable examples? **08**

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Set **P**

M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
PHYSICS (CONDENSED MATTER PHYSICS)
Energy Harvesting Devices (MSC04310)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Q. (1) and (2) are compulsory.
 2) Attempt any three from Q. (3) to Q. (7).
 3) Figures to the right indicate full marks

Q.1 A) Select Correct Alternatives**10**

- 1) The amount of photo generated current increases slightly with an increase in _____.
 a) Temperature b) Photons
 c) Diode current d) Shunt
- 2) Alkali fuel cell operate on compressed _____ and _____ gases.
 a) Hydrogen, oxygen b) Helium, Neon
 c) Nitrogen, Argon d) None of these
- 3) _____ material is used as window layer in the solar cell.
 a) CdSe b) CdTe
 c) ZnO d) CuInSe₂
- 4) Which of the following highest power density value?
 a) Capacitor b) Battery
 c) Supercapacitor d) None of these
- 5) The band gap of the CdS material is _____
 a) 3.2 eV b) 1.12 eV
 c) 0.66 eV d) 2.45 eV
- 6) Hybrid capacitor electrodes contains _____ as the electrode materials.
 a) Metal oxide b) Carbon
 c) Combination of a and b d) None of these
- 7) The piezoelectric materials used for converting energy are called as _____.
 a) Transition Devices b) Converter
 c) Transducer d) Dielectric
- 8) Organic solar cells are realized using _____ materials.
 a) Oligomers b) Polymers
 c) Both a and b d) None of these

- 9) Polymer electrolyte membrane fuel cell operate in the temperature range _____ °C.
- | | |
|------------|---------------|
| a) 10-30 | b) 60-80 |
| c) 120-150 | d) above 1000 |
- 10) Piezoelectricity is shown by substances which are _____
- | | |
|--------------|---------------|
| a) Polar | b) Non-polar |
| c) Symmetric | d) Asymmetric |

B) Fill in the blanks / State True False.

06

- 1) Quantum dot-sensitized solar cells are _____ solar cell
- 2) _____ is one of the most preferable electrolytes for liquid solar cell.
- 3) _____ is redox mediator.
- 4) Shockley queasier limit is defined for Quantum Efficiency. (True / False)
- 5) QDSSC is not a multi-junction solar cell (True / False)
- 6) Fill factor is ratio of $FF = \frac{V_m \times I_m}{V_{oc} \times I_{sc}}$ (True / False)

Q.2 Attempt the following.

16

- a) SO Fuel Cell (SOFC)
- b) Polymer supercapacitors
- c) p-n junction solar cell
- d) Piezoelectric micro power generator

Q.3 Answer the following.

- a) Give an account of magnetoelectric composites. **10**
- b) Elucidate mechanical energy harvester using piezoelectric fibers. **06**

Q.4 Answer the following.

- a) Describe principle, working and fabrication of inorganic solar cells **10**
- b) What is the theoretical efficiency of photodiodes made of semiconductor with band gap energy of 2.4 eV when exposed to sunlight? **06**

Q.5 Answer the following.

- a) Describe piezoelectric power generators with power storage circuit. **10**
- b) Explain principle and working of proton exchange membrane in fuel cells. **06**

Q.6 Answer the following.

- a) Describe principle of operation of Solid Oxide Fuel Cells **10**
- b) Elaborate the mechanism of metal oxide fuel cell **06**

Q.7 Answer the following.

- a) Describe charge storage mechanism involved in the electrical double layer and pseudocapacitor. **10**
- b) Elucidate symmetric and asymmetric supercapacitor configurations. **06**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ENTREPRENEURSHIP
Corporate Governance and Ethics (MSC28310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Multiple choice questions.

10

- 1) The framework for establishing good corporate governance and accountability was originally setup by _____.
 a) Nestle committee b) Rowntree committee
 c) Cadbury committee d) Thornton committee
- 2) Which of the following is not one of the underlying principles of the corporate governance combined code of practice?
 a) Accountability b) Openness
 c) Acceptability d) Integrity
- 3) External audit of the accounts of a limited company is required?
 a) Because it is demanded by the company's bankers
 b) By the companies act 2006
 c) At the discretion of the shareholders
 d) To detect fraud
- 4) Director's responsibilities are unlikely to include _____.
 a) a duty to keep proper accounting records
 b) a fiduciary duty
 c) a duty to propose high dividends for shareholders
 d) a duty of care
- 5) Values and ethics shape the _____.
 a) Corporate unity b) Corporate discipline
 c) Corporate culture d) Corporate differences
- 6) The moral principles, standards of behavior, or set of values that guide a person's actions in the workplace is called _____.
 a) Office place ethics b) factory place ethics
 c) behavioral ethics d) work place ethics
- 7) Which of the following factors encourage good ethics in the workplace?
 a) Transparency
 b) fair treatment to the employees of all levels
 c) both (a) and (b)
 d) Bribe
- 8) Which of the following are ethical issues in financial markets-?
 a) Churning b) Illegal dividend payment
 c) creative accounting d) none of these

- 9) A low context culture is _____.
 - a) A culture where much goes unsaid
 - b) A culture in which communication is clear and direct
 - c) A culture where ambiguity is the norm, and directness is avoided
 - d) A culture in which body language and 'reading between the lines' are important
- 10) Characteristics of organizational culture include all but which one of the following?
 - a) Common language, terminology and norms of behavior
 - b) Sustainability policies
 - c) Preference for formal or informal communication
 - d) Rulebook of do's and don'ts for staff

B) Answer in one sentence.

06

- 1) Define Business
- 2) Define Ethics
- 3) Define Share
- 4) Define External environment
- 5) Define Internal environment
- 6) Define audit

Q.2 Answer the following.

16

- a) Describe History of corporate governance?
- b) Define Role of auditors?
- c) Describe Corporate Social Responsibility?
- d) Define Concepts of corporate governance?

Q.3 Answer the following.

16

- a) Describe Role of Media in Ensuring Corporate Governance?
- b) Describe Rights and privileges Stakeholders?

Q.4 Answer the following.

16

- a) Define MRTP Act?
- b) Describe Ganguly committee's Recommendation?

Q.5 Describe the following.

16

- a) Define Role of SEBI in Capital Market?
- b) Describe Corporate Governance and Other stakeholders?

Q.6 Write note on.

16

- a) Define the Role of Media in Ensuring Corporate Governance?
- b) Describe the Role of Government in Developing and Transition Economics?

Q.7 Answer the following.

16

- a) Explain the Role of Public Policies in Governing Business?
- b) Explain Ethics in Advertising and Ethical Issues in The Functional Area?

Seat No.	
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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ELECTRONICS**

Medical Instrumentation (MSC21310)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Answer five questions
2) Question no. 1 and 2 are compulsory.
3) Attempt any three questions from Q. No. 3 to Q. No. 7.
4) Figure to right indicate full marks.

Q.1 A) Choose correct answer

10

- 1) The leakage current for biomedical instrumentation should not be greater than _____
 - a) $10 \mu A$
 - b) $20 \mu A$
 - c) $30 \mu A$
 - d) $50 \mu A$
- 2) Bioelectric potentials are generated at a _____ level.
 - a) Chemical
 - b) Cellular
 - c) Electrical
 - d) Skin
- 3) The term systole and diastole refer to _____
 - a) sound from the heart
 - b) artery and vein from to the heart
 - c) heart contraction and relaxation
 - d) rates of heart pulse
- 4) The _____ is an instrument for recording the electrical activity of the muscle.
 - a) ECG
 - b) EEG
 - c) EMG
 - d) VCG
- 5) The silver-silver chloride electrodes are normally prepared by _____
 - a) Electrolyte
 - b) non-electrolyte
 - c) Electrolysis
 - d) none of these
- 6) The _____ diagnostic image is the result of ultrasound technology.
 - a) radiograph
 - b) echocardiogram
 - c) angiogram
 - d) all of these
- 7) The cell membrane in excited state impedes the entry of _____ ions.
 - a) Na^+
 - b) Cl^+
 - c) K^+
 - d) P^+
- 8) The cardiovascular system is a complex closed _____ system
 - a) respiratory
 - b) hydraulic
 - c) circulatory
 - d) nervous
- 9) Normal EEG frequency range is _____
 - a) 50-500Hz
 - b) 0.5-50Hz
 - c) 0.05-5Hz
 - d) 1-200HZ
- 10) The bedside patient monitoring system basically consists of _____
 - a) preamplifier section
 - b) logic boards
 - c) display part
 - d) all of these

- B) State true or false.** **06**
- 1) Differential amplifier always provides the protection against leakage currents.
 - 2) The isolation amplifier always provides the protection against leakage currents.
 - 3) The internal resting potential within a cell is approximately -90 mV.
 - 4) Pre-gelled disposable electrode generally suffers from motion artefacts.
 - 5) The body fluid is ionic.
 - 6) The body fluid is slightly acidic.
- Q.2 Answer the following.** **16**
- a) Describe the sources bioelectric potentials.
 - b) Explain the SA and AV node in detail.
 - c) Explain the role of jellies and cream in electrical conductivity of electrode.
 - d) Write a note on blood gas electrode.
- Q.3 Answer the following.** **10**
- a) Describe the cardio-vascular system in detail. **06**
 - b) Explain the heart sound. **06**
- Q.4 Answer the following.** **10**
- a) Explain in detail the central monitoring **06**
 - b) Explain in detail ECG electrodes. **06**
- Q.5 Answer the following.** **10**
- a) Explain in detail the EEG system in detail. **06**
 - b) Explain the electrode-tissue interface. **06**
- Q.6 Answer the following.** **10**
- a) With suitable diagram, describe in details the MRI method. **06**
 - b) Explain the ultrasonic measurements and diagnosis. **06**
- Q.7 Answer the following.** **10**
- a) Explain the measurement of the pulse rate and heart rate. **06**
 - b) Explain the electrical safety analyzer. **06**

Seat
No.

**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ELECTRONIC SCIENCE**

Digital Electronics and Communication System (MSC02311)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No 7.
3) Figures to the right indicate full marks.

Q.1 A) Multiple Choice Questions 10

- 1) The techniques used for sampling are _____.
a) Instantaneous sampling b) Natural sampling
c) Flat top sampling d) All of the above
- 2) In _____, each group of users is given a shared code.
a) TDMA b) FDMA
c) CDMA d) OFDMA
- 3) _____ the satellite networks will orbit at distances of about 8000 miles from earth's surface.
a) Medium Earth Orbit (MEO)
b) Low Earth Orbit (LEO)
c) Geosynchronous Earth Orbit (GEO)
d) All of these
- 4) The commutative law of addition for two variables is written as _____.
a) $A+B=B+A$ b) $A*B=B+A$
c) $A+B=B*A$ d) $A*B=B*A$
- 5) The subsystem, which provides the connecting link between transmitting and receiving antennas of a satellite is known as _____.
a) Transponder b) Transmitter
c) Receiver d) Repeater
- 6) What should be the value of modulation index for under modulation?
a) <1 b) 0
c) >1 d) Infinity
- 7) By modulation, Antenna size gets _____.
a) Reduced b) Increased
c) Enhanced d) All of these
- 8) According to Boolean law: $A + 1 = ?$
a) 1 b) A
c) 0 d) A'
- 9) GSM comes under which generation?
a) 2G b) 1G
c) 3G d) 4G
- 10) The NAND & NOR gates are known as _____.
a) Universal gates b) Basic gates
c) Special gates d) All of these

- B) Write true/false.** **06**
- 1) The output of NOT gate is the logical inversion of input.
 - 2) 3G aims to give real-time voice, streaming and non-real time video.
 - 3) TDMA technology divides a signal into different timeslots, and increases the data carrying capacity.
 - 4) The base or radix of binary number system is 8.
 - 5) Diameter of femto cell is more than pico cell.
 - 6) In BPSK technique, the sine wave carrier takes two phase reversals such as 0° and 180° .
- Q.2 Answer the following.** **16**
- 1) Explain ASK.
 - 2) What are Boolean laws?
 - 3) Define the following term:
 - i) Modulation
 - ii) Demodulation
 - iii) Multiplexing
 - iv) Logic gate
 - 4) Explain OR gate with its truth table.
- Q.3 Answer the following.**
- A)** What is QPSK? With a neat block diagram, explain its modulator and demodulator. **10**
- B)** Explain FDM with its advantages and disadvantages. **06**
- Q.4 Answer the following.**
- A)** Explain in detail cellular concept with its advantages and disadvantages. **10**
- B)** Discuss about: **06**
- i) 1G
 - ii) 2G
- Q.5 Answer the following.**
- A)** What is satellite communication? Explain the following terms: **10**
- i) Satellite transponder
 - ii) Satellite orbits
- B)** Explain sampling with its different cases: **06**
- i) Perfect sampling
 - ii) Under sampling
 - iii) Over sampling
- Q.6 Answer the following.**
- A)** Explain the following number system with a suitable example. **10**
- i) Binary number system **06**
 - ii) Decimal number system
- B)** Explain standard form and canonical form with suitable example.
- Q.7 Answer the following.**
- A)** Explain in detail following theorems used in Boolean algebra: **10**
- i) Duality theorem
 - ii) DeMorgan's theorem
- B)** Explain universal gates with its gate representation and truth table. **06**

- 9) ——— आर्थिक क्रिया बौद्धिक आणि वैयक्तिक सेवा प्रदान करतात.
 अ) प्राथमिक ब) द्वितीयक
 क) तृतीयक ड) चतुर्थक
- 10) प्रायोगिक क्षेत्र विभागाची विभागणी ——— उप विभागात केली आहे.
 अ) चार ब) सहा
 क) आठ ड) दहा

ब) रिकाम्या जागा भरा.

06

- 1) वंश ही ——— संकल्पना आहे.
 2) ——— हे अंडमानचे रहिवासी आहेत.
 3) इजिप्त ही ——— नदीची देणगी आहे.
 4) ——— ही कलहरी वाळवंटातील अदिम जमात आहे.
 5) 'थांबा व जा' हा निर्धारवाद ——— यांनी मांडला.
 6) ——— या भटक्या जमातीच्या लोकांच्या आहारात बैलाचे रक्त हा महत्वाचे आवडते पेय आहे.

प्र.2 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) ग्रामीण समुदायाची वैशिष्ट्ये सांगा.
 ब) संस्कृती प्रसाराचे प्रकार सांगा.
 क) सांस्कृतिक भूगोलाची व्याप्ती सांगा.
 ड) सामाजिक क्षेत्रकुशलतेची संकल्पना सांगा.

प्र.3 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) सांस्कृतिक भूगोलाचा अर्थ सांगून त्याचे स्वरूप स्पष्ट करा.
 ब) भारतातील सांस्कृतिक विविधता व प्रादेशिकीकरणाची चर्चा करा.

प्र.4 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) सांस्कृतिक भूगोलाचे महत्त्व विशद करा.
 ब) जगातील भटक्या जमातीचे थोडक्यात वर्णन करा.

प्र.5 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) ग्रामीण व शहरी समाजाच्या संस्कृतीक प्रारूपाची चर्चा करा.
 ब) शेतीतील तांत्रिक बदलाची माहिती स्पष्ट करा.

प्र.6 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) सामाजिक क्षेत्र कुशलतेचे निर्देशक थोडक्यात स्पष्ट करा.
 ब) जगातील सांस्कृतिक परिमंडळ स्पष्ट करा.

प्र.7 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) जगातील प्रथम धर्म स्पष्ट करा.
 ब) जगातील सांस्कृतिक उगमस्थानाचे वर्णन करा.

Seat No.	
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**M.A./M.Sc. (Geography) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Cultural Geography (MAG310)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question No. 1 and 2 are compulsory
2) Attempt any three questions from Q. No. 3 to Q. No. 7.
3) Figures to the right indicate full marks.
4) Use of Stencils is allowed.
5) Draw neat diagrams wherever necessary.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) _____ are inhabitants of Nilgiri region of India.
 - a) Bhil
 - b) Toda
 - c) Canthal
 - d) Gond
- 2) The concept of social well-being is given by _____.
 - a) David Smith
 - b) Ratzel
 - c) Blash
 - d) Devis
- 3) _____ is holly book of Muslim.
 - a) Mahabharat
 - b) Bible
 - c) Ramayan
 - d) Kuran
- 4) _____ is called the father of cultural geography.
 - a) Carl O. Soure
 - b) Ratzel
 - c) Blash
 - d) Devis
- 5) Sikhs population is more concentrated in _____ State of India.
 - a) Himachal Pradesh
 - b) Punjab
 - c) Hariyana
 - d) Rajasthan
- 6) _____ are inhabitant of Tundra region.
 - a) Bora
 - b) Jarwa
 - c) Eskimo
 - d) Semang
- 7) _____ is the most widely spoken language in the world.
 - a) Irani
 - b) Mandarin
 - c) French
 - d) Hindi
- 8) _____ is a demographic indicators of socio-cultural process.
 - a) Fertility
 - b) Transportation
 - c) Industrialization
 - d) Urbanization
- 9) _____ economic activities provides intellectual and personal services.
 - a) Primary
 - b) Secondary
 - c) Tertiary
 - d) Quaternary
- 10) The accidental realm is further sub-divided in to _____ sub region.
 - a) Four
 - b) Six
 - c) Eight
 - d) Ten

B) Fill in the blanks. **06**

- 1) Race is a _____ concept.
- 2) _____ are inhabitants of Andaman.
- 3) Egypt is a gift of _____ river.
- 4) _____ are a primitive tribe of the Kalahari desert.
- 5) The “Stop and go” determinism was put forth by _____.
- 6) “Ox blood” is favourite and important in the diet of _____ tribal group.

Q.2 Answer the following. **16**

- a) State the characteristics of rural community.
- b) State the type of cultural diffusion.
- c) State the scope of cultural geography.
- d) Give the concept of social well being.

Q.3 Answer the following. **16**

- a) Define cultural geography and explain its nature.
- b) Comment on the cultural diversity and regionalization in India.

Q.4 Answer the following. **16**

- a) Explain the significance of cultural geography.
- b) Describe in various tribes of the world.

Q.5 Answer the following. **16**

- a) Discuss the cultural pattern of rural and Urban society.
- b) Explain the technological changes in agriculture.

Q.6 Answer the following. **16**

- a) Explain in brief social well-being indicators.
- b) Explain the world cultural realms.

Q.7 Answer the following. **16**

- a) Explain major religions of the world.
- b) Describe the world cultural hearths.

Seat No.	
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Set P

**M.A./M.Sc. (Geography) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Commercial Geography (MAG311)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) प्रश्न क्र. 1 व 2 अनिवार्य आहेत.
2) प्रश्न क्र. 3 ते 7 पैकी कोणतेही 3 प्रश्न सोडवा.
3) उजवीकडील अंक गुण दर्शवितात.
4) नकाशा स्टेन्सिल वापरण्यास परवानगी आहे.

प्र.1 अ) खालील दिलेले योग्य पर्याय निवडून रिकाम्या जागा भरा.

10

- 1) व्यापारी भूगोल ही ——— भूगोलाची उपशाखा आहे.
अ) आर्थिक ब) सामाजिक
क) राजकीय ड) प्राकृतिक
- 2) ——— भूगोल हे पुस्तक पी.एन.पाडे यांनी लिहिले.
अ) मानवी ब) व्यापारी
क) प्राकृतिक ड) यापैकी नाही
- 3) ——— व्यापार संघटनेचे मुख्यालय जिनीव्हा येथे आहे.
अ) डब्ल्यूटीओ ब) ओपेक
क) सार्क ड) यापैकी नाही
- 4) ——— आणि घाऊक व्यापार या व्यापाराच्या दोन पध्दती आहेत.
अ) फिरती ब) साठा
क) किरकोळ ड) यापैकी नाही
- 5) ——— हा जगातील पेट्रोलियम उत्पादने निर्यात करणाऱ्या देशाचा संघ आहे.
अ) ओपेक ब) कोळसा
क) लोह ड) सोने
- 6) भारतातील मुंबई येथील ——— हवामान सुतीवस्त्र उद्योगाच्या प्रारंभास उपयुक्त ठरले आहे.
अ) दमट ब) समशितोष्ण
क) थंड ड) यापैकी नाही
- 7) दोन देशातील वस्तूच्या देवाण घेवाणीस ——— व्यापार म्हणतात.
अ) राष्ट्रीय ब) आंतरराष्ट्रीय
क) किरकोळ ड) घाऊक
- 8) पर्यटन हा जगातील ——— क्रमांकाचा उद्योग आहे.
अ) पहिल्या ब) दुसरा
क) तिसरा ड) चौथ्या

- 9) 2022-23 मध्ये ---- भारताचा सर्वात मोठा व्यापारी भागीदार होता.
 अ) जपान ब) अमेरिका
 क) चीन ड) श्रीलंका
- 10) भारताचा बहुतांश आंतरराष्ट्रीय व्यापार ---- मार्गाने होतो.
 अ) स्थानिक ब) राष्ट्रीय
 क) आंतरराष्ट्रीय ड) हवाई

ब) रिकाम्या जागा भरा.

06

- 1) जॉर्ज चिशोलम यांना आधुनिक ---- भूगोलाचे जनक म्हणतात.
- 2) शेती हा ---- श्रेणीचा आर्थिक व्यवसाय आहे.
- 3) सौदी अरेबिया हा ---- मध्ये जगातील प्रमुख निर्यातदार आहे.
- 4) राष्ट्रीय आणि आंतरराष्ट्रीय असे दोन स्तर आहेत ज्यावर ---- करता येतो.
- 5) कृषी पर्यटन हा उद्योग ---- निगडीत आहे
- 6) ---- राज्यात भारतातील सर्वाधिक कापड गिरण्या आहेत.

प्र.2 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) भारतातील पर्यटनाच्या समस्या सांगा.
- ब) व्यापारी भूगोलाचे महत्त्व सांगा.
- क) पर्याप्त लोकसंख्येची संकल्पना स्पष्ट करा.
- ड) प्राकृतिक आणि सांस्कृतिक पर्यावरणाची व्याख्या सांगा.

प्र.3 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) भारतातील कृषी-पर्यटन विकासाचे थोडक्यात वर्णन करा.
- ब) मानवाच्या आर्थिक क्रियांचे वर्गीकरण स्पष्ट करा.

प्र.4 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) व्यापारी भूगोलाची व्याप्ती व स्वरूप स्पष्ट करा.
- ब) व्यापारी भूगोलाचे दृष्टीकोन स्पष्ट करा.

प्र.5 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) राष्ट्रीय विकासातील आर्थिक क्रियांचे (उपक्रम) योगदान स्पष्ट करा.
- ब) अतिरिक्त आणि न्यूनतम लोकसंख्या संकल्पना स्पष्ट करा.

प्र.6 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) भारतातील कापड उद्योग विकासाचे वर्णन करा.
- ब) प्राकृतिक घटकांचा पर्यटन विकासावरील प्रभाव स्पष्ट करा.

प्र.7 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) भौगोलिक घटकांचा आंतरराष्ट्रीय व्यापारांवरील प्रभाव स्पष्ट करा.
- ब) भारतातील स्वयंचलित उद्योगाची सविस्तर माहिती लिहा.

Seat
No.

**M.A./M.Sc. (Geography) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Commercial Geography (MAG311)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question No. 1 and 2 are compulsory
2) Attempt any three questions from Q. No. 3 to Q. No. 7.
3) Figures to the right indicate full marks.
4) Use of Stencils is allowed.

Q.1 a) Choose correct alternative from the following.**10**

- 1) Commercial Geography is the branch of _____ Geography.
 - a) Economic
 - b) Social
 - c) Political
 - d) Physical
- 2) The book entitled _____ Geography is written by P.N.Padey.
 - a) Human
 - b) Commercial
 - c) Physical
 - d) None of these
- 3) The headquarter of _____ trade organization is in Geneva.
 - a) WTO
 - b) OPEC
 - c) SAARC
 - d) None of these
- 4) _____ and Wholesale trade are the two methods of trade.
 - a) Swing
 - b) Stock
 - c) Retail
 - d) None of these
- 5) _____ is the producer group of the world's Petroleum Products exporting countries.
 - a) OPEC
 - b) WTO
 - c) SAARC
 - d) None of these
- 6) The _____ climate of Mumbai has helped the early growth of cotton Textile industry in India.
 - a) Humid
 - b) Temperate
 - c) Cold
 - d) None of these
- 7) Exchange of goods between two countries is called _____ Trade.
 - a) National
 - b) International
 - c) Retail
 - d) wholesale
- 8) Tourism is the _____ Largest industries in the world.
 - a) 1st
 - b) 2nd
 - c) 3rd
 - d) 4th
- 9) The _____ was India's biggest trading partner in 2022-23.
 - a) Japan
 - b) United States
 - c) China
 - d) Srilanka
- 10) Most of India's _____ trade is by sea routs.
 - a) Local
 - b) National
 - c) International
 - d) Air

- b) Fill in the blanks.** **06**
- 1) George Chisholm is considered as father of modern _____ geography.
 - 2) Agriculture is a _____ type of economic activity.
 - 3) Saudi Arabia is the leading exporter of _____ in world.
 - 4) National and International are two levels at which _____ can be conducted.
 - 5) Agro - Tourism is an industry related to _____.
 - 6) _____ state has leading textile mills in India.

Q.2 Answer the following. **16**

- a) State the problems of tourism in India.
- b) Write importance of commercial geography.
- c) Explain the Concept of Optimum population.
- d) Define physical and culture environment.

Q.3 Answer the following. **16**

- a) Describe in brief Agro-tourism development in India.
- b) Explain the classification of economic activities of man.

Q.4 Answer the following. **16**

- a) Describe Commercial geography nature and Scope.
- b) Explain the approaches of commercial geography.

Q.5 Answer the following. **16**

- a) Explain the contribution of economic activities in national development.
- b) Explain the concept of over and under population.

Q.6 Answer the following. **16**

- a) Describe the development of Cotton Textile industries in India.
- b) Explain the physical factors affecting on tourism development.

Q.7 Answer the following. **16**

- a) Describe the importance of transportation in commercial development.
- b) Give an account of Automobile industry in India.

Seat No.	
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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
GEOINFORMATICS**

Fundamentals of GIS and Remote Sensing (MSC017310)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Choose the correct alternative.

10

- 1) An altitude of the Sun synchronous satellite is _____ kilometres.
 - a) 700-900
 - b) 1000
 - c) 2000
 - d) 6000
- 2) _____ a precision camera specifically designed for use in aircrafts.
 - a) Aerial Camera
 - b) Aerial sensor
 - c) Aerial Film
 - d) Aerial lens
- 3) The relation between velocity, wavelength and frequency can be given as _____.
 - a) $\lambda = c/r$
 - b) $\lambda = c/f$
 - c) $\lambda = c/h$
 - d) $\lambda = h * c/f$
- 4) _____ use their own source of energy and the earth surface is illuminated by this energy.
 - a) Active sensors
 - b) Passive sensors
 - c) LIDAR
 - d) RADAR
- 5) When the scale of an aerial photograph is 1: 15,000 and larger, the photography is known as _____.
 - a) long-scale photograph
 - b) medium-scale photograph
 - c) small-scale photograph
 - d) large-scale photograph
- 6) The segments present in GPS are _____.
 - a) Ground control
 - b) Space
 - c) User equipment
 - d) All the above
- 7) What is meant by study of something without direct contact?
 - a) Cartography
 - b) Remote sensing
 - c) Geographic information system
 - d) Geography
- 8) Among the available formats, which are most commonly used in case of GIS for raster dataset?
 - a) GIF
 - b) TIFF
 - c) JPEG
 - d) .shp
- 9) GPS is maintained by the _____ government and is freely accessible to anyone with a GPS receiver.
 - a) Indian
 - b) European
 - c) United States
 - d) Japanese

- 10) _____ are stationary like a tripod (for field observation) and stationary balloons or mobile like aircrafts and spacecrafts.
- a) Sensors
 - b) Satellites
 - c) Platforms
 - d) None of these

B) Fill in the blanks OR Write True or False. 06

- 1) In visible region, the blue light is having a wavelength range of _____.
- 2) The _____ consists of three major segments: the Space Segment, the Control Segment, and the User Segment.
- 3) _____ data is data that is location specific.
- 4) _____ is Art, science and technology of taking aerial photographs from an air-borne platform.
- 5) Active remote sensing depends on other sources of energy. (True/False)
- 6) In vector data, the basic units of spatial information are points, lines (arcs) and polygons. (True/False)

Q.2 Answer the following. 16

- a) Explain types of remote sensing
- b) Stereoscopic parallax
- c) Terrain Analysis
- d) GPS Segments

Q.3 Answer the following.

- a) What is aerial photography? Explain in detail types of aerial photographs on the basis of camera axis. 08
- b) Application of remote sensing and GIS in mineral exploration. 08

Q.4 Answer the following.

- a) Define resolution and explain its types. 08
- b) Write notes on components of GIS. 08

Q.5 Answer the following.

- a) Write in brief on interaction of electromagnetic spectrum with earth surface material. 08
- b) Explain in detail measurement of Errors of GPS. 08

Q.6 Answer the following.

- a) What is overlay analysis and explain Vector based overlay. 08
- b) Write in brief geographical coordinate system. 08

Q.7 Answer the following.

- a) Note on satellite Remote Sensing. 08
- b) Write in detail geospatial data models. 08

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Set **P**

**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
GEOINFORMATICS**

Fundamentals of GIS and Remote Sensing (MSC017310)

Day & Date: Thursday, 18-01-2024
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Choose the correct alternative. 10

- 1) In electromagnetic spectrum visible range starts from _____ nanometers.
 - a) 400
 - b) 40
 - c) 4
 - d) 0.4
- 2) DN values in image pixel represents _____.
 - a) Scattering
 - b) Atmospheric window
 - c) Spatial resolution
 - d) Reflectance
- 3) LIDAR sensor is used to _____.
 - a) Land observation
 - b) Ocean monitoring
 - c) Distance and altitude measurement
 - d) Navigation
- 4) An altitude of Sun synchronous satellite is _____ kilometers.
 - a) 600-800
 - b) 1000
 - c) 2000
 - d) 6000
- 5) IRS series satellites are _____ satellites.
 - a) Israel
 - b) Japanese
 - c) Indian
 - d) Indonesian
- 6) Which of the following factor plays important role in the determination of photo scale?
 - a) Focal length
 - b) Shadow
 - c) Displacement
 - d) Type of camera
- 7) An example of non-imaging active micro wave sensor is _____.
 - a) Radiometer
 - b) Radar
 - c) Light Detection and Ranging
 - d) SAR
- 8) Normally an overlap in aerial photographs is required to obtain _____.
 - a) Three dimension
 - b) Clear photo
 - c) Scale
 - d) To remove displacement in an aerial photo
- 9) Mie scattering occurs when the particle size is _____.
 - a) > 10 micrometre
 - b) 0.1 to 10 micrometre
 - c) 5 micrometre
 - d) < 1 micrometre
- 10) _____ absorbs thermal radiation.
 - a) Ozone
 - b) Water vapour
 - c) Dust particles
 - d) CO₂

- B) Fill in the blanks OR Write True or False. 06**
- 1) _____ is the ratio of reflected energy to incident energy.
 - 2) Father of GIS is _____.
 - 3) Indian GPS System always follow _____ datum.
 - 4) Minimum number of Satellite required to get position in GPS _____.
 - 5) Sensors, which sense natural radiations, either emitted or reflected from the earth, are called passive sensors. (True/False)
 - 6) TIN stands for Triple Irregular Network. (True/False)

- Q.2 Answer the following. 16**
- a) What is Remote Sensing?
 - b) What is parallax in aerial photography?
 - c) Explain concept of GIS
 - d) Explain DEM.

- Q.3 Answer the following. 08**
- a) Explain in detail elements of image interpretation. 08
 - b) Describe components of GIS. 08

- Q.4 Answer the following. 08**
- a) Explain in detail various data models 08
 - b) Explain in detail scale of aerial photographs. 08

- Q.5 Answer the following. 08**
- a) Describe Landsat Data series. 08
 - b) Explain in detail various types of aerial photographs. 08

- Q.6 Answer the following. 08**
- a) What is FCC? Describe the variation in colour of geographical features in FCC. 08
 - b) Explain in detail various types of map projection. 08

- Q.7 Answer the following. 08**
- a) What is GIS analysis? Explain in detail overlay analysis with diagrams. 08
 - b) Describe in detail applications and limitations of GPS. 08

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
GEOINFORMATICS
Climatology (MSC017311)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. No. 1 and. 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.
4) Draw neat and labeled diagrams wherever necessary.

Q.1 A) Fill in the blank with appropriate choice: 10

- 1) The first compendium on climatology 'Meteorologica' was produced by _____.
a) Hippocrates b) Aristotle
c) Theophrastus d) George Hadley
- 2) What is the most important element of climatology?
a) Temperature b) Pressure
c) Rainfall d) Humidity
- 3) The zone of _____ winds are known as ferrel cell.
a) westerly b) trade
c) easterly d) none of these
- 4) Which region of the earth receives maximum solar radiation?
a) equator b) subpolar
c) poles d) none of these
- 5) Vertical decrease in temperature of atmosphere is called as _____.
a) thermal inversion b) lapse rate
c) both A & B d) none of these
- 6) Moist adiabatic laps rate lies nearby in the range of _____.
a) 1⁰ to 3⁰ c/ km b) 5⁰ to 7⁰ c/ km
c) 3⁰ to 5⁰ c/ km d) 7⁰ to 9⁰ c/ km
- 7) The narrow band of strong westerly wind current in the upper level of atmosphere is termed as _____.
a) narrow wind b) westerly wind
c) jet stream d) coriolis flow
- 8) _____ is the lowermost layer of atmosphere.
a) Troposphere b) Stratosphere
c) Mesosphere d) Thermosphere
- 9) The tiny and white granular ice particles that settle over the edges objects is called as _____.
a) hoar frost b) rime
c) dew drops d) none of these

- 10) Unequal heating of earth is cause due to _____.
a) coriolis force
b) pressure difference
c) angle of incidence of solar radiation
d) both B & C

B) Answer the following.**06**

- 1) The temperature at which relative humidity is 100% is _____.
- 2) IWDR stands for _____.
- 3) Ice deposited on roofs and grass is called as _____.
- 4) Hurricanes are represented by circular isobars.
(State whether true or false).
- 5) Trade winds blow between 30⁰ and 60⁰ latitudes.
(State whether true or false).
- 6) The Coriolis force deflects the winds in the northern hemisphere to the right.
(State whether true or false).

Q.2 Write notes on.**16**

- a) Humidity and its types
- b) Explain land and sea breeze
- c) Discuss evapotranspiration
- d) Elements of climatology

Q.3 Answer the following.**16**

- a) Write a note on thunderstorms.
- b) Write a brief note on condensation and its forms.

Q.4 Explain in details.**16**

- a) Hydrological cycle.
- b) Write a detailed note on regional climatology.

Q.5 Describe the following.**16**

- a) Tricellular theory of atmospheric circulation
- b) History of climatology

Q.6 Write note on.**16**

- a) Nature and scope of climatology
- b) Tornados

Q.7 Answer the following.**16**

- a) Explain eddy's theory in brief.
- b) Which factors are responsible for change the environment.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MATERIAL SCIENCE
Energy Harvesting Devices (MSC03312)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) A solar cell is a _____.
 - a) P-type semiconductor
 - b) N-type semiconductor
 - c) Intrinsic semiconductor
 - d) P-N Junction
- 2) Which of the following capacitors has the highest capacitance value?
 - a) Ceramic capacitor
 - b) Parallel plate capacitor
 - c) Electrolytic capacitor
 - d) Electrochemical supercapacitors
- 3) The piezoelectric materials used for converting energy are called as _____.
 - a) Transition Devices
 - b) Converter
 - c) Transducer
 - d) Dielectric
- 4) Alkali fuel cell operate on compressed _____ and _____ gases.
 - a) Hydrogen, oxygen
 - b) Helium, Neon
 - c) Nitrogen, Argon
 - d) None of these
- 5) Which of the following highest power density value?
 - a) Capacitor
 - b) Battery
 - c) Supercapacitor
 - d) None of these
- 6) The Fill Factor of the solar cell is $FF = \frac{V_m I_m}{V_{oc} I_{sc}}$.
 - a) $V_m I_m / V_{oc} I_{sc}$
 - b) $V_m I_m / V_{oc} I_{sc}$
 - c) $V_m V_{oc} / I_m I_{sc}$
 - d) $V_{oc} I_{sc} / V_m I_m$
- 7) _____ material is used as window layer in the solar cell.
 - a) CdSe
 - b) CdTe
 - c) ZnO
 - d) CuInSe₂
- 8) The band gap of the CdS material is _____.
 - a) 3.2 eV
 - b) 1.12 eV
 - c) 0.66 eV
 - d) 2.45 eV
- 9) Hybrid capacitor electrodes contains _____ as the electrode materials.
 - a) Metal oxide
 - b) Carbon
 - c) Combination of a and b
 - d) None of these

- 10) Piezoelectricity is shown by substances which are _____.
a) Polar
b) Non-polar
c) Symmetric
d) Asymmetric

B) Write True or False / Fill in the blanks.**06**

- 1) The piezoelectric materials used for converting energy are called as _____.
- 2) _____ is one of the most preferable electrolytes for liquid solar cell.
- 3) _____ is most preferable metal oxide in Dye Sensitized Solar Cell.
- 4) Shockley queasier limit is defined for Quantum Efficiency. (True / False)
- 5) The efficiency of QDSSC is lower than DSSC due to Multiple excitons. (True / False)
- 6) QDSSC is not a multi-junction solar cell (True / False)

Q.2 Answer the following.**16**

- a) Write in brief about piezoelectric single crystal materials?
- b) Write about photovoltaic effect.
- c) Write the solar cell characterizations.
- d) State the Supercapacitor characterizations.

Q.3 Answer the following.

- a) Write in detail about piezoelectric bulk power generators.
- b) Explain in short about Electrostrictive polymers.

10**06****Q.4 Answer the following.**

- a) Elaborate the construction and working of Metal-Semiconductor solar cell.
- b) Explain fabrication of supercapacitor with one example.

10**06****Q.5 Answer the following.**

- a) Elaborate the construction and working of Phosphoric Acid fuel cell.
- b) Write in brief about conversion efficiency of power generators.

10**06****Q.6 Answer the following.**

- a) Explain fabrication of supercapacitors with an example.
- b) Explain in brief about Piezoelectric thin films.

10**06****Q.7 Answer the following.**

- a) Explain the construction and working of CdTe-based solar cells.
- b) Write in brief about Laser Micromachining as a mechanical energy harvester.

10**06**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MATHEMATICS
Numerical Techniques (MSC15308)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) The degree of $y(x)$ in Simpson's $\frac{1}{3}$ rule is _____.
 - a) 3
 - b) 2
 - c) 0
 - d) 1
- 2) Every polynomial equation of the n^{th} degree has _____ roots.
 - a) atleast n distinct roots
 - b) atleast n multiple roots
 - c) atmost n distinct roots
 - d) atmost $2n$ distinct roots
- 3) If $\Delta f(x) = f(x+h) - f(x)$, then for a constant 8 , $\Delta 8$ equals to _____.
 - a) One
 - b) Zero
 - c) $f(8) - f(0)$
 - d) $f(8)$
- 4) The root of the equation $f(x) = 0$ lies in interval (a, b) if _____.
 - a) $f(a)f(b) = 0$
 - b) $f(a)f(b) > 0$
 - c) $f(a)f(b) < 0$
 - d) $f(a)f(b) = 1$
- 5) If $A = \begin{bmatrix} -3 & 3 \\ 9 & -8 \end{bmatrix}$ then the determinant of A is _____.
 - a) -3
 - b) 24
 - c) 0
 - d) -11
- 6) Newton's _____ difference interpolation formula is useful for interpolation near the beginning of tabular values.
 - a) Forward
 - b) Backward
 - c) Central
 - d) None of these
- 7) The roots of the quadratic equation $x^2 - 5x + 6 = 0$ are _____.
 - a) 2,5
 - b) 4,1
 - c) 2,2
 - d) 2,3
- 8) Newton's interpolation formula is used when arguments are _____.
 - a) Zero
 - b) Equally spaced
 - c) Non-zero
 - d) Unequally spaced
- 9) The positive root of the equation $x^3 - 4x - 9 = 0$ using Regula Falsi method and correct to 4 decimal places is _____.
 - a) 2.7065
 - b) 2.7123
 - c) 2.7214
 - d) 2.0602

10) The solution of system of linear equation $2x - 5y = 4, 3x + 7y = 1$ is

a) $x = \frac{1}{29}, y = \frac{-10}{29}$

b) $x = \frac{4}{29}, y = \frac{20}{29}$

c) $x = \frac{1}{39}, y = \frac{33}{29}$

d) $x = \frac{33}{29}, y = \frac{-10}{29}$

B) Fill in the blanks.

06

- 1) The averaging operator μy_r is _____.
- 2) The relation between percentage error and relative error is _____.
- 3) The symbol used for backward difference operator is _____.
- 4) In Gauss elimination method the coefficient matrix is reduced to _____.
- 5) Rounded off value of 0.859378 to four significant figures is _____.
- 6) The Newton Raphson method fails if $f'(x)$ is _____.

Q.2 Answer the following.

16

a) Show that,

$$\Delta^n u_{x-n} = u_x - nu_{x-1} + \frac{n(n-1)}{2!}u_{x-2} + \frac{n(n-1)(n-2)}{3!}u_{x-3} + \dots + (-1)^n u_{x-n}.$$

- b) If an approximate value of π is $X_1 = \frac{22}{7} = 3.1428571$ and its true value is $X = 3.1415926$ then find absolute and relative errors?
- c) Prove that $\mu\delta = \frac{1}{2}(\Delta + \nabla)$.
- d) Define tridiagonal matrix and orthogonal matrix.

Q.3 Answer the following.

- a) Find cubic polynomial which takes the values $f(1) = 24, f(3) = 120, f(5) = 336, f(7) = 725$ and obtain the value of $f(8)$ using Newton's backward interpolation formula. 10
- b) Solve the following system of equations: 06
 $2x + 2y + z = 6, 4x + 2y + z = 6, x + y + z = 0$
 By using Gauss-elimination method.

Q.4 Answer the following.

- a) Find a real root of the equation $x^3 - 2x - 5 = 0$ by Bisection method, correct upto two decimal places. 08
- b) Derive a formula of Trapezoidal rule. 08

Q.5 Answer the following.

a) From the following data calculate $f(3)$ using Lagrange's interpolation formula. 08

x	0	1	2	4	5	6
$Y = f(x)$	1	14	15	5	6	19

b) Find the value of $I = \int_0^1 \frac{1}{1+x^2} dx$ by using the Simpson's $\frac{1}{3}$ rule with $h = 0.125$. 08

Q.6 Answer the following.

- a) Explain the Gaussian elimination method. 10
- b) Find all the eigen values and eigen vectors of the matrix $\begin{bmatrix} 1 & 2 \\ 3 & 2 \end{bmatrix}$. 06

Q.7 Answer the following.

- a) Find the approximate root of $17^{\frac{1}{3}}$ with initial approximation $x_0 = 2$ by using Newton-Raphson's method. **08**
- b) Solve the following system of equations: **08**
 $2x + 3y + z = 9$, $x + 2y + 3z = 6$, $3x + y + 2z = 8$
By using LU-decomposition method.

Seat No.	
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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MICROBIOLOGY (CAMPUS)**

Environmental Microbiology and Waste Management (MSC01311)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) In water tracing techniques _____ is used as a visible tracer.
 - a) Azo dyes
 - b) Vat dyes
 - c) Fluorescent dyes
 - d) Acid dyes
- 2) The lake poor in nutrients is _____ lake.
 - a) Mesotrophic
 - b) Oligotrophic
 - c) Eutrophic
 - d) All of these
- 3) The waste water generated by _____ industry is called spent wash.
 - a) Textile
 - b) Paper & pulp
 - c) Cyanide
 - d) Distillery
- 4) _____ method is generally used for industrial waste treatment by GEM.
 - a) Bioaugmentation
 - b) Bioaccumulation
 - c) Biofilter
 - d) Biofilm
- 5) In an anaerobic treatment _____ gas is produced in large amount.
 - a) CH₄
 - b) H₂S
 - c) O₂
 - d) H₂
- 6) _____ is a strong chemical oxidizing agent used in determination of COD.
 - a) Ferrous ammonium sulfate
 - b) K₂Cr₂O₇
 - c) Na₂S₂O₃
 - d) Starch
- 7) In _____ type of lake the balance between activity of producer organism & consumer organism is equal.
 - a) Eutrophic
 - b) Mesotrophic
 - c) Oligotrophic
 - d) All of these
- 8) The term ecosystem was proposed by British ecologist _____.
 - a) A.G. Tansley
 - b) Lindeman
 - c) Robert Warden
 - d) Rachel carson
- 9) Which of the following is not biotic component?
 - a) Phytoplankton
 - b) Herbivores
 - c) Bacteria
 - d) Light
- 10) What is the full form of ETPs that usually carried out before the disposal of waste water into the natural water bodies to make it less polluting?
 - a) Exclusive treatment problems
 - b) Effective treatment processes
 - c) Effluent treatment plant
 - d) Sewage treatment plant

- B) Write True/False** **06**
- 1) In cometabolism both the substrates are act as carbon & energy source for the growth of microorganisms.
a) True b) False
 - 2) Edaphology is the relationship between soil and living organisms.
a) True b) False
 - 3) The meaning of the word ecology was given by British ecologist A.G. Tansley.
a) True b) False
 - 4) The waste water generated by dairy industry is called whey.
a) True b) False
 - 5) In effluent treatment plant (ETP) a grit chamber is usually installed before primary sedimentation tanks.
a) True b) False
 - 6) Denitrification is a chemical reaction that occurs during anaerobic digestion of wastewater treatment system.
a) True b) False
- Q.2 Answer the following.** **16**
- a) Define the term Ecology and Ecosystem.
 - b) What are the different characteristics & property of eutrophic lake?
 - c) Explain in detail about activated sludge process.
 - d) Write a note on impacts of pollutants on biotreatment with respect to cometabolism & Low concentration of substrate situation.
- Q.3 Answer the following.**
- a) Write in detail about factors which are responsible for eutrophication. **10**
 - b) Write a note on fluidized bed reactor. **06**
- Q.4 Answer the following.**
- a) Define ETP with neat labelled diagram & explain primary treatment used for treatment of industry waste water. **10**
 - b) What is difference between healthy ecosystem & eutrophic ecosystem? **06**
- Q.5 Answer the following.**
- a) Explain in detail about bioaugmentation. **10**
 - b) Explain in detail about the different characteristics & treatment of textile industry waste water. **06**
- Q.6 Answer the following.**
- a) Explain in detail about the physical, chemical & biological characteristics of different waste water. **10**
 - b) Write a note on water tracing. **06**
- Q.7 Answer the following.**
- a) Discuss in detail characteristics of any four different industrial wastes. **10**
 - b) Write a note on environmental audit. **06**

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MICROBIOLOGY
Agricultural Microbiology (MSC023310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) The oxidation of ammonia to nitrite is carried out by _____ species.
 - a) Nitrosomonas
 - b) Nitrosococcus
 - c) Nitrobacter
 - d) Both nitrosomonas and nitrosococcus
- 2) On _____ of the following the baculoviruses attack.
 - a) Arthropods
 - b) Mammals
 - c) Fishes
 - d) Plants
- 3) _____ of the following crop has been developed by genetic engineering in India.
 - a) Bt-potato
 - b) Bt-pomato
 - c) Bt-cotton
 - d) Bt-jute
- 4) _____ is the Phosphate solubilizing bacterium.
 - a) *Bacillus megaterium*
 - b) *Clostridium pasteurianum*
 - c) *A. Niger*
 - d) *Micrococcus* sp
- 5) The neem product used as insect repellent is _____.
 - a) Azadiractin
 - b) Parathion
 - c) Rotenone
 - d) Endrin
- 6) _____ is an example of plant growth promoting substance produced by microorganisms in the rhizosphere.
 - a) Siderophore
 - b) IAA
 - c) Gibberllic acid
 - d) All of the above
- 7) Fogg's medium is used for isolation of _____ in biofertilizer preparation
 - a) Rhizobium
 - b) Azospirillum
 - c) Cyanobacteria
 - d) Azolla
- 8) The ability of an individual cell to develop into a whole plant is called _____.
 - a) Cellular totipotency
 - b) tissue culture
 - c) cell division
 - d) none of the above
- 9) Crop rotation is practiced for the irradiation of _____.
 - a) air borne diseases
 - b) seed borne diseases
 - c) soil borne diseases
 - d) vector borne diseases
- 10) Leghaemoglobin is found in _____.
 - a) Root nodules of legumes
 - b) Mycorrhiza
 - c) Coralloid roots
 - d) Cyanobacteria

B) Fill in the blanks OR Write True or False. 06

- 1) Siderophore is iron chelating plant growth promoting substance.
a) True b) False
- 2) Indole-3-acetic acid is not an auxin.
a) True b) False
- 3) _____ is an example of N₂fixing actinomycete.
- 4) VAM fungi is an example of phosphate absorber.
a) True b) False
- 5) The region where soil and roots make contact and rich in microbial population is called _____.
- 6) Enzyme responsible for Nitrogen fixation is _____.

Q.2 Answer the following. 16

- a) Merits and limitations of biofertilizers
- b) Siderophores
- c) Green manure.
- d) Explain root exudates and its role.

Q.3 Answer the following. 08

- a) Explain the production and methods of applications of vermicompost. 08
- b) Physicochemical properties of soil. 08

Q.4 Answer the following. 08

- a) Write an essay on production and application of Azotobacter- Rhizobium biofertilizers. 08
- b) Write a note on Plant tissue culture. 08

Q.5 Answer the following. 10

- a) Write in detail about Nitrogen cycle. 10
- b) Write a note on rhizosphere and rhizospheric effect. 06

Q.6 Answer the following. 10

- a) Write about biopesticide *Bacillus thuringiensis*, its commercial Production formulation and methods of application. 10
- b) Give an account of Phosphorus cycle. 06

Q.7 Answer the following 08

- a) Give the detailed account of carbon cycle and its significance. 08
- b) Give an account of plant growth promoting rhizobacteria with examples. 08

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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
MICROBIOLOGY

Environment and Waste Management Technology (MSC023311)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) Biggest reservoir of nitrogen is _____.
 - a) Atmosphere
 - b) Geological deposits
 - c) Organic waste
 - d) Inorganic ores
- 2) _____ is only carried out by bacteria and fungi in carbon cycle.
 - a) Nitrogen fixation
 - b) Decomposition
 - c) Photosynthesis
 - d) Assimilation
- 3) _____ are pioneer colonisers of rock surface.
 - a) algae
 - b) fungi
 - c) Bacteria
 - d) Lichens
- 4) _____ test is used to determine potability of water.
 - a) SPC
 - b) BOD
 - c) SOM
 - d) MPN
- 5) _____ is indicator of fecal pollution.
 - a) E coli
 - b) Enterobacter
 - c) Citrobacter
 - d) Pseudomonas
- 6) _____ of the following is adiarrhoeal waterborne disease.
 - a) Amoebiasis
 - b) Syphilis
 - c) AIDS
 - d) Tuberculosis
- 7) The process in which dewatered sludge undergoes decomposition is described as _____.
 - a) composting
 - b) sludge digestion
 - c) activated sludge process
 - d) lagooning
- 8) Self regulating biological communities and their physical environment is called _____.
 - a) biosphere
 - b) ecosphere
 - c) ecosystem
 - d) ecophene
- 9) The earth odour that emanates from soil after first monsoon rains is due to _____.
 - a) archaeobacteria
 - b) agrobacterium
 - c) actinomycets
 - d) ascomycetes
- 10) _____ is used for MPN.
 - a) BGLB
 - b) EMB
 - c) MacConkey broth
 - d) CRYEA

- B) Write True or False.** **06**
- 1) Any waste material can be recycled.
 - 2) Streptococcus faecalis indicator of water pollution.
 - 3) Brilliant green lactose bile broth is used in presumptive.
 - 4) Incineration is the primary means of waste disposal used today.
 - 5) The long-term success of recycling programs is tied to economic incentives.
 - 6) Chemical waste can be considered as domestic waste
- Q.2 Answer the following.** **16**
- a) Write a short note on Environmental segments.
 - b) Write short note on abiotic environment.
 - c) Write in details on food chain.
 - d) Write on coliforms.
- Q.3 Answer the following.** **16**
- a) Write in details on Vermicomposting.
 - b) Describe green house gases.
- Q.4 Answer the following.** **16**
- a) Describe effects of eutrophication on the quality of water environment
 - b) Write in details on BOD
- Q.5 Answer the following.** **16**
- a) Explain COD.
 - b) Write in details on ecosystems.
- Q.6 Answer the following.** **16**
- a) Write on treatment of distillery.
 - b) Waste management in paper and Pulp industry.
- Q.7 Answer the following.** **16**
- a) Write on waste disposal control and regulations.
 - b) Describe Sources of water pollution.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
NANO PHYSICS
Energy Harvesting Devices (MSC09310)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) A solar cell is a _____.
 a) P-type semiconductor b) N-type semiconductor
 c) Intrinsic semiconductor d) P-N Junction
- 2) Which of the following capacitors has the highest capacitance value?
 a) Ceramic capacitor
 b) Parallel plate capacitor
 c) Electrolytic capacitor
 d) Electrochemical supercapacitors
- 3) The piezoelectric materials used for converting energy are called as _____.
 a) Transition Devices b) Converter
 c) Transducer d) Dielectric
- 4) Alkali fuel cell operate on compressed _____ and _____ gases.
 a) Hydrogen, oxygen b) Helium, Neon
 c) Nitrogen, Argon d) None of these
- 5) Which of the following highest power density value?
 a) Capacitor b) Battery
 c) Supercapacitor d) None of these
- 6) The Fill Factor of the solar cell is $FF =$ _____.
 a) $V_{mlm} \cdot V_{oc} / I_{sc}$ b) $V_{mlm} / V_{oc} I_{sc}$
 c) $V_m V_{oc} / I_m I_{sc}$ d) $V_{oc} I_{sc} / V_{mlm}$
- 7) _____ material is used as window layer in the solar cell.
 a) CdSe b) CdTe
 c) ZnO d) CuInSe₂
- 8) The band gap of the CdS material is _____.
 a) 3.2 eV b) 1.12 eV
 c) 0.66 eV d) 2.45 eV
- 9) Hybrid capacitor electrodes contains _____ as the electrode materials.
 a) Metal oxide b) Carbon
 c) Combination of a and b d) None of these

- 10) Piezoelectricity is shown by substances which are _____.
- a) Polar
 - b) Non-polar
 - c) Symmetric
 - d) Asymmetric

B) Write True or False / Fill in the blanks. 06

- 1) The piezoelectric materials used for converting energy are called as _____.
- 2) _____ is one of the most preferable electrolytes for liquid solar cell.
- 3) _____ is most preferable metal oxide in Dye Sensitized Solar Cell.
- 4) Shockley queasier limit is defined for Quantum Efficiency. (True / False)
- 5) The efficiency of QDSSC is lower than DSSC due to Multiple excitons. (True / False)
- 6) QDSSC is not a multi-junction solar cell (True / False)

Q.2 Answer the following. 16

- a) Write in brief about piezoelectric single crystal materials?
- b) Write about photovoltaic effect.
- c) Write the solar cell characterizations.
- d) State the Supercapacitor characterizations.

Q.3 Answer the following. 10

- a) Write in detail about piezoelectric bulk power generators. 10
- b) Explain in short about Electrostrictive polymers. 06

Q.4 Answer the following. 10

- a) Elaborate the construction and working of Metal-Semiconductor solar cell. 10
- b) Explain fabrication of supercapacitor with one example. 06

Q.5 Answer the following. 10

- a) Elaborate the construction and working of Phosphoric Acid fuel cell. 10
- b) Write in brief about conversion efficiency of power generators. 06

Q.6 Answer the following. 10

- a) Explain fabrication of supercapacitors with an example. 10
- b) Explain in brief about Piezoelectric thin films. 06

Q.7 Answer the following. 10

- a) Explain the construction and working of CdTe-based solar cells. 10
- b) Write in brief about Laser Micromachining as a mechanical energy harvester. 06

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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
SOLID STATE PHYSICS
Energy Harvesting Devices (MSC10313)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7
 3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below. 10

- 1) A solar cell is a _____.
 - a) P-type semiconductor
 - b) N-type semiconductor
 - c) Intrinsic semiconductor
 - d) P-N Junction
- 2) Which of the following capacitors has the highest capacitance value?
 - a) Ceramic capacitor
 - b) Parallel plate capacitor
 - c) Electrolytic capacitor
 - d) Electrochemical supercapacitors
- 3) The piezoelectric materials used for converting energy are called as _____.
 - a) Transition Devices
 - b) Converter
 - c) Transducer
 - d) Dielectric
- 4) Alkali fuel cell operate on compressed _____ and _____ gases.
 - a) Hydrogen, oxygen
 - b) Helium, Neon
 - c) Nitrogen, Argon
 - d) None of these
- 5) Which of the following highest power density value?
 - a) Capacitor
 - b) Battery
 - c) Supercapacitor
 - d) None of these
- 6) The Fill Factor of the solar cell is $FF =$ _____.
 - a) $V_{mlm} \cdot V_{oc} / I_{sc}$
 - b) $V_{mlm} / V_{oc} I_{sc}$
 - c) $V_m V_{oc} / I_m I_{sc}$
 - d) $V_{oc} I_{sc} / V_{mlm}$
- 7) _____ material is used as window layer in the solar cell.
 - a) CdSe
 - b) CdTe
 - c) ZnO
 - d) CuInSe₂
- 8) The band gap of the CdS material is _____.
 - a) 3.2 eV
 - b) 1.12 eV
 - c) 0.66 eV
 - d) 2.45 eV
- 9) Hybrid capacitor electrodes contains _____ as the electrode materials.
 - a) Metal oxide
 - b) Carbon
 - c) Combination of a and b
 - d) None of these

- 10) Piezoelectricity is shown by substances which are _____.
 a) Polar
 b) Non-polar
 c) Symmetric
 d) Asymmetric

B) Write True or False / Fill in the blanks. 06

- 1) The piezoelectric materials used for converting energy are called as _____.
- 2) _____ is one of the most preferable electrolytes for liquid solar cell.
- 3) _____ is most preferable metal oxide in Dye Sensitized Solar Cell.
- 4) Shockley queasier limit is defined for Quantum Efficiency. (True / False)
- 5) The efficiency of QDSSC is lower than DSSC due to Multiple excitons. (True / False)
- 6) QDSSC is not a multi-junction solar cell (True / False)

Q.2 Answer the following. 16

- a) Write in brief about piezoelectric single crystal materials?
- b) Write about photovoltaic effect.
- c) Write the solar cell characterizations.
- d) State the Supercapacitor characterizations.

Q.3 Answer the following.

- a) Write in detail about piezoelectric bulk power generators. 10
- b) Explain in short about Electrostrictive polymers. 06

Q.4 Answer the following.

- a) Elaborate the construction and working of Metal-Semiconductor solar cell. 10
- b) Explain fabrication of supercapacitor with one example. 06

Q.5 Answer the following.

- a) Elaborate the construction and working of Phosphoric Acid fuel cell. 10
- b) Write in brief about conversion efficiency of power generators. 06

Q.6 Answer the following.

- a) Explain fabrication of supercapacitors with an example. 10
- b) Explain in brief about Piezoelectric thin films. 06

Q.7 Answer the following.

- a) Explain the construction and working of CdTe-based solar cells. 10
- b) Write in brief about Laser Micromachining as a mechanical energy harvester. 06

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
STATISTICS
Applied Statistics (MSC16308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Question no. 1 and 2 are compulsory.
 2) Attempt any three questions from Q. No. 3 to Q. No. 7.
 3) Figure to right indicate full marks.
 4) Use of calculator is allowed.

Q.1 A) Multiple choice questions.

10

- 1) Selection of Indian Cricket team for World cup is _____ sampling.
 - a) random
 - b) systematic
 - c) stratified
 - d) none of these
- 2) Non-sampling error can be reduced by _____.
 - a) increasing the sample size
 - b) decreasing the sample size
 - c) reducing amount of data
 - d) none of these
- 3) Laspeyre's index formula uses weights of the _____.
 - a) base year
 - b) current year
 - c) average of the weights of a number of years
 - d) none of these
- 4) The condition for the time reversal test to hold good with usual notations is _____.
 - a) $P_{01} \times P_{10} = 1$
 - b) $P_{10} \times P_{01} = 0$
 - c) $P_{01}/P_{10} = 1$
 - d) $P_{01} + P_{10} = 1$
- 5) Fertility rates mainly depends on _____.
 - a) total female population
 - b) total population
 - c) female population in child bearing age
 - d) number of newly born babies
- 6) The value of $NRR > 1$ indicative of _____.
 - a) increase in population
 - b) reduction in population
 - c) constancy in population
 - d) all the above
- 7) Assignable causes are _____.
 - a) not as important as natural causes
 - b) within the limits of control chart
 - c) also referred to as chance causes
 - d) causes of variation that can be identified and removed
- 8) The control limits of the p chart are based on the assumption that the number of defective items follows _____ distribution.
 - a) normal
 - b) binomial
 - c) poisson
 - d) geometric

- 9) Irregular variation in time series are caused by _____.
 a) lockout and strike b) epidemics
 c) floods d) all the above
- 10) A border check post stops every passenger van. The procedure adopted is _____.
 a) random sampling b) purposive sampling
 c) complete enumeration d) systematic sampling

B) Fill in the blanks:

06

- 1) Stratified sampling is preferred when the population is _____.
 2) Fisher's price index number is _____ mean of Laspeyre's price index and Paasche's price index.
 3) _____ fertility rate is generally used to measure the fertility between two towns.
 4) The variation due to _____ causes cannot be identified and removed from the process.
 5) Increasing in population of India represents _____ component of time series.
 6) If sample size increases, the sampling error will _____.

Q.2 Answer the following

16

- a) Describe a procedure for obtaining a sample of size n from a population of size N using SRSWOR method.
 b) What is base shifting? When one come across the problem of base shifting and how can it be tackled?
 c) During a examination of equal length of cloth, the following are the number of defects observed: 2, 3, 4, 0, 5, 6, 7, 4, 3, 2. Compute the control limits of the C chart.
 d) Explain with illustration seasonal variation in the context of time series.

Q.3 Answer the following.

- a) Explain sampling method and census method. Give advantages of sampling method over census method. **08**
 b) What is stratified sampling? Explain the problem of allocating the sample size in stratified random sampling. **08**

Q.4 Answer the following.

- a) Explain the need of index numbers? What are the problems in construction of index numbers? **08**
 b) From the following data compute price index number by **08**
 (i) Simple aggregate method
 (ii) Average of price relative method using arithmetic mean.

Commodities	A	B	C	D	E	F
Price in 1995 (Rs)	40	60	20	50	80	100
Price in 1990 (Rs)	50	60	30	70	90	120

Q.5 Answer the following.

- a) Explain the meaning of the following rates in vital statistics and discuss their importance. **08**
- i) Crude death rate
 - ii) Crude birth rate
 - iii) General fertility rate.
- b) Compute CDR and STDR for the population A and population B from following data and compare them. Use direct method of standardization taking population B as standard. **08**

Age Group	Population A		Population B	
	No. of Persons	No of Deaths	No. of persons	No of Deaths
0-10	600	18	400	16
10-20	1000	5	1500	6
20-60	3000	24	2400	24
60-100	400	20	700	21

Q.6 Answer the following.

- a) What is control chart? Explain how it helps to control the quality of manufactured product. **08**
- b) Twenty subgroup samples of each of size 5 are taken from a manufacturing process and certain quality characteristic is measured. The sample mean (\bar{X}) and sample range (R) for each subgroup are computed. After 20 subgroups, $\Sigma \bar{X} = 0.87632$ cms and $\Sigma R = 0.2410$ cms. Compute the control limits of \bar{X} chart and R chart. Given for $n = 5$, $A_2 = 0.58$, $D_3 = 0$ and $D_4 = 2.11$. **08**

Q.7 Answer the following.

- a) Define time series. Describe the moving average method for determining the trend. **08**
- b) Find out the trend values of the following time series assuming three yearly cycle. **08**

Year	1963	64	65	66	67	68	69	70	71	1972
Value	20	24	22	25	28	30	33	30	36	37

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**M.Sc. (Semester - III) (CBCS) Examination: Oct/Nov-2023
ZOOLOGY**

Wild Life and Conservation Biology (MSC31310)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Choose correct alternative.

10

- 1) Which is the renewable exhaustible natural energy resource?
 - a) Coal
 - b) Petroleum
 - c) Kerosene
 - d) Biomass
- 2) What is the significance of natural resource conservation?
 - a) Maintaining the ecological processes
 - b) Disturbing the ecological balance
 - c) Extinction of biological species
 - d) Disruption of the quality of the environment
- 3) Who gives the Red List?
 - a) NSS
 - b) IUCN
 - c) WHO
 - d) NCC
- 4) _____ is one of the most prevalent hotspots of biodiversity in India.
 - a) Himalayas
 - b) Western Ghats
 - c) Ganges
 - d) None of the above
- 5) Chandoli National Park is located in which of the following states?
 - a) Uttarakhand
 - b) Himanchal Pradesh
 - c) Maharashtra
 - d) Telangana
- 6) An organism's niche is _____.
 - a) The way the organism uses the range of physical and biological conditions in which it lives.
 - b) All the biological and physical factors in the organism's environment.
 - c) The function role played by the organism where it lives.
 - d) The range of temperature that the organism needs to live.
- 7) The hot spots of biodiversity are characterized by:
 - a) low endemicity and low threat of extinction
 - b) low endemicity and high threat of extinction
 - c) high endemicity and low threat of extinction
 - d) high endemicity and high threat of extinction
- 8) The community that initially inhabits a bare area is called _____.
 - a) Climax Community
 - b) Pioneer Community
 - c) Ploughed Field
 - d) Intermediate Stage

- 9) All the populations together make up a _____.
 a) climate b) population
 c) community d) biome
- 10) In an ecosystem, the energy flow is always
 a) Always unidirectional b) Always bidirectional
 c) In any direction d) Always down directional

B) Write true/false.**06**

- 1) Industrialization is a cause of biodiversity loss
 2) Inter-relation between different food chains is known as a food web
 3) In 1972 Wildlife Protection Act implemented in India.
 4) Natural place of an organism or community is known as biotome
 5) Hampering the biological species is an important reason for natural resource conservation
 6) Endemism is not generally seen in biodiversity hotspots

Q.2 Answer the following.**16**

- a) Give an account on industrialization
 b) Write a note on Earth Summit and its agenda
 c) Explain Red data book
 d) Give an account on Indian wild life act, 1972

Q.3 Answer the following.

- a) Explain in detail traditional conservation practices. **08**
 b) Describe structure and stratification of community in aquatic ecosystem. **08**

Q.4 Answer the following.

- a) Describe Captive breeding of endangered species **08**
 b) Explain in detail types of Ecological succession: **08**

Q.5 Answer the following.

- a) Describe anthropogenic factors affecting ecosystem and community structure. **08**
 b) Explain role of individual in conservation of natural resources. **08**

Q.6 Answer the following.

- a) Give in detail account on Environment impact assessment. **08**
 b) Describe Modern conservation practices. **08**

Q.7 Answer the following.

- a) Explain methods for Quantification of community diversity. **08**
 b) Explain in detail Wild life protection Acts. **08**

- B) Write True or False.** **06**
- 1) The interrelationship of among organisms and between organisms and their environment is called as Ecology.
 - 2) The energy flow in an ecosystem is multidirectional.
 - 3) Bhopal tragedy was due to the Methyl Isocyanate gas released.
 - 4) Learning behavior is a change of behavior by life experience is called.
 - 5) Species diversity abruptly increases as we move from equator to poles.
 - 6) GPS (Global positioning system) a network of satellites and receiving devices used to determine location on earth.
- Q.2 Answer the following.** **16**
- a) Define ecosystem, what are different types of ecosystem?
 - b) Write a note on Energy flow.
 - c) What is Mutualism? Describe with suitable examples.
 - d) Give an account on circadian rhythm.
- Q.3 Answer the following.**
- a) Give a detail account on carbon cycle. **10**
 - b) Describe the Food chain? Explain food web in grassland ecosystem. **06**
- Q.4 Answer the following.**
- a) Define a population? Give a concise account of various characteristics of population of organism. **10**
 - b) Give an account on various types of intraspecific interaction among the organism. **06**
- Q.5 Answer the following.**
- a) What is ecological community? Mention all the important characteristics of community. **10**
 - b) Describe types of biological rhythms with examples. **06**
- Q.6 Answer the following.**
- a) Define the term biodiversity; give significance of GIS and GPS in biodiversity studies. **10**
 - b) Define the Pollution? Give an account on cause of air pollution. **06**
- Q.7 Answer the following.**
- a) Give an account of abiotic and biotic factors grassland ecosystem. **10**
 - b) What are the different types of behavior? Describe in detail acquired behavior. **06**

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**M.A. (Rural Development) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Human Development (MA04308)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. 16

- 1) For how many days NREGA provides employment?
 - a) 70
 - b) 80
 - c) 90
 - d) 100
- 2) Who is considered as poor?
 - a) Landlords
 - b) Landless labourer
 - c) A rich farmer
 - d) Businessman
- 3) Women and children under the age of five are food insecure population due to:
 - a) Malnutrition
 - b) Healthy diet at
 - c) Fats
 - d) None of the above
- 4) By which year governments are aiming to meet the Millennium Development Goals including having the rate of global poverty?
 - a) 2011
 - b) 2015
 - c) 2045
 - d) 2023
- 5) Which of the following is an indicator of poverty in India?
 - a) Income level
 - b) Illiteracy level
 - c) Employment level
 - d) All of these.
- 6) Which one of the following Economic groups is vulnerable to poverty?
 - a) Scheduled Caste
 - b) Scheduled Tribes
 - c) Rural Agricultural Household
 - d) All the above
- 7) In which year was N R E G A enacted?
 - a) 2005
 - b) 2000
 - c) 1999
 - d) 1993
- 8) HDI means _____.
 - a) Human Development Industry
 - b) Human Development Index
 - c) Human Development Investigation
 - d) None of these
- 9) _____ are protective factors of personal security
 - a) Strength
 - b) Skill
 - c) Resources
 - d) All of these
- 10) _____ is social determinants of Human capital
 - a) Gross Enrollment ratio
 - b) Assets
 - c) Income
 - d) All of these

- 11) Physical quality of life index to measure _____
a) Literacy rate b) Infant Mortality Rate
c) Life Expectancy Rate d) All of these
- 12) _____ is reason for decline food grain.
a) Not commercial Purpose b) Natural Problems
c) Traditional Cultivation of Land d) All of these
- 13) School Health Programme is components of _____.
a) Intra Uterine Device b) National Rural Health Mission
c) Community Health Center d) All of these
- 14) Which three indicators are used in the Human Development Index (HDI)?
I) Standard of living
II) Education
III) Life expectancy
IV) Condition of environment
a) Only I, II & IV b) Only I, II, & III
c) Only I&II d) All of the above
- 15) _____ is developed PQLI.
a) D.Morris b) Amarty Sen
c) Martha Nussbaum d) None of these
- 16) According to David Clark _____ is a other attempt of capability Approach.
a) Jobs b) Housing
c) Education d) All of these

Q.2 Write short answers. (Any Four) 16

- a) Why Human Development Index is important?
- b) What are the criteria for selecting capabilities?
- c) What is the meaning of human capital formation?
- d) What is the meaning of environment security?
- e) What is the meaning of Human capital?
- f) What is the meaning of quality of life?

Q.3 Answer the following questions. (Any Two) 16

- a) What is the meaning and importance of Health Security?
- b) Explains the physical quality of life index.
- c) What are the components of quality of life?
- d) National Rural Health Mission is important how?

Q.4 Answer the following questions. (Any One) 16

Explain the Gender Empowerment Measure.

OR

Elaborate Marshall Utility of a Commodity approach.

Q.5 Discuss the social determinants of human development in detail. 16

Seat No.	
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**M.A. (A.I.H.C & A.) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Archaeology (MA19308)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) श्री ऐज सिस्टिम (त्रियुग सिध्दांत) — यांनी तयार केला.
अ) सी. जे. थॉमसेन ब) मॉर्टिमर व्हिलर
क) जॉन मार्शल ड) ह. ध. सांकलिया
- 2) व्ही. एस. वाकणकर यांनी — शोधले.
अ) पाटणे ब) भीमबेटका
क) आदमगड ड) मोरणा पहाड
- 3) नेवासा हे शहर — नदीच्या काठावर आहे.
अ) भीमा ब) गोदावरी
क) कृष्णा ड) प्रवरा
- 4) — हे मानवाने वापरलेले पहिले दगडी साधन (हत्यार) होते.
अ) गारगोटी ब) कुहाडी
क) चॉपर ड) ब्लेड
- 5) — पध्दत मोठ्या क्षेत्राचे उत्खनन करण्यासाठी योग्य — आहे.
अ) उत्सेध पध्दती ब) आयात पध्दती
क) पायरी पध्दती ड) यापैकी नाही
- 6) कार्बन-14 कालमापन पध्दतीचा शोध — यांनी लावला.
अ) डॉ. लिबी ब) बिनफोर्ड
क) सी. व्ही. रमण ड) सी. जे. थॉमसन
- 7) भीमबेटका लेणी — यांनी शोधली.
अ) डॉ. सांकलिया ब) मॉर्टिमर व्हिलर
क) डॉ. व्ही. एस. वाकणकर ड) यापैकी नाही
- 8) मारुंट अबु — साठी प्रसिध्द आहे.
अ) जैन मंदिरे ब) हिंदु मंदिरे
क) बौध्द मंदिरे ड) यापैकी नाही

- 9) भारतीय पुरातत्व सर्वेक्षणाची स्थापना ---- मध्ये झाली.
 अ) 1860 ब) 1861
 क) 1862 ड) 1863
- 10) ---- यांना 'भारतीय पुरातत्वशास्त्राचे जनक' असे संबोधले जाते.
 अ) लॉर्ड अलेक्झांडर ब) लॉर्ड कनिंगहॅम
 क) लॉर्ड रिपन ड) लॉर्ड कर्झन
- 11) पुरातत्वविद्याचे लेखक ---- आहेत.
 अ) एस. बी. देव ब) आर. कुलकर्णी
 क) व्ही. शिंदे ड) दयाराम साहनी
- 12) अजिंठा लेणी कोणत्या जिल्ह्यात आहेत.
 अ) लातूर ब) नाशिक
 क) छत्रपती संभाजीनगर ड) नांदेड
- 13) सूर्य मंदिर कोणत्या राज्यात आहे?
 अ) त्रिपुरा ब) हिमाचल प्रदेश
 क) ओडिशा ड) गुजरात
- 14) उत्खननाच्या आयात पध्दतीला ---- प्रणाली असेही म्हणतात.
 अ) उत्सेध ब) जाळी
 क) चाचणी ड) पायरी
- 15) अजिंठा लेणी ---- धर्माशी संबंधित आहे.
 अ) बौद्ध ब) जैन
 क) ख्रिश्चन ड) हिंदु
- 16) ---- हे "प्रीहिस्ट्री अँड प्रोटोहिस्ट्री ऑफ इंडिया अँड पाकिस्तान" या पुस्तकाचे लेखक आहेत.
 अ) एच.डी.सांकलिया ब) मॉर्टिमर व्हिलर
 क) जॉन मार्शल ड) के.एन.दिक्षित

प्र.2 खालीलपैकी प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) पुरातत्वशास्त्र आणि इतिहास
 ब) पुरातत्वशास्त्राची उद्दिष्टे
 क) पुरातत्वशास्त्र आणि भूशास्त्र
 ड) एलोरा (वेरुळ) लेणी
 इ) सूर्य, मंदिर, कोणार्क
 ई) दगडी शिल्पे

प्र.3 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणतेही दोन)

16

- अ) पुरातत्वीय उत्खननाच्या पध्दती स्पष्ट करा.
 ब) नाणकशास्त्र आणि शिलालेखशास्त्र विषयी वर्णन करा.
 क) कैलास मंदिर, वेरुळ थोडक्यात वर्णन करा.
 ड) पुरातत्वशास्त्र आणि सामाजिक शास्त्रे थोडक्यात लिहा.

प्र.4 खालीलपैकी कोणत्याही एका प्रश्नाचे उत्तर लिहा.
हडप्पा संस्कृतीचे वर्णन करा.

16

किंवा

प्रागैतिहासिक (पाषाण युग) संस्कृतीची चर्चा करा.

प्र.5 पुरातत्वीय अन्वेषण पध्दतीचे वर्णन करा.

16

Seat No.	
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**M.A. (A.I.H.C & A.) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Archaeology (MA19308)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. 16

- 1) Three age system was first formulated by _____.
 - a) C.J. Thomsen
 - b) Mortimer Wheeler
 - c) John Marshall
 - d) H.D. Sankaliya
- 2) V.S. Wakankar discovered _____.
 - a) Patne
 - b) Bhimbetka
 - c) Adamgarh
 - d) Morhana Pahad
- 3) On _____ river bank the town Nevasa is located.
 - a) Bhima
 - b) Godavari
 - c) Krishna
 - d) Pravara
- 4) _____ was a first stone tool used by man.
 - a) Pebble
 - b) Axe
 - c) Chopper
 - d) Blade
- 5) _____ method is suitable for excavating large sites.
 - a) Vertical method
 - b) Horizontal method
 - c) Step trench method
 - d) None of these
- 6) The carbon-14 dating method invented by _____.
 - a) Dr. F.W. Libby
 - b) L.R. Binford
 - c) C.V. Raman
 - d) C.J. Thomsen
- 7) Bhimbetka caves are discovered by _____.
 - a) Dr. Sankaliya
 - b) Mortimer Wheeler
 - c) Dr. V.S. Wakankar
 - d) None of these
- 8) Mount Abu is famous for _____.
 - a) Jain temples
 - b) Hindu temples
 - c) Buddhist temples
 - d) None of these
- 9) Archaeology Survey of India was established in _____.
 - a) 1860
 - b) 1861
 - c) 1862
 - d) 1863
- 10) _____ is called as 'The Father of Indian Archaeology'.
 - a) Lord Alexander
 - b) Lord Cunningham
 - c) Lord Ripan
 - d) Lord Curzon

- 11) The author of Purattavidya is _____.
a) S.B. Deo
b) R. Kulkarni
c) V. Shinde
d) Dyaram Sahani
- 12) Ajanta caves are located in which district
a) Latur
b) Nashik
c) Chhatrapati Sambhajinagar
d) Nanded
- 13) In which state sun temple is located?
a) Tripura
b) Himachal Pradesh
c) Odisha
d) Gujarat
- 14) Horizontal method of excavation is also called _____ system.
a) Vertical
b) Grid
c) Trial
d) Step trench
- 15) Ajanta caves belonging to _____ religion.
a) Buddha
b) Jain
c) Christian
d) Hindu
- 16) _____ is the author of book entitled 'Prehistory and Protohistory of India and Pakistan'.
a) H.D. Sankalia
b) Mortimer Wheeler
c) John Marshall
d) K.N. Dixit

Q.2 Write Short Notes. (Any Four)**16**

- a) Archaeology & History
- b) Aims of Archaeology
- c) Archaeology & Geology
- d) Ellora caves
- e) Sun temple, Konark
- f) Stone sculpture

Q.3 Answer the following questions. (Any Two)**16**

- a) Explain the methods of archaeological excavation.
- b) Describe the Numismatics & Epigraphy.
- c) Kailasa Temple, Ellora, Write in brief.
- d) Archaeology & Social Sciences, write in brief.

Q.4 Answer the following questions. (Any One)**16**

Describe the Harrappan culture.

OR

Discuss the Prehistoric (stone age) culture.

Q.5 Describe the methods of archaeological exploration.**16**

- 9) 'प्रवचनसार' ग्रंथातील तृतीय अधिकाराचे नाव ——— आहे.
 अ) मोक्षतत्व प्रज्ञापन ब) ज्ञानतत्व प्रज्ञापन
 क) चरणानुयोगसूचक चूलिका ड) ज्ञेयतत्व प्रज्ञापन
- 10) शुद्धोपयोग हा ——— गुणस्थानात असतो.
 अ) प्रथम—द्वितीय—तृतीय ब) चतुर्थ —पंचम—षष्ठ
 क) चतुर्थ—पंचम ड) प्रथम—द्वितीय
- 11) कुंदकुंद यांना चार अंगुल आकाशात अधर गमनाची ऋध्दी प्राप्त असल्याने त्यांना ——— विशेषण देऊन गौरवले जाते.
 अ) संत ब) महंत
 क) कलीकालसर्वज्ञ ड) पूज्यपाद
- 12) चेहरा कमळाप्रमाणे गुलाबी असल्याने कुंदकुंद यांचे ——— हे नाव पडले.
 अ) एलाचार्य ब) पद्मनंदी
 क) पद्मकुमार ड) गृध्दपिच्छाचार्य
- 13) दिगंबर परंपरेप्रमाणे मूर्ती विराजमान करीताना त्यावर ——— उल्लेख लिहिला जातो.
 अ) स्थुलीभद्रान्वय ब) कुन्दकुन्दान्वय
 क) महावीरान्वय ड) गणधरान्वय
- 14) ——— यांनी षटपाहुडाच्या टीकेत पाचही नावांचा उल्लेख केला आहे.
 (कुंदकुंद, एलाचार्य, गृध्दपिच्छ, वक्रग्रीवाचार्य, पद्मनंदी)
 अ) श्रुतसागरसूरी ब) धर्मामृतसागरसूरी
 क) जिनेश्वरसूरी ड) विमलसागरसूरी
- 15) शीलाशिवाय मनुष्यभवाची निरर्थकता आहे याचे वर्णन ——— पाहुडान आले आहे.
 अ) भाव ब) दर्शन
 क) बोध ड) शील
- 16) आचार्य कुंदकुंद यांच्या ग्रंथाची भाषा ——— प्राकृत आहे.
 अ) मागधी ब) अपभ्रंश
 क) शौरसेनी ड) पैशाची

प्र.2 खालीलपैकी प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) मौखिक श्रुतपरंपरेविषयी थोडक्यात माहिती द्या.
 ब) कुंदकुंदाच्या ग्रंथत्रयी विषयी माहिती सांगा.
 क) केवलज्ञानाची महिमा थोडक्यात सांगा.
 ड) 'मुलाचार' ग्रंथासंबंधी माहिती सांगा.
 इ) 'समयसार' ग्रंथाविषयी सार स्वरूप माहिती लिहा.
 ई) 'पाहुड' शब्दाचा अर्थ सांगून उपलब्ध पाहुडांची नावे लिहा.

- प्र.3 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) 16**
- अ) आचार्य कुंदकुंद यांच्या साहित्यातील जीवन मूल्यांची चर्चा करा
ब) 'प्रवचनसार' या ग्रंथाची विषयवस्तु संबंधी माहिती द्या.
क) 'प्रवचनसार' ग्रंथात आ. कुंदकुंद वीतराग चारित्र व सराग चारित्र यातील फरक काय सांगतात?
ड) ज्ञाने किती आहेत? कोणती? इंद्रिय व अतिंद्रिय ज्ञानातील फरक प्रवचनसार अधारे लिहा.
- प्र.4 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणताही एक) 16**
- मंगल म्हणजे काय? मंगलाचरण का करावेत? मंगलाचरणाची कारणे सांगा.
किंवा
'प्रवचनसार' या ग्रंथातील द्वितीय अधिकाराविषयी चर्चा करा.
- प्र.5 आचार्य कुंदकुंद यांचा जीवनपरिचय देऊन त्यांच्या साहित्याविषयी थोडक्यात माहिती द्या. 16**

Seat No.	
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M.A. (Pali) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Boudhha Tatvadnyan (MA17308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
 2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खाली दिलेल्या पर्यायापैकी योग्य पर्याय निवडून वाक्य पुन्हा लिहा.

16

- 1) बुद्ध तत्त्वज्ञानात दृष्टी कोणत्या अर्थाने आहे?
 - अ) सम्यक
 - ब) योग्य धारणा
 - क) दृश्य
 - ड) बघणे
- 2) 'अहं वन्दामि' म्हणजे काय?
 - अ) मी वंदनीय
 - ब) मी वंदन करतो
 - क) मी बोलतो
 - ड) मी वंदा
- 3) सावक संघाचे किती गुण आहेत?
 - अ) सहा
 - ब) सात
 - क) आठ
 - ड) नऊ
- 4) 'बुद्धत्व' हे काय आहे?
 - अ) देवत्व
 - ब) सिद्धत्व
 - क) अवतार
 - ड) अवस्था
- 5) दुःखाचे मूळ कारण कशात आहे?
 - अ) जीवनात
 - ब) तृष्णेत
 - क) जगात
 - ड) सुखात
- 6) उपासकांसाठी किती शीलपालन करणे आवश्यक आहे?
 - अ) पाच
 - ब) आठ
 - क) नऊ
 - ड) दहा
- 7) परम सुखाची प्राप्ती कशाची प्राप्ती?
 - अ) धनाची
 - ब) मानवी जीवनाची
 - क) स्वर्गाची
 - ड) निर्वाणाची
- 8) सर्व संस्कार कसे आहेत?
 - अ) सुंदर
 - ब) लोभनीय
 - क) नित्य
 - ड) अनित्य

- 9) मनुष्याचे परमसुख कशात आहे?
 अ) माणुसकीमध्ये
 ब) इच्छापूर्तीत
 क) निर्वाणात
 ड) सुखसाधानेत
- 10) श्रामनेरांसाठी किती शीलाचे पालन आवश्यक आहे?
 अ) पाच
 ब) आठ
 क) नऊ
 ड) दहा
- 11) 'वेदना' कशाचा घटक आहे?
 अ) दुःखाचा
 ब) मनाचा
 क) सहाइंद्रियांचा
 ड) शरीराचा
- 12) अनिच्च म्हणजे काय?
 अ) अनिच
 ब) सज्जन
 क) नित्य
 ड) अनित्य
- 13) पालि 'जरा' या शब्दाचा अर्थ काय आहे?
 अ) थोडे
 ब) अल्प
 क) म्हातारपण
 ड) बुद्धवचन
- 14) सिद्धार्थ गौतमास बुद्धत्वाची प्राप्ती कोणत्या ठिकाणी झाली?
 अ) लुम्बिनी
 ब) कपिलवस्तु
 क) गया
 ड) राजगृह
- 15) 'दुःख निरोधगामिनी पटिपदा' हे कितवे आर्य सत्य आहे?
 अ) पहिले
 ब) दुसरे
 क) तिसरे
 ड) चौथे
- 16) मैत्री, करुणा, मुदिता, उपेक्षा यांना काय म्हटले आहे?
 अ) गुण
 ब) उपदेश
 क) सदाचार
 ड) ब्रह्मविहार

प्र.2 टीपा लिहा. (कोणतेही चार)

- अ) तत्वज्ञान
 ब) बुद्धत्व
 क) मैत्री
 ड) अविद्या
 इ) विज्ञान
 ई) पञ्चक्खंध

16

प्र.3 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणतेही दोन)

अ) पंचशील सांगा

ब) खालील पालि गाथेचा मराठी अर्थ सांगा.

“इति पि सो भगवा अरहं,सम्मा सम्बुद्धो, विज्जाचरण संपन्नो,
सुगतो लोकविदो, अनुत्तरो, पुरीस दम्म सारथी,
सत्था देव मानुस्सानं बुद्धो भगवा ति।”

क) धम्मगुण थोडक्यात सांगा.

ड) समाधी म्हणजे काय?

प्र.4 खालील प्रश्नाचे उत्तर लिहा. (कोणताही एक)

16

शील म्हणजे काय सांगून शीलाचे प्रकार स्पष्ट करा.

किंवा

प्रतित्यसमुत्पाद सिद्धांत संकल्पना स्पष्ट करा.

प्र.5 आधुनिक काळात बुध्द तत्वज्ञानाचे महत्व सांगा.

16

- 9) अपादानाची ---- ही विभक्ती होते.
 अ) तृतीया ब) प्रथमा
 क) पञ्चमी ड) द्वितीय
- 10) नमः, स्वस्ति, स्वाहा आणि स्वधा यांच्या योगे ---- विभक्ति होते.
 अ) तृतीया ब) प्रथमा
 क) चतुर्थी ड) द्वितीय
- 11) प्रथमा विभक्तिचे ---- हे कारक आहे
 अ) संबन्ध ब) आपादान
 क) कर्ता ड) कर्म
- 12) साधकतमं ---- ।
 अ) सूत्रम् ब) करणम्
 क) वार्तिकम् ड) भाष्यम्
- 13) कर्मणा यं अभिप्रैति स ---- ।
 अ) सम्प्रदानम् ब) कर्मणि
 क) कारकम् ड) क्रिया
- 14) आधारः ---- ।
 अ) अधिकरणम् ब) आश्रयः
 क) कारणम् ड) किमपि न
- 15) प्रातिपदिकाची ---- विभक्ति होते.
 अ) षष्ठी ब) द्वितीया
 क) प्रथमा ड) चतुर्थी
- 16) अष्टाध्यायी ग्रंथात एकूण ---- अध्याय आहेत.
 अ) पाच ब) चार
 क) तीन ड) आठ

प्र.2 टिप्पणी लिखत। (केवलं 4)

16

- 1) धातू
- 2) कारक
- 3) स्वपरिचयः
- 4) संप्रदान कारक
- 5) पूर्वपद
- 6) संस्कृतभाषा

प्र.3 विस्तरेण स्पष्टीकुरुत। (केवलं 2)

16

- 1) अव्ययीभाव समास
- 2) बहुव्रीही समास
- 3) स्वपरिचयः
- 4) एका लघुकथा

प्र.4 कस्यचिद् एकस्य समाधानं देयम्।

16

- 1) समासमहत्वम्
- 2) संस्कृत कारकम्

प्र.5 संस्कृत भाषेचे मानवी जीवनातील महत्व स्पष्ट करा.

16

Seat
No.

M.A. (Urdu) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Hindustan Mein Cinema (MA08308)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the left indicate full marks.

16

سوال نمبر 1. صحیح متبادل کا انتخاب کر کے جوابی پرچے میں لکھیے۔

(1) پرو جیکٹر کی ایجاد کس نے کی؟

- (A) مائی برج۔
(B) دادا صاحب پھالکے۔
(C) ایل۔ وی۔ پرشاد۔
(D) نیوٹن۔

(2) ہندوستان کی پہلی خاموش فلم کون سی ہے؟

- (A) عالم آراء۔
(B) انارکلی۔
(C) کرما۔
(D) راجا ہریش چندر۔

(3) کس نے مراٹھی میں کامیڈی فلمیں بنائیں؟

- (A) واڈیکر۔
(B) دی شاننارام۔
(C) مائی برج۔
(D) دادا صاحب تورنے۔

(4) پنڈت جواہر لال نہرو نے کس فلم کو سراہا تھا؟

- (A) کرما۔
(B) مدرانڈیا۔
(C) آوارہ۔
(D) کبھی خوشی کبھی غم۔

(5) فلمی دنیا کا مغل اعظم کسے کہا جاتا ہے؟

- (A) دی شاننارام۔
(B) دادا صاحب پھالکے۔
(C) راج کپور۔
(D) ایل وی پرشاد۔

(6) وہ کون سی ہندوستانی فلم ہے جس نے بمبئی میں 9 سینما گھروں میں ایک ساتھ سیلور جلی منائی؟

- (A) راجا ہندوستانی۔
(B) دل والے دلہنیا لے جائیں گے۔
(C) شعلے۔
(D) امرا اکبر انتھونی۔

7) راکیش روشن کی کس فلم میں اڑن طشتری اور دوسری دنیا کے جانداروں کو دکھانے کی کوشش کی گئی؟

- (A) کریش-1
(B) کہو ناپیار ہے۔
(C) کوئی مل گیا۔
(D) کریش-3

8) کس اداکار کو آٹھ بار بہترین اداکار کے لئے فلم فیئر ایوارڈ دیا گیا۔

- (A) امیتا بھ بچن۔
(B) جینندر۔
(C) دھر میندر۔
(D) دلپ کمار۔

9) دادا صاحب پھالکے ایوارڈ کا آغاز کب ہوا؟

- (A) 1968ء
(B) 1969ء
(C) 1970ء
(D) 1956ء

10) دنیا کا سب سے بڑا فلم ایوارڈ "آسکر ایوارڈ" سے کس کو نوازا گیا۔

- (A) وی شان تارام۔
(B) لتا منگیشکر۔
(C) دلپ کمار۔
(D) ستیہ جیت رے۔

11) "بنا گیت مالا" پیش کرتے آرہے اناؤنسر کا کیا نام ہے؟

- (A) امین سہانی۔
(B) واڈیکر۔
(C) لتا منگیشکر۔
(D) اشوک کمار۔

12) سب سے پہلا بین الاقوامی فلمی میلہ کہاں منعقد ہوا تھا؟

- (A) لاہور۔
(B) امریکہ۔
(C) دہلی۔
(D) بمبئی۔

13) دادا صاحب پھالکے ایوارڈ سب سے پہلے کس اداکارہ کو دیا گیا؟

- (A) آشنا پارکھ۔
(B) شری دیوی۔
(C) دیویکارانی۔
(D) للیتا پوار۔

14) خان بہادر اور دلشیر ایرانی کس فلم کے خالق مانے جاتے ہیں؟

- (A) خاموش فلم۔
(B) پہلی بولتی فلم۔
(C) گیتوں کی
(D) رنگین فلم۔

15) گلزار کا اصل نام کیا ہے؟

- (A) پورن سنگھ۔
(B) دیوی سنگھ۔
(C) راج کمار۔
(D) پردیپ کمار۔

16) "اک دن بک جائے گا ماٹی کے مول

جگ میں رہ جائیں گے پیارے تیرے بول" یہ کس کا گیت ہے؟

- (A) محمد رفیع صاحب۔
(B) گلزار۔
(C) جاوید اختر۔
(D) مجروح سلطانی پوری۔

16

سوال نمبر 2. مندرجہ ذیل سوالات کے مختصر جوابات لکھیے۔ (کوئی چار)

- 1) بابی ووڈ کے مقبول نغمہ نگار جاوید اختر کے فلمی سفر پر روشنی ڈالیے۔
- 2) دادا صاحب پھالکے کے حالات زندگی پر تبصرہ کیجیے۔
- 3) ہندی فلموں میں مسلم معاشرت کی عکاسی کس طرح کی گئی ہے بیان کیجیے۔
- 4) تشکیل بدایونی کے حالات زندگی پر تبصرہ کیجیے۔
- 5) جاوید اختر کی زندگی میں ان کے والد صاحب اور ماموں نے کیا اہم رول ادا کیا؟ وضاحت کیجیے۔
- 6) گلزار کے فلمی سفر کے بارے میں بتائیے۔

16

سوال نمبر 3. مندرجہ ذیل سوالات کے جوابات لکھیے۔ (کوئی دو)

- 1) ہندوستان کی علاقائی زبان کا فلموں پر کیا اثر ہا بیان کیجیے۔
- 2) ہندی فلموں پر دیگر زبانوں کے اثرات کس طرح نمایاں رہے وضاحت کیجیے۔
- 3) متکلم (بولتی) فلموں کا آغاز اور تقاضا پر تفصیلی نوٹ لکھیے۔
- 4) ہندوستان میں سینما کا آغاز اور تقاضا پر روشنی ڈالیے۔

16

سوال نمبر 4. مفصل جواب لکھیے۔ (کوئی ایک)

- 1) جاں نثار اختر کے فلمی سفر کے متعلق تفصیلی نوٹ تحریر کیجیے۔
- 2) اردو ادب اور سینما پر تفصیلی نوٹ لکھیے۔

16

سوال نمبر 5. ساحر لدھیانوی کے حالات زندگی اور سینما پر تفصیلی نوٹ تحریر کیجیے۔

Seat
No.

**M.A. (Urdu) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Aligarh Tahrik (MA08309)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the left indicate full marks.

16

سوال نمبر 1. صحیح متبادل کا انتخاب کر کے جوابی پرچے میں لکھیے۔

(1)۔۔۔۔ سر سید کے رفقاءے کار میں شامل ہیں۔

- (A) غالب۔
(B) ظفر علی خان۔
(C) مومن۔
(D) چراغ علی۔

(2) شبلی کی "الکلام" کا موضوع کیا ہے؟

- (A) ریاضی۔
(B) اردو ادب۔
(C) مذہب۔
(D) فارسی ادب۔

(3) شبلی نے۔۔۔۔۔ کے لیے درالمصتفین اعظم گڑھ کا قیام کیا۔

- (A) شاعروں۔
(B) صحافیوں۔
(C) سائنس دانوں۔
(D) نوجوان ادیبوں۔

(4) "مسدس حالی" کس نے لکھی؟

- (A) مولانا حالی۔
(B) محمد حسین آزاد۔
(C) اقبال۔
(D) مجاز۔

(5)۔۔۔۔۔ محسن قوم سر سید احمد خان کی سوانح ہے۔

- (A) حیات سر سید۔
(B) حیات جاوید۔
(C) یادگار سر سید۔
(D) حیات سعدی۔

(6) خطبات احمدیہ کو سر سید نے۔۔۔۔۔ میں چھاپ کر اس کی اشاعت کی۔

- (A) لندن۔
(B) فرانس۔
(C) ہندوستان۔
(D) پاکستان۔

(7)۔۔۔۔۔ کا تعلق عیسائیوں کے مذہبی کتاب "بائبل" سے ہیں؟

- (A) بتسین الکلام۔
 (B) آثار الصناد۔
 (C) تاریخ سرکشی بجنور۔
 (D) حیات سعدی۔

(8) اردو میں۔۔۔۔۔ کی ابتداء علی گڑھ سے ہوئی۔

- (A) افسانہ نگاری۔
 (B) ڈراما نگاری۔
 (C) ناول نگاری۔
 (D) مرثیہ نگاری۔

(9) شبلی نے اردو میں۔۔۔۔۔ کی بنیاد ڈالی۔

- (A) اسلوبیاتی تنقید۔
 (B) ہتھی تنقید۔
 (C) متنی تنقید۔
 (D) تقابلی تنقید۔

(10)۔۔۔۔۔ اردو میں انشاپردازی کے بانی کہلاتے ہیں۔

- (A) آزاد۔
 (B) سرسید۔
 (C) اقبال۔
 (D) سودا۔

(11) تحریک کے لفظی معنی۔۔۔۔۔ ہیں۔

- (A) حرکت دینا۔
 (B) رکنا۔
 (C) چلنا۔
 (D) دوڑنا۔

(12) سرسید نے۔۔۔۔۔ اخبار جاری کیا۔

- (A) مخزن۔
 (B) اودھ پنچ۔
 (C) تہذیب الاخلاق۔
 (D) مہذب۔

(13)۔۔۔۔۔ اردو کے پہلے باقاعدہ نقاد ہیں۔

- (A) حالی۔
 (B) ذوق۔
 (C) سرور۔
 (D) چکبست۔

(14)۔۔۔۔۔ نے مقدمہ شعر و شاعری کو اردو کا پہلا مینی فیسٹو قرار دیا ہے۔

- (A) کلیم الدین احمد۔
 (B) شمس الرحمن۔
 (C) آل احمد سرور۔
 (D) وزیر آغا۔

15)۔۔۔۔۔ شبلی کی تحریر کردہ سوانح ہیں۔

- (A) الفاروق۔
(B) حیات سعدی۔
(C) حیات جاوید۔
(D) درد و مسعود۔

16) سر سید نے۔۔۔۔۔ کی عمر میں اپنے بھائی کے اخبار "سید الاخبار" میں لکھنا شروع کیا۔

- (A) 20 سال۔
(B) 25 سال۔
(C) 17 سال۔
(D) 10 سال۔

16

سوال نمبر 2. مختصر جوابات لکھیے۔ (کوئی چار)

1) سر سید کی انشائیہ نگاری پر مختصر روشنی ڈالیے۔

2) مولانا حالی نے شاعری کے لیے کن باتوں کو ضروری قرار دیا ہے؟

3) مولانا حالی کی مقدمہ شعر و شاعری کا تعارف بیان کیجیے۔

4) مولانا شبلی نعمانی کی تنقیدی تصانیف کا نام بیان کیجیے۔

5) علی گڑھ تحریک کے مقاصد بیان کیجیے۔

6) سر سید کے عہد کے نثر نگاروں کے نام لکھیے۔

16

سوال نمبر 3. درج ذیل سوالات کے جوابات لکھیے۔ (کوئی دو)

1) مولانا شبلی نعمانی کی سوانح نگاری کا اجمالی جائزہ لیجیے۔

2) مولانا حالی کی شاعری کا اجمالی جائزہ لیجیے۔

3) سر سید کے پہلے دور تحقیقی کے رجحانات کا محاکمہ کیجیے۔

4) سر سید نے علی گڑھ تحریک کے ذریعے کن اصناف کا آغاز کیا اس پر روشنی ڈالیے۔

16

سوال نمبر 4. مفصل جواب لکھیے۔ (کوئی ایک)

1) علی گڑھ تحریک کے کارناموں پر مفصل روشنی ڈالیے۔

2) علی گڑھ تحریک میں شبلی نعمانی کی خدمات کا مفصل جائزہ لیجیے۔

16

سوال نمبر 5. علی گڑھ تحریک کے آغاز و ارتقاء کا مفصل جائزہ لیجیے۔

Seat No.	
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**M.A. (Semester - III) (CBCS) Examination: Oct/Nov-2023
KANNADA**

Kannada Language (MA10309)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

- ಪ್ರ.1 ಈ ಕೆಳಗಿನ ವಸ್ತುನಿಷ್ಠ ಪ್ರಶ್ನೆಗಳಿಗೆ ಆಯ್ದು ಉತ್ತರ ಬರೆಯಿರಿ. 16
- 1) ಮಾತೆಂಬುದು ಜ್ಯೋತಿರ್ಲಿಂಗ -

1) ಬಸವಣ್ಣ	2) ದಂಡಿ
3) ಅಲ್ಲಮಪ್ರಭು	4) ಅಕ್ಕಮಹಾದೇವಿ
 - 2) ಶ್ರಮ ಪರಿಹಾರಪಾದದ ಪ್ರತಿಪಾದಕ -

1) ಬಾರ್ಬರ್	2) ನೋರಿ
3) ಐಸ್ಟರ್	4) ಭಟ್ಟಕಳಂಕ
 - 3) ಈತ ಕನ್ನಡದ ಭಾಷಾ ವಿಜ್ಞಾನಿ -

1) ಬರಗೂರು	2) ಸಿದ್ದಲಿಂಗಯ್ಯ
3) ಜಿ.ಎಸ್.ಎಸ್.	4) ಕೆ.ಕುಶಾಲಪ್ಪಗೌಡ
 - 4) ಭಾಷೆಯ ಉಗಮ ಕುರಿತು ಲಿಬ್ನಿಜ್ ನ ವಾದ -

1) ಅನುರಣ	2) ಅನುಕರಣ
3) ಸಂಜ್ಞಾವಾದ	4) ಯೋ-ಹೇ-ಹೋ
 - 5) ಕವಿರಾಜ ಮಾರ್ಗ

1) ವಾಮನ	2) ದಂಡಿ
3) ನಾಗವರ್ಮ	4) ಶ್ರೀವಿಜಯ
 - 6) ಕನ್ನಡದ ಮೊದಲನೇ ಶಬ್ದ -

1) ಇಸಿಲ್	2) ಊರೋ
3) ಪೊಟ್ಟಿ	4) ಕೋಟೆ
 - 7) ಹಲ್ಮಿಡಿ ಇದು - ಮೊದಲ ಶಾಸನ

1) ಕನ್ನಡದ	2) ಮರಾಠಿಯ
3) ತಮಿಳು	4) ಸಂಸ್ಕೃತದ
 - 8) ಪಂಪ-ರನ್ನರ ಭಾಷೆ -

1) ಹಳೆಗನ್ನಡ	2) ಪೂರ್ವದ ಹಳೆಗನ್ನಡ
3) ಹೊಸಗನ್ನಡ	4) ನಡುಗನ್ನಡ
 - 9) ಭಾಷೆಯ ಮೂಲದ್ರವ್ಯ -

1) ಧ್ವನಿ	2) ಧ್ವನಿಮಾ
3) ಆಕೃತಿ	4) ಆಕೃತಿಮಾ

- 10) ಭಾಷೆಯನ್ನು ನಮ್ಮವರು - ಎಂದು ಕರೆದಿದ್ದಾರೆ.
 1) ಕತ್ತಲೆ 2) ಬೆಳಕು
 3) ಬಿಸಿಲು 4) ಹಗಲು
- 11) ಸಾಮಾಜಿಕ ಸಹಕಾರವನ್ನು ಉಂಟು ಮಾಡುವ ಮಾಧ್ಯಮ -
 1) ಸಂಪತ್ತು 2) ಧರ್ಮ
 3) ಭಾಷೆ 4) ಅಧಿಕಾರ
- 12) ಅನುರಣನ ವಾದಕ್ಕೆ ಚೀಷ್ಟೆಯಿಂದ ಕರೆದಿರುವ ಹೆಸರು
 1) ಡಿಂಗ್ ಡಾಂಗ್ ವಾದ 2) ಪೂಹ್ ಪೂಹ್ ಧೇರಿ
 3) ಯೋ.ಹೆ. ಯೋ. ವಾದ 4) ಬೌವೌ
- 13) 'ಗಾಥಾ ಸಪ್ತಸತಿ'ಯಲ್ಲಿ ಬರುವ ಕನ್ನಡ ಪದ -
 1) ಪೊಟ್ಟಿ, ತುಪ್ಪ 2) ಮಿಟಚಿ
 3) ಹಂಪೆ 4) ಹಣ್ಣು
- 14 ಕವಾ, ಕಿವ, ಕಿಲಿ ಪದಗಳ ಪ್ರಭೇದ -
 1) ಬಳ್ಳಾರಿ ಕನ್ನಡ 2) ಕಲಬುರ್ಗಿ ಕನ್ನಡ
 3) ಬೆಂಗಳೂರು ಕನ್ನಡ 4) ಕಾರವಾರ ಕನ್ನಡ
- 15 ಛಾಂದೋಗ್ಯ ಉಪನಿಷತ್ತಿನಲ್ಲಿ ಕನ್ನಡದ - ಶಬ್ದಗಳು ಸಿಗುತ್ತವೆ.
 1) ದಿನ, ದಮ್ಮಾರ 2) ಚೆನ್, ಮಟಚಿ
 3) ಹಿಪ್ಪಿ, ಕವರ 4) ಇಸಿಲ
- 16 ಕನ್ನಡದ ಮೊಟ್ಟ ಮೊದಲನೇ ಉಪಲಬ್ಧ ಗ್ರಂಥ
 1) ವಡ್ಡಾರಾಧನೆ 2) ಪಂಪಭಾರತ
 3) ಗಥಾಯುದ್ಧ 4) ಕವಿರಾಜಮಾರ್ಗ

ಪ್ರ.2 ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ (ಬೇಕಾದ ನಾಲ್ಕಕ್ಕೆ)

16

- 1) ಕನ್ನಡದ ನಾಲ್ಕು ಜನ ಭಾಷಾ ವಿಜ್ಞಾನಿಗಳನ್ನು ಹೆಸರಿಸಿರಿ.
- 2) ಭಾಷೆಯ ಉಗಮದ ಬಗ್ಗೆ ವ್ಯಕ್ತವಾದ ವಾದಗಳಾವುವು?
- 3) ಟಾಲೆಮಿಯ ಕಾಲ ಯಾವುದು? ಅವನು ಗುರುತಿಸಿದ ಕನ್ನಡದ ಸ್ಥಳಗಳನ್ನು ಹೆಸರಿಸಿರಿ.
- 4) ಕನ್ನಡ ಭಾಷೆಯ ಅವಸ್ಥೆಗಳು ಯಾವುವು?
- 5) ಕನ್ನಡದ ಪ್ರಮುಖ ಭೌಗೋಳಿಕ ಉಪಭಾಷೆಗಳನ್ನು ಹೆಸರಿಸಿರಿ.
- 6) ಹಾಲರಾಜನ ಗಾಥಾ ಸಪ್ತಸತಿಯಲ್ಲಿ ಸಿಗುವ ಕನ್ನಡ ಶಬ್ದಗಳಾವುವು?

ಪ್ರ.3 ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿರಿ (ಬೇಕಾದ ಎರಡಕ್ಕೆ) :

16

- 1) ಕನ್ನಡ ಭಾಷೆಯ ಅಸಾಧಾರಣ ಲಕ್ಷಣಗಳು
- 2) ಡಾ. ಚಿದಾನಂದಮೂರ್ತಿ
- 3) ಭಾಷೆಯ ಮಹತ್ವ
- 4) ಭಾಷೆಯ ಲಕ್ಷಣಗಳು

ಪ್ರ.4 ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸವಿಸ್ತಾರ ಉತ್ತರ ಬರೆಯಿರಿ (ಬೇಕಾದ ಒಂದಕ್ಕೆ) :

16

- 1) ಭಾಷೆಯ ವೈಶಿಷ್ಟ್ಯಗಳನ್ನು ಕುರಿತು ಬರೆಯಿರಿ.
- 2) ಕನ್ನಡ ಭಾಷೆಯ ಹುಟ್ಟು ಬೆಳವಣಿಗೆ ಕುರಿತು ನಿರೂಪಿಸಿರಿ.

ಪ್ರ.5 ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸೋದಾಹರಣದಿಂದ ಉತ್ತರಿಸಿರಿ.
ಭಾಷೆಯ ಉಗಮದ ವಿಚಾರವಾಗಿ ಹುಟ್ಟಿಕೊಂಡ ವಾದಗಳನ್ನು ಕುರಿತು ನಿರೂಪಿಸಿರಿ.

Seat No.	
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M.A. (Semester - III) (CBCS) Examination: Oct/Nov-2023
Economics (Campus)
Human Development (MA13308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options.

16

- 1) For how many days NREGA provides employment?
 - a) 70
 - b) 80
 - c) 90
 - d) 100
- 2) Who is considered as poor?
 - a) Landlords
 - b) Landless labourer
 - c) A rich farmer
 - d) Businessman
- 3) Women and children under the age of five are food insecure population due to:
 - a) Malnutrition
 - b) Healthy diet at
 - c) Fats
 - d) None of the above
- 4) By which year governments are aiming to meet the Millennium Development Goals including having the rate of global poverty?
 - a) 2011
 - b) 2015
 - c) 2045
 - d) 2023
- 5) Which of the following is an indicator of poverty in India?
 - a) Income level
 - b) Illiteracy level
 - c) Employment level
 - d) All of these.
- 6) Which one of the following Economic groups is vulnerable to poverty?
 - a) Scheduled Caste
 - b) Scheduled Tribes
 - c) Rural Agricultural Household
 - d) All the above
- 7) In which year was N R E G A enacted?
 - a) 2005
 - b) 2000
 - c) 1999
 - d) 1993
- 8) HDI means _____.
 - a) Human Development Industry
 - b) Human Development Index
 - c) Human Development Investigation
 - d) None of these
- 9) _____ are protective factors of personal security
 - a) Strength
 - b) Skill
 - c) Resources
 - d) All of these
- 10) _____ is social determinants of Human capital
 - a) Gross Enrollment ratio
 - b) Assets
 - c) Income
 - d) All of these

- 11) Physical quality of life index to measure _____
a) Literacy rate b) Infant Mortality Rate
c) Life Expectancy Rate d) All of these
- 12) _____ is reason for decline food grain.
a) Not commercial Purpose b) Natural Problems
c) Traditional Cultivation of Land d) All of these
- 13) School Health Programme is components of _____.
a) Intra Uterine Device b) National Rural Health Mission
c) Community Health Center d) All of these
- 14) Which three indicators are used in the Human Development Index (HDI)?
I) Standard of living
II) Education
III) Life expectancy
IV) Condition of environment
a) Only I,II & IV b) Only I, II, & III
c) Only I&II d) All of the above
- 15) _____ is developed PQLI.
a) D.Morris b) Amarty Sen
c) Martha Nussbaum d) None of these
- 16) According to David Clark _____ is a other attempt of capability Approach.
a) Jobs b) Housing
c) Education d) All of these

Q.2 Write short answers. (Any Four) 16

- a) Why Human Development Index is important?
b) What are the criteria for selecting capabilities?
c) What is the meaning of human capital formation?
d) What is the meaning of environment security?
e) What is the meaning of Human capital?
f) What is the meaning of quality of life?

Q.3 Answer the following questions. (Any Two) 16

- a) What is the meaning and importance of Health Security?
b) Explains the physical quality of life index.
c) What are the components of quality of life?
d) National Rural Health Mission is important how?

Q.4 Answer the following questions. (Any One) 16

Explain the Gender Empowerment Measure.

OR

Elaborate Marshall Utility of a Commodity approach.

Q.5 Discuss the social determinants of human development in detail. 16

Seat No.	
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**M.A. (Economics) (Aff.College) (Semester - III) (CBCS) Examination:
Oct/Nov-2023**

International Trade and Finance (MA24306)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) ----- च्या मते स्थानिक व्यापार आणि आंतरराष्ट्रीय व्यापार यामध्ये फरक नसतो.
अ) अँडम स्मिथ ब) ओव्हीन
क) रिकार्डो ड) वरील पैकी नाही
- 2) समान प्रमाणात संसाधने वापरून प्रतिस्पर्धापेक्षा अधिक चांगली सेवा देण्याची किंवा उत्पादन करण्याची क्षमता म्हणजे -----
अ) तुलनात्मक लाभ ब) निव्वळ लाभ
क) संबंधित घटक एंडॉवमेंट ड) अधिक संधी खर्च
- 3) निव्वळ लाभाचा सिद्धांत गृहीत धरतो.
अ) तांत्रिक बदल नाही ब) वाहतूक खर्च नाही
क) मूल्याचा श्रम सिद्धांत ड) वरील सर्व
- 4) हेक्शर-ओहलिन मॉडेल असे गृहीत धरते की सर्व व्यापारी देशांमध्ये -----
एकसारखे आहे.
अ) सकल देशांतर्गत उत्पादन ब) तंत्रज्ञान
क) घटक देणगी ड) अ आणि ब दोन्ही
- 5) इतर फर्म किंवा व्यक्तीपेक्षा कमी संधी खर्चात वस्तू आणि सेवांचे उत्पादन करण्याची फर्म किंवा व्यक्तीची क्षमता.
अ) पूर्ण फायदा ब) संधीची किंमत
क) तुलनात्मक लाभ ड) वरीलपैकी नाही
- 6) निश्चित विनिमय दर प्रणाली अंतर्गत, ----- हे इतर चलनांच्या तुलनेत देशाच्या चलनाच्या मूल्यामध्ये अधिकृत बदल होतो.
अ) अवमूल्यन ब) घसारा आणि प्रशंसा
क) पुनर्मूल्यांकन ड) अ आणि क दोन्ही
- 7) अवमूल्यनाचा मुख्य परिणाम म्हणजे तो -----
अ) देशांतर्गत चलन इतर चलनांच्या तुलनेत स्वस्त करते.
ब) इतर चलनांच्या तुलनेत देशांतर्गत चलन अधिक महाग करते.
क) इतर चलनांच्या तुलनेत परकीय चलन स्वस्त करते.
ड) सापेक्ष मूल्य अपरिवर्तित ठेवते.

- 8) रेकार्डाचा तुलनात्मक लाभाचा नियम ---- यावर आधारित आहे.
 अ) मूल्याचा श्रम सिद्धांत ब) संधीची किंमत
 क) घटत्या परताव्याचा कायदा ड) वरील सर्व
- 9) भारतात अवलंबलेली विनिमय दर प्रणाली ---- आहे.
 अ) निश्चित विनिमय दर प्रणाली ब) लवचिक विनिमय दर प्रणाली
 क) व्यवस्थापित स्थिर प्रणाली ड) वरीलपैकी नाही
- 10) परकीय उत्पन्नात होणारी वाढ साधारणपणे पुढील गोष्टींना कारणीभूत ठरते.
 अ) निर्यात वाढली, देशांतर्गत उत्पादन वाढले.
 ब) निर्यात घटली, देशांतर्गत उत्पादन वाढले.
 क) निर्यात घटली, देशांतर्गत उत्पादन घटले.
 ड) निर्यात वाढली, देशांतर्गत उत्पादन घटले.
- 11) चलनाचे अवमूल्यन तेव्हा होते जेव्हा:
 अ) चलनाचे मूल्य घसरते ब) चलनाचे मूल्य वाढते
 क) महागाई कमी होते ड) पेमेंट शिल्लक सुधारते
- 12) जर मध्यवर्ती बँकेने मालमत्ता खरेदी केली तर त्याचा परिणाम ---- होईल
 अ) पैशाच्या पुरवठ्यात वाढ
 ब) मध्यवर्ती बँकेच्या निव्वळ संपत्तीत वाढ
 क) पैशाच्या पुरवठ्यात घट
 ड) मध्यवर्ती बँकेच्या निव्वळ संपत्तीत घट.
- 13) खालीलपैकी कोणते "युरोकरन्सी" व्यापाराचे उदाहरण आहे?
 अ) युरोपमधील युरोचा व्यापार ब) कुठेही युरोसाठी डॉलरचा व्यापार
 क) युरोपमधील डॉलरचा व्यापार ड) ESCB द्वारे युरो मार्केटमध्ये हस्तक्षेप
- 14) सुवर्ण मानक म्हणजे ----.
 अ) देशाचे चलन सोन्याचे आहे
 ब) कागदी चलन वापरले जात नाही
 क) देशाचे चलन मुक्तपणे सोन्यात बदलता येते.
 ड) अ आणि क दोन्ही
- 15) आंतरराष्ट्रीय अवपुंजनात समावेश असू शकतो.
 अ) देशांतर्गत ग्राहकांकडून आकारल्या जाणाऱ्या किंमतीपेक्षा कमी किमतीत परदेशी लोकांना वस्तु विकणे
 ब) उत्पादन खर्चापेक्षा कमी किमतीत परदेशी लोकांना वस्तु विकणे
 क) आयात केलेल्या, टाकलेल्या मालावर अँटीडंपिंग शुल्क आकारले जात आहे.
 ड) वरील सर्व
- 16) दोन देशांमधील व्यापाराला ---- मुळे प्रोत्साहन मिळेल.
 अ) भिन्न कर प्रणाली ब) फ्रंटियर चेक
 क) राष्ट्रीय चलने ड) कमी केलेले दर

प्र.2 खालीलपैकी प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही चार)

- अ) देयक शिल्लक स्पष्ट करा.
- ब) व्यापारातून लाभाचे कोणतेही चार निर्धारक घटक द्या.
- क) व्यापाराच्या अटी परिभाषित करा.
- ड) आंतर-उद्योग व्यापार म्हणजे काय?
- इ) जागतिकीकरणाची व्याख्या करा.
- ई) संधीची किंमत स्पष्ट करा.

प्र.3 टिपा लिहा. (कोणत्याही दोन)

16

- अ) व्यापार वाढीचा परिणाम
- ब) आंतरराष्ट्रीय व्यापाराचा परिपूर्ण फायदा सिध्दांत
- क) आंतरराष्ट्रीय व्यापारातून नफा
- ड) व्यापाराने अपूर्णपणे स्पर्धात्मक बाजारपेठ बनवली आहे.

प्र.4 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणताही एक)

16

व्यापाराचे विविध लाभ निर्धारित करणारे विविध घटक स्पष्ट करा.

किंवा

“व्यापार हे आर्थिक विकासाचे इंजिन म्हणून” स्पष्ट करा.

प्र.5 आंतरराष्ट्रीय व्यापाराच्या सनातनवादी सिध्दांतावरील टीका स्पष्ट करा.

16

Seat No.	
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**M.A. (Economics) (Aff.College) (Semester - III) (CBCS) Examination:
Oct/Nov-2023**

International Trade and Finance (MA24306)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- Instructions:** 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. 16

- 1) According to _____ there is no difference between the domestic trade and international trade.

a) Adam Smith	b) Ohlin
c) Ricardo	d) None of the above
- 2) The ability to serve or produce better than competitors using the same amount of resources is called _____.

a) a comparative advantage	b) an absolute advantage
c) relative factor endowment	d) greater opportunity cost.
- 3) Absolute advantage theory assumes _____.

a) No technological change	b) No transportation cost
c) Labour theory of value	d) All the above
- 4) The Heckscher-Ohlin model assumes that _____ are identical in all trading countries.

a) Gross domestic product	b) Technologies
c) Factor endowments	d) Both A and B
- 5) The ability of a firm or individual to produce goods and services at a lower opportunity cost than other firms or individuals.

a) absolute advantage	b) opportunity cost
c) comparative advantage	d) none of the above
- 6) Under a fixed exchange rate system, a devaluation is an official change in the value of a country's currency relative to other currencies.

a) devaluation	b) depreciation and appreciation
c) revaluation	d) both a and c.
- 7) A key effect of devaluation is that it _____.

a) Makes the domestic currency cheaper relative to other currencies.	b) Makes the domestic currency dearer relative to other currencies.
c) Makes the foreign currency cheaper relative to other currencies.	d) Leaves the relative value unchanged.
- 8) Ricardo's Law of Comparative advantage is based on _____.

a) labour theory of value	b) opportunity cost
c) law of diminishing returns	d) all the above
- 9) The exchange rate system that is followed in India is _____.

a) fixed exchange rate system	b) flexible exchange rate system
c) managed float system	d) Non of the above

- 10) An increase in foreign income generally leads to:
 - a) Increased exports, increased domestic output
 - b) Decreased exports, increased domestic output
 - c) Decreased exports, decreased domestic output
 - d) Increased exports, decreased domestic output
- 11) A depreciation of a currency occurs when:
 - a) The value of the currency falls
 - b) The value of the currency increases
 - c) Inflation falls
 - d) The balance of payments improves
- 12) If the central bank purchases assets, it will result in _____.
 - a) An increase in the money supply.
 - b) An increase in the central bank's net worth.
 - c) A decline in the money supply.
 - d) A decline in the central bank's net worth.
- 13) Which of the following is an example of "Eurocurrency" trade?
 - a) Trade of euros in Europe
 - b) Trade of dollars for euros anywhere
 - c) Trade of dollars in Europe
 - d) Intervention by the ESCB in the euro market
- 14) Gold standard means _____.
 - a) Currency of the country is made of gold
 - b) Paper currency is not used
 - c) Currency of the country is freely convertible into gold
 - d) (a) & (c) of above
- 15) International dumping may involve
 - a) selling goods to foreigners at a price below that charged domestic consumers
 - b) selling goods to foreigners at a price below the cost of production
 - c) antidumping duties being levied on the imported, dumped goods
 - d) all of the above
- 16) Trade between the two countries will be boosted by _____.

a) Different tax system	b) Frontier checks
c) National currencies	d) Reduced tariffs

Q.2 Answer in brief. (Any Four)

16

- a) Explain the balance of payment.
- b) Give any four determining factors of gain from trade.
- c) Define terms of trade.
- d) What is intra-industry trade?
- e) Define globalization.
- f) Explain the opportunity cost.

Q.3 Write short notes. (Any Two)

16

- a) Effects of growth on trade.
- b) Absolute advantage theory of international trade.
- c) Gains from international trade.
- d) Trade made imperfectly competitive market.

- Q.4 Answer the following questions. (Any One)** **16**
Explain the various factors determining the gains of trade
OR
Explain "Trade as an engine of economic development".
- Q.5 Explain with criticism the classical theory of international trade** **16**

Seat No.	
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**M.A. (Economics) (Aff.College) (Semester - III) (CBCS) Examination:
Oct/Nov-2023**

Advanced Banking (MA24307)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 योग्य पर्याय निवडा.

16

- 1) हुंडी म्हणजे ---- दस्तऐवज होय.
अ) चलन
ब) लेखी
क) तोंडी
ड) वस्तू
- 2) भारतात सर्वप्रथम मध्ये ---- युटीआयने 'इंडियन फंड' या नावाने मॅच्युअल फंड योजना सुरु केली.
अ) 1984
ब) 1986
क) 1988
ड) 1990
- 3) K.Y.C. म्हणजे ---- होय.
अ) तुमच्या ग्राहकाला जाणून घ्या
ब) तुमचे चारित्र्य जाणून घ्या
क) वरील दोन्ही
ड) वरीलपैकी काहीही नाही
- 4) बँक ---- साठी कर्ज देत नाही.
अ) पीक कर्ज
ब) शैक्षणिक कर्ज
क) गृह कर्ज
ड) मध्यपान आणि जुगार
- 5) डिपॉझिटरिज कायदा ---- या वर्षी करण्यात आला.
अ) 1980
ब) 1996
क) 2000
ड) 2005
- 6) विशिष्ट तारखेस बँकेची आर्थिक स्थिती दर्शविणारी मालमत्ता आणि दायित्व यांच्या संदर्भातील पत्रक म्हणजे ---- होय.
अ) अहवाल
ब) ताळेबंद
क) वचनचिह्नी
ड) खाते पुस्तक
- 7) भांडवल बाजार कर्ज ---- पुरविते.
अ) अल्पकालीन
ब) मध्यकालीन
क) दीर्घकालीन
ड) यापैकी नाही
- 8) मुंबई रोखे बाजाराची स्थापना ---- या वर्षात झाली.
अ) 1980
ब) 1970
क) 1975
ड) 1980

- 9) राष्ट्रीय इलेक्ट्रॉनिक निधी हस्तांतरण ही प्रणाली भारतात नोव्हेंबर —— मध्ये सुरु झाली.
अ) 2003 ब) 2004
क) 2005 ड) 2006
- 10) मुदत ठेवीची कमाल मुदत —— आहे.
अ) 5 वर्षे ब) 6 वर्षे
क) 8 वर्षे ड) 10 वर्षे
- 11) व्यक्तिगत संगणकामार्फत निरनिराळे बँकिंग व्यवहार सुलभतेने घडवून आणणारी प्रणाली म्हणजे —— बँकिंग क्षेत्र होय.
अ) कोअर ब) हरित
क) इंटरनेट ड) केवायसी
- 12) बँकेच्या सर्व शाखा मध्यवर्ती माहिती केंद्राशी निगडित असल्याने त्याला —— असे म्हटले जाते.
अ) गाभा बँकिंग ब) हरित बँकिंग
क) शाश्वत बँकिंग ड) इंटरनेट बँकिंग
- 13) भारतात चलनक्षम दस्तऐवज कायदा —— या वर्षी संमत करण्यात आला.
अ) 1872 ब) 1881
क) 1882 ड) 1891
- 14) —— मध्ये 'शेती पुनर्वित्त व विकास महामंडळ' स्थापन करण्यात आले.
अ) 1953 ब) 1963
क) 1973 ड) 1983
- 15) शाश्वत बँकिंग मध्ये —— अभिप्रेत आहे.
अ) पर्यावरण जतन ब) मानवी अधिकाराची हमी
क) वर्तमान विकास साधने ड) वरील सर्व
- 16) —— हा बँकेचा आर्थिक स्थितीचा आरसा असतो.
अ) ठेवीदार ब) ताळेबंद
क) धनादेश ड) हुंडी

प्र.2 थोडक्यात उत्तरे लिहा. (6 पैकी 4)

16

- अ) शून्य शिल्लक खात्यांची वैशिष्ट्ये स्पष्ट करा.
ब) बँकांच्या मालमत्तेतील घटकांचे वर्णन करा.
क) के.वाय.सी. ची वैशिष्ट्ये सांगा.
ड) तारणाच्या पध्दती स्पष्ट करा.
इ) वित्तीय व्यवस्थेची कार्ये स्पष्ट करा.
ई) आर.आय.जी.एस.ची वैशिष्ट्ये स्पष्ट करा.

प्र.3 खालील प्रश्नांची उत्तरे लिहा. (4 पैकी 2)

16

- अ) डेबिट करण्याचे वैशिष्ट्ये सांगा.
ब) बँकेचे गुंतवणूक धोरण स्पष्ट करा.
क) योग्य कर्जाची तत्वे स्पष्ट करा.
ड) बँकेचे विविध अधिकार सांगा.

- प्र.4 खालील प्रश्नाचे तपशीलवार उत्तर द्या. (कोणताही एक) 16
- अ) गाभा बँकेची संकल्पना गुणदोषासह स्पष्ट करा.
किंवा
- ब) बँकेत ग्राहकांचे खाते उघडण्याची कार्यपध्दती स्पष्ट करा.
- प्र.5 खालील प्रश्नाचे तपशीलवार उत्तर द्या. 16
- हरित बँकेचा अर्थ आणि महत्त्व स्पष्ट करा.

Seat No.	
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Set P

**M.A. (Economics) (Aff.College) (Semester - III) (CBCS) Examination:
Oct/Nov-2023**

Advanced Banking (MA24307)

Day & Date: Friday, 14-07-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options.

16

- 1) Bill of exchange is a _____ Document.

a) Currency	b) Written
c) Oral	d) Objects
- 2) For the first time in India...UTI launched a 'Mutual fund' scheme called 'Indian fund'.

a) 1984	b) 1986
c) 1988	d) 1990
- 3) K.Y.C. Means _____.

a) Know Your Customers	b) Know Your Character
c) Both of the above	d) None of the above
- 4) Bank does not provide loan for _____.

a) Crop Loans	b) Education Loans
c) Home Loans	d) Drinking and Gambling
- 5) The Depositories Act was passed in the year _____.

a) 1980	b) 1996
c) 2000	d) 2005
- 6) The statement regarding assets and liabilities showing the financial condition of the bank on a particular date is _____.

a) Report	b) Balance sheet
c) Promise note	d) Account Book
- 7) The capital market provide _____ loans.

a) Short term	b) Medium term
c) Long term	d) None of these
- 8) Bombay stock exchange was established in the year _____.

a) 1980	b) 1970
c) 1975	d) 1980
- 9) National Electronic Funds Transfer was started in India in November _____.

a) 2003	b) 2004
c) 2005	d) 2006
- 10) The maximum tenure of term deposit is _____.

a) 5 Years	b) 7 Years
c) 8 Years	d) 10 Years

- 11) Banking system as a system that facilitates various banking transactions through personal computer is _____.
 a) Core b) Green
 c) Internet d) KYC
- 12) Since all the branches of the bank are affiliated to the central information central it is called as _____.
 a) Core banking b) Green banking
 c) Sustainable banking d) Internet banking
- 13) The negotiable Instruments Act in India was passed in the _____ year.
 a) 1972 b) 1881
 c) 1882 d) 1891
- 14) Agriculture refinance and Development corporation was established in _____.
 a) 1953 b) 1963
 c) 1973 d) 1983
- 15) In sustainable banking _____ is meant.
 a) Environmental protection b) Guarantee of human rights
 c) Current development tools d) All of the above
- 16) _____ Is mirror of the financial condition of the bank.
 a) Depositter b) Balance Card
 c) Check d) Hundi

- Q.2 Answer short answer. (Any Four) 16**
 a) Explain the features of zero balance accounts.
 b) Describe the components of banks' assets.
 c) state the features of K.Y.C.
 d) Explain the methods of salvation.
 e) Explain the functions of financial system.
 f) Explain the characteristics of RIGS.
- Q.3 Answer the following question. (Any Two) 16**
 a) Mention the feathers of Debit Card.
 b) Explain the investment policy of the bank.
 c) Explain the principles of lending.
 d) Explain the various right of the Bank.
- Q.4 Answer the following question in detail. (Any 1 out of 2). 16**
 a) Explain the concept of core bank with merit.
 b) Explain the procedure for opening a customer account in the bank.
- Q.5 Answer the following question in detail. 16**
 Explain the meaning and importance of green Bank.

Seat No.	
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M.A. (Hindi) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Sahitya Mimansa (MA15308)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 2:00 PM

- सूचना : 1) सभी प्रश्न अनिवार्य हैं।
2) दाईं ओर लिखे अंक प्रश्न के गुण दर्शाते हैं।

प्र.1 निम्नलिखित वाक्यों के नीचे दिए गए विकल्पों में उचित विकल्प चुनकर वाक्य फिर से लिखिए। 16

- 1) छायावाद के प्रमुख आधार स्तंभ ---- है।
 अ) निराला
 ब) रामधारीसिंह दिनकर
 क) महावीर प्रसाद द्विवेदी
 ड) अज्ञेय
- 2) निराला का जन्म सन् ---- को हुआ।
 अ) 1880
 ब) 1896
 क) 1900
 ड) 1920
- 3) एक थे नब्बाब,
 ---- से मँगाये थे गुलाब।
 अ) जर्मनी
 ब) फारस
 क) जपान
 ड) अमरिका
- 4) गुलाब ---- का प्रतीक है।
 अ) सर्वहारा वर्ग
 ब) पूँजीपति वर्ग
 क) माली
 ड) मजदूर
- 5) 'सेप्पुकु' का पर्यायवाची शब्द ---- है।
 अ) हाराकिरि
 ब) सामुराई
 क) दोनों
 ड) इनमें से नहीं
- 6) नामी अखबारों के तथाकथित ---- पन्ने से लेखक को नफरत थी।
 अ) पेज थ्री कल्चर
 ब) पेज टू कल्चर
 क) लास्ट पेज कल्चर
 ड) सभी
- 7) प्रताप नारायण रस्तोगी 1982 में ---- से दिल्ली आया था।
 अ) मुंबई
 ब) राजकोट
 क) बनारस
 ड) गोरखपुर
- 8) भारतीय कला दुनिया के गरिमा, ग्लैमर, गरीबी और अश्लीलता का चित्रण ---- उपन्यास में आया है।
 अ) गोदान
 ब) मैला आंचल
 क) सेप्पुकु
 ड) दीवार में खिड़की रहती है

- 9) 'झोपडी से राष्ट्रपति भवन तक' यह जीवनी ---- की है।
 अ) डॉ. अब्दुल कलाम ब) पं. जवाहरलाल नेहरू
 क) महात्मा गांधी ड) भगतसिंह
- 10) डॉ.ए.पी.जे. अब्दुल कलाम का जन्म ---- शहर में हुआ था।
 अ) हैदराबाद ब) रामेश्वरम्
 क) दिल्ली ड) मैसूर
- 11) डॉ.ए.पी.जे. अब्दुल कलाम जी ने रॉकेट प्रक्षेपण की तकनीकियों का प्रशिक्षण ---- संस्था से लिया था।
 अ) इस्ट्रो ब) नासा
 क) ए.एस.ए. ड) सी.एन.एस.ए.
- 12) अब्दुल कलाम को सन 1981 में गणतंत्र दिन के अवसर पर ---- पुरस्कार से सम्मानित किया गया।
 अ) भारतरत्न ब) पद्मभूषण
 क) पद्मश्री ड) ज्ञानपीठ
- 13) सुमित्रा महाजन का जन्म ---- को हुआ है।
 अ) 1943 ब) 1945
 क) 1950 ड) 1955
- 14) गौतमाबाई का अहिल्याबाई से नाता ---- का था।
 अ) बहन ब) बेटी
 क) माता ड) सास
- 15) "अहिल्या, पत्नी-धर्म के लिए सती हो जाना एक सर्वधारण नियम माना जाता है। लेकिन तुम इसको अपवाद हो। तुम्हारा कर्तव्य, तुम्हारा गांधीर्य, तुम्हारी आकलन शक्ति, यह सात्त्विक तेज, यह सब तुम्हारा असामान्य होना दरशाता है।" यह संवाद ---- का है।
 अ) मल्हारराव ब) हरकुंवर
 क) मंजुला ड) अनंत फंदी
- 16) ---- यह नाटक अहिल्याबाई के मातृत्व के श्रेष्ठ गुणों का परिचायक है।
 अ) होरी ब) मातोश्री
 क) चंद्रगुप्त ड) सकुबाई

प्र.2 निम्नलिखित में से किन्हीं चार प्रश्नों के उत्तर संक्षेप में लिखिए।

16

- अ) कुकुरमत्ता और गुलाब किसके प्रतीक हैं?
 ब) विनोद भारद्वाज के रचना संसार की जानकारी दीजिए।
 क) पात्र प्रताप नारायण रस्तोगी का परिचय दीजिए।
 ड) 'झोपडी से राष्ट्रपति भवन तक' यह जीवनी किसकी है?
 इ) मातोश्री नाटक का पात्र 'मुक्ता' का चरित्र चित्रण कीजिए।
 ई) नाटककार सुमित्रा महाजन का परिचय दीजिए।

- प्र.3 निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर संक्षेप में लिखिए।** **16**
- अ) सूर्यकांत त्रिपाठी निराला के व्यक्तित्व पर प्रकाश डालिए।
ब) मातोश्री नाटक की रंगमंचीयता का विवेचन कीजिए।
क) सेप्पुकु उपन्यास कला के बाजारवाद को चित्रित करता है, स्पष्ट कीजिए।
ड) डॉ.ए.पी.जे. अब्दुल कलाम के पारिवारिक जीवन पर प्रकाश डालिए।
- प्र.4 निम्नलिखित प्रश्नों में से किसी एक प्रश्न का उत्तर लिखिए।** **16**
- सेप्पुकु उपन्यास कला दुनिया के अर्न्तवस्तु को अभिव्यक्ति देता है, स्पष्ट कीजिए।
अथवा
मातोश्री नाटक में अहिल्याबाई होलकर के पारिवारिक जीवन का विवेचन आया विवेचित कीजिए।
- प्र.5 कुकुरमुत्ता कविता सर्वहारा वर्ग के सर्वव्यापकता को दर्शाती है, स्पष्ट कीजिए।** **16**

Seat
No.

Set P

M.A. (Hindi) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Film Mimansa (MA15309)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 2:00 PM

Max. Marks: 80

सूचना : 1) सभी प्रश्न अनिवार्य हैं।
 2) दाईं ओर लिखे अंक प्रश्न के गुण दर्शाते हैं।

प्र.1 निम्नलिखित वाक्यों के नीचे दिए गए विकल्पों में उचित विकल्प चुनकर वाक्य फिर से लिखिए। 16

- 1) संसार का पहला स्टूडियो ---- ने स्थापित किया।
 अ) लेयॉन गॉमोट
 ब) लूमियर बंधु
 क) चार्ल्स पाथे
 ड) मेजर वारविक
- 2) मूक फिल्म ---- नहीं है।
 अ) राजा हरिश्चन्द्र
 ब) लंका दहन
 क) नल दमयंती
 ड) आलमआरा
- 3) कोरिओग्राफर के लिए ---- भी कहा जाता है।
 अ) संगीत निर्देशक
 ब) म्यूज़िक डायरेक्टर
 क) नृत्य निर्देशक
 ड) एक्शन डायरेक्टर
- 4) शूटींग टीम की सहायता करनेवालों को ---- कहते हैं।
 अ) गुड बॉय
 ब) एक्शन डायरेक्टर
 क) स्पॉट बॉय
 ड) स्टंटमन
- 5) 'ओ माय गॉड' फिल्म के निर्देशक ---- है।
 अ) उमेश शुक्ला
 ब) नितेश तिवारी
 क) अमीर खान
 ड) महेश भट्ट
- 6) 'ओ माय गॉड' यह फिल्म ---- भाषा के नाटक पर बनी है।
 अ) मराठी
 ब) हिंदी
 क) उर्दू
 ड) गुजराती
- 7) फिल्म 'ओ माय गॉड' में हनीफ भाई की भूमिका ---- ने साकार की है।
 अ) परेश रावल
 ब) ओम पुरी
 क) मिथुन चक्रवर्ती
 ड) गोविंद
- 8) कांजी लालजी मेहता की दुकान ---- की थी।
 अ) मूर्तियों
 ब) कपड़े
 क) किताबों
 ड) फलों

- 9) ---- स्पोर्ट्स ड्रामा फिल्म हैं।
 अ) ओ माय गॉड ब) दंगल
 क) तारे जमीन पर ड) बॉडीगार्ड
- 10) वयस्क संस्करण में गीता फोगट की भूमिका ---- ने साकार की है।
 अ) जायरा वसीम ब) सुहानी भटनागर
 क) सान्या मल्होत्रा ड) फातिमा सना शेख
- 11) अमीर खान ने सत्यमेव जयते में फोगट बहनों का साक्षात्कार ---- को लिया था।
 अ) 1910 ब) 1912
 क) 1914 ड) 1916
- 12) 'दंगल' फिल्म को 62 वें फिल्मफेयर पुरस्कार समारोह में ---- पुरस्कार से सम्मानित किया गया था।
 अ) सर्वश्रेष्ठ फिल्म ब) सर्वश्रेष्ठ निर्देशक
 क) सर्वश्रेष्ठ अभिनेता एवं एक्शन ड) उक्त सभी
- 13) 'तारे जमीन पर' फिल्म के गीत ---- ने लिखे हैं।
 अ) अमोल गुप्ते ब) प्रसून जोशी
 क) शंकर एहसान लॉय ड) दीपा भाटिया
- 14) 'तारे जमीन पर' फिल्म में ईशान की भूमिका ---- ने की थी।
 अ) अमिर खान ब) दर्शील सफारी
 क) विपिन शर्मा ड) अमोल गुप्ते
- 15) राम शंकर निकुम्भ ---- विषय के अध्यापक थे।
 अ) कला ब) विज्ञान
 क) वाणिज्य ड) तकनीकी
- 16) 'तारे जमीन पर' इस फिल्म को सर्वश्रेष्ठ फिल्म का पुरस्कार ---- को मिला है।
 अ) 2005 ब) 2007
 क) 2010 ड) 2015

प्र.2 निम्नलिखित में से किन्हीं चार प्रश्नों के उत्तर संक्षेप में लिखिए।

16

- अ) भारत की पहली बोलती कौनसी है?
 ब) कॉस्ट्यूम से क्या तात्पर्य है?
 क) कांजी विरूध्द कांजी इस नाटक पर हिंदी में कौनसी फिल्म बनी है?
 ड) गीता फोगट के व्यक्तित्व की विशेषताएँ बताइए।
 इ) 'तारे जमीन पर' फिल्म कब प्रदर्शित हुई?
 ई) 'डिस्लेक्सिया' बीमारी के लक्षण क्या हैं?

- प्र.3** निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर संक्षेप में लिखिए। **16**
- अ) फिल्म निर्देशक (फिल्म डायरेक्टर) की भूमिका स्पष्ट कीजिए।
ब) स्त्री विमर्श के परिप्रेक्ष्य में दंगल फिल्म की समीक्षा कीजिए।
क) 'दंगल' फिल्म के माध्यम से महावीर सिंह फोगट के चरित्र पर प्रकाश डालिए।
ड) 'तारे जमीन पर' फिल्म की कथावस्तु को समझाइए।
- प्र.4** निम्नलिखित प्रश्नों में से किसी एक प्रश्न का उत्तर लिखिए। **16**
- 'ओ माय गॉड' फिल्म धार्मिक पाखंड का पर्दापाश करती है, संसदभर्भ स्पष्ट कीजिए।
अथवा
फिल्म निर्मिती प्रक्रिया समझाइए।
- प्र.5** हिंदी फिल्म उद्भव एवं विकास पर प्रकाश डालिए। **16**

Seat
No.

M.A. (English) (Semester - III) (CBCS) Examination: Oct/Nov-2023
21st Century Skills (MA06308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) Figures to the right indicate full marks.
 2) All questions are compulsory.

Q.1 Rewrite the following sentences by choosing the correct alternative. 16

- 1) _____ means working together with others and sharing responsibility in the process.

a) Flexibility	b) Creativity
c) Collaboration	d) Isolation

- 2) _____ can be nurtured by teachers in an environment that encourages questions.

a) Innovative Thinking	b) Collaboration
c) Productivity	d) None of these

- 3) The ability of a learner to connect, explain and clearly distinguish the complexities of the world is attributed to the power of _____.

a) Social Skills	b) Literacy Skills
c) Leadership	d) Technological Skills

- 4) The ability to adjust to short-term change quickly and calmly is called _____.

a) Passive	b) Communication
c) Leadership	d) Flexibility

- 5) What are some ethical considerations that 21st century students should keep in mind when conducting research?

a) Ignore impact on human subjects
b) Share data without consent
c) Copy others' work without credit
d) Consider impact on human subjects, data privacy, confidentiality, and avoid plagiarism

- 6) What are the factors influencing learning process?

a) Motivation	b) Reward
c) Praise	d) All of the above

- 7) What is the importance of staying updated with the latest technological advancements for 21st century students?

a) It has no impact on students future careers
b) It helps students to adapt to the changing world and prepares them for future careers.
c) It makes students less adaptable to change
d) It is not important for students to stay updated with technological advancements

- 8) How does technology integration in teaching help in catering to different learning styles of students?
- a) It provides personalized learning experiences through various digital tools and resources.
 - b) It limits students to only one learning style
 - c) It has no impact on catering to different learning styles
 - d) It makes learning experiences less engaging for students
- 9) _____ is the ability of an individual to use technological tools responsibly, appropriately, and effectively.
- a) Media and Information Literacy
 - b) Information Literacy
 - c) Technology Literacy
 - d) Media Literacy
- 10) The way you see yourself and your feelings about your worth is _____.
- a) Self concept
 - b) Goal
 - c) Career
 - d) Attitude
- 11) The objective of environmental literacy is _____.
- a) Raise consciousness about environmental education
 - b) To teach environmentally appropriate behaviour
 - c) Create an environmental ethic that fosters awareness about ecological interdependence of economics, social and political
 - d) All of the above
- 12) Social skills include all of the following except _____.
- a) Showing basic politeness.
 - b) Smile when you greet and talk with others.
 - c) Disrespect the rights of others.
 - d) Show appreciation for and praise what others do.
- 13) Which of the following skills are considered to be components of health literacy?
- a) Ability to understand and use numbers
 - b) Ability to understand what is said
 - c) Speaking skills
 - d) All of the above
- 14) Employers want employees to think _____ at the workplace to bring new
- a) Critically
 - b) Logically
 - c) Emotionally
 - d) None of these
- 15) Limited health literacy is associated with _____.
- a) Higher mortality rates
 - b) Lower levels of health knowledge
 - c) Poor Medicine adherence
 - d) All of the above
- 16) Conscious of one's own feelings, character traits, behaviors, personality and nature is known as _____.
- a) reality
 - b) self- will
 - c) self -aware
 - d) behavior

- Q.2 Answer any four of the following.** **16**
- a) Define the term Civic literacy.
 - b) Write a short note on ethical literacy.
 - c) Explain the term - Global Awareness.
 - d) Write in short about *Health and Wellness Literacy*.
 - e) What is an Environmental and Conservation Literacy?
 - f) Explain in brief the term Scientific Literacy and Reasoning.
- Q.3 Explain in detail the characteristics of 21st century teacher.** **16**
- Q.4 Answer any one of the following questions.** **16**
- a) How to teach 21st century skills?
- OR**
- b) What are the characteristics of 21st century student?
- Q.5 Write a detail note on the characteristics of 21st century literature.** **16**

Seat No.	
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**M.A. (English) (Sem - III) (CBCS) Examination: Oct/Nov-2023
Introduction to Film Studies (MA06309)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives.

16

- 1) The first to present projected moving pictures to a paying audience were _____ in 1895.
 - a) The Robert Brothers
 - b) The wright Brothers
 - c) The Lumiere Brothers
 - d) The William Brothers
- 2) In _____ the silent film had reached its artistic peak.
 - a) 1928
 - b) 1938
 - c) 1948
 - d) 1918
- 3) Digital film technology has constantly transformed and enhanced the _____ aesthetic elements in the traditional aesthetic categories of the film aesthetics.
 - a) Religious
 - b) Fundamental
 - c) Modern
 - d) All of these
- 4) "Raja Harishchandra", the first film made in India was released in _____.
 - a) 1893
 - b) 1903
 - c) 1910
 - d) 1913
- 5) _____ released the first film made in India.
 - a) Satyajit Ray
 - b) Dadasaheb Phalke
 - c) Rabindranath Tagore
 - d) Raj Kapur
- 6) _____ was an evergreen superstar of 1960s Indian cinema.
 - a) Amitabh Bacchan
 - b) Anil Kapoor
 - c) Prithvi Kapoor
 - c) Dev Anand
- 7) Rajesh Khanna was commonly called _____ on the film sets.
 - a) Dada
 - b) Kaka
 - c) Jokar
 - d) Himan
- 8) _____ films traditionally contain dangerous situation and highstake risks and many require the use of physical stunt and fight.
 - a) Action
 - b) Comedy
 - c) Romance
 - d) All of these
- 9) _____ films typically involve a journey, and some may include a pursuit.
 - a) Comedy
 - b) Romance
 - c) Adventure
 - d) Drama
- 10) _____ is a sequence of drawings that represent the shots you plan to film, and can be a critical part of the film making process.
 - a) The Idea
 - b) The script
 - c) The casts
 - d) The story board

- 11) _____ is an early stage of any project including commercials music, videos short films and feature films.
a) Pre-production
b) Post-production
c) Release
d) All of these
- 12) _____ involves a slew of professionals-editors, sound-designers, foley artists, colourists and more.
a) Casts
b) Post-production
c) Pre-production
d) The story
- 13) The film semiotics is the study _____.
a) Regulating process
b) Fundamental process
c) Sign process
d) All of these
- 14) Satyajit Ray was an _____ director, screen writer, film maker an essayist.
a) Indian
b) Pakistani
c) American
d) British
- 15) _____ films are designed to frighten and to invoke our hidden worst fears often in a terrifying shocking finale.
a) Romance
b) Horror
c) Sci-fi
d) Comedy
- 16) The New wave in Indian Cinema originated in the state of _____.
a) Tamilnadu
b) Kolkata
c) West Bengal
d) Asam

- Q.2 Answer any four of the following questions in brief.** **16**
- a) What is a film?
b) Write a short note on the language of cinema.
c) What is digital aesthetics?
d) Write a note on the semiotics of cinema.
e) Write in brief on the origin of cinema.
f) What is a global cinema?
- Q.3** Write a detailed note on the evolution and development of Indian Cinema. **16**
- Q.4 Answer the following questions. (Any One)** **16**
- a) Write a detailed note on the various film genres with the suitable examples.
OR
b) What is a film genre? Write an essay on the types of film.
- Q.5 Answer the following questions.** **16**
- Write a detailed note on the basics of film production including pre-production, post-production, production.

Seat No.	
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Set P

M.A. (Marathi) (Sem - III) (CBCS) Examination: Oct/Nov-2023
Marathi Bhasha Va Sparda Pariksha (MA12308)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
 2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) खानदेशी ही मराठीची बोली नसून ती गुजराती बोली आहे असे मत कोणी मांडले?

अ) सोस्युर	ब) चॉम्सकी
क) गिअर्स	ड) रुसो
- 2) 'लोकगीत' हा शब्द प्रथम मराठीत कोणी वापरला?

अ) वि. का. राजवाडे	ब) प्रभाकर मांडे
क) दुर्गा भागवत	ड) रा.चि.ढेरे
- 3) आहिराणी बोलीचे प्रदेशवाचक नाव काय आहे?

अ) वऱ्हाडी	ब) माणदेशी
क) डांगी	ड) खानदेशी
- 4) Folklore साठी मराठीत कोणती संज्ञा रुढ झाली?

अ) लोकसंस्कृती	ब) लोकयान
क) लोकसाहित्य	ड) लोकविद्या
- 5) 'बत्तीस कथा' कोणत्या कथा संग्रहात संग्रहीत केल्या आहेत?

अ) सिंहासनहात्रिंशिक	ब) जातककथा
क) शुकसप्तती	ड) वेताळपंचविशतिक
- 6) आमीर लोकांची बोली म्हणून कोणती बोली ओळखली जाते.

अ) डांगी	ब) वऱ्हाडी
क) आहिराणी	ड) माणदेशी
- 7) पुढीलपैकी कोणत्या कथांचे स्वरूप काल्पनिक असते?

अ) दंतकथा	ब) बोधकथा
क) हस्यकथा	ड) उत्पत्तीकथा
- 8) भाषा ही समाजनिर्मित असते असे मत कोणी मांडले?

अ) सोस्युर	ब) जॉन ऑरवेल
क) रुसो	ड) जॉन ड्युई

- 9) वऱ्हाडी बलीढे कलती उडडडड डडडडड?
- अ) डर ब) तीन
क) डलन ड) डक
- 10) डडडडडडडडी डीतडे डवरुड कुणतुड डीत डररडे असते?
- अ) डधलडी डीते ब) डेडरवरडी डीते
क) ओवीडीते ड) डेडलडीते
- 11) लुकसलहलतुड हे अडडडडडडडडडडडड डसून डररडररडड असते हे डत कुणी डडडलडे?
- अ) डररररडड डरडुड ब) डुनरस डललरस
क) डरुडकुन ड) डसुकड
- 12) डडडडडडी डडडडडडडडड डुणररडुड डैडरररक डेवरणडेवरणीस करड डुणततड?
- अ) डररुडडड ब) रुडडड
क) डुवन ड) डरडैकी नरडी
- 13) तडरशर डरडररीकरणरत वडरडे डुथरन कधी अरहे?
- अ) डरररडुडी ब) शेवटी
क) डैरवी नंतर ड) डरडैकी नरडी
- 14) डंतरकथर ही डरररडडडडड डंडुरर कुणतुड अरडुडरडडकसरडी वरडरततड?
- अ) डुरररणक ब) तैलरनक
क) डेतलहलसक ड) डुररडीन
- 15) डरनवी डुखरवरडे उडुडरलतुड डरणररडुड डुवनीस करड डुणततड?
- अ) डुवनडड ब) रुडडड
क) डुवन ड) डुवनरंतरे
- 16) कुणतुड डरषरडैडुनरकलर डरडुडडडडडड डरनुड नरडी
- अ) डरुडडडड ड) रुसु
क) डरुन डुडुड ड) डुलुडडडडड

डुर.2 खरलीलडैकी कुणतुडरडी डरर डुरशुनरडी थुडकुडरत उतुतरे ललहर.

16

- अ) लुकसलहलतुडरडुडल 'सलहलतुड' डर डडरडर अरुथ सुडुशु करर.
ब) वऱ्हाडी डरषेडी ओडख करुन डर.
क) डरषेडी कररुडे थुडकुडरत वलषड करर.
ड) लुककथेडी उतुडतुडी कशी डुररली?
इ) डली डुणजे करड?
ई) लुकनरडुडरडी संकलुडनर सुडुशु करर.

डुर.3 लघुतुतरी डुरशुन. (कुणतेही डुन)

16

- अ) खरनडेशी डली डडलडे डतडुड सुडुशु करर.
ब) लुकसलहलतुडरडे
क) डुरडुगसलधुड लुककलर डुणजे करड?
ड) लरंग व डररुल ही डरररडडडडड संकलुडनर सुडुशु करर.

- प्र.4** खालीलपैकी कोणत्याही एका प्रश्नाचे उत्तर लिहा.
लोकगीताची संकल्पना व स्वरूप सविस्तर लिहा.
किंवा
भाषेचे स्वरूप सविस्तर पणे विशद करा. **16**
- प्र.5** लोकसाहित्याची संकल्पना व व्याप्ती सविस्तरपणे स्पष्ट करा. **16**

- 10) पत्रकारितेतील सर्वात विश्वासाह घटक म्हणून कोणत्या लेखन प्रकाराकडे पाहिले जाते?
 अ) बातमी
 ब) जाहिरात
 क) मुलाखत
 ड) स्तंभलेखन
- 11) मराठी भाषेतील कोणते दैनिक सर्वप्रथम इंटरनेटवर गेले आहे?
 अ) सकाळ
 ब) केसरी
 क) सामना
 ड) संचार
- 12) फेसबुक या समाज माध्यमाची स्थापना — यांनी केली आहे.
 अ) ग्रॅहम बेल
 ब) मार्क झुकेरबर्ग
 क) सॅम पित्रोदा
 ड) मार्कोनी
- 13) आकाशवाणी हे — माध्यम आहे.
 अ) श्राव्य
 ब) दृकश्राव्य
 क) दृक
 ड) चलचित्र
- 14) आकाशवाणीचे ब्रीदवाक्य काय आहे?
 अ) बहुजन हिताय बहुजन सुखाय
 ब) सत्यम शिवम सुंदरम
 क) पत्र नव्हे मित्र
 ड) सदरक्षणाय खलनिग्रहणाय
- 15) रुपक ही — या माध्यमाची देणगी आहे.
 अ) वृत्तपत्र
 ब) दूरदर्शन
 क) चित्रपट
 ड) आकाशवाणी
- 16) 'जनसंवाद सिध्दांत आणि व्यवहार' हे पुस्तक कोणी लिहिले आहे?
 अ) रमा गोळवलकर
 ब) आनंद पाटील
 क) महेंद्र कदम
 ड) नंदकुमार मोरे

प्र.2 थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) नभोवणी वरील बातम्यांची निवड कोणत्या पध्दतीने केली जाते ते लिहा.
 ब) लोकनाट्याचे स्वरूप थोडक्यात स्पष्ट करा.
 क) मुद्रित माध्यमे कोण कोणती आहेत?
 ड) व्हाट्सअप या समाज माध्यमाचे स्वरूप स्पष्ट करा.
 इ) महात्मा फुले यांनी सामाजिक परिवर्तनाची पायाभरणी वृत्तपत्राच्या माध्यमातून कशा प्रकारे केली?
 ई) जाहिरातींचे प्रकार स्पष्ट करा.

प्र.3 लघुत्तरी प्रश्न. (कोणतेही दोन)

16

- अ) वृत्तपत्राच्या रचनेत कोणकोणते बदल झाले ते लिहा.
 ब) दूरदर्शन वरील बातम्यांचे विशेष लिहा.
 क) दूरदर्शन कार्यक्रमांचे प्रसारण पूर्व परीक्षण महत्वाचे कसे आहे ते लिहा.
 ड) आकाशवाणी वरील बातम्यांची निवड कोणत्या पध्दतीने केली जाते?

- प्र.4 दीर्घोत्तरी प्रश्न (कोणताही एक) 16**
- अ) आजच्या युगातील समाज माध्यमे कोणकोणती आहेत व त्याचा समाजावरील परिणाम कसा होतो ते लिहा.
- ब) दूरचित्रवाणी वरील मुलाखतीची वैशिष्ट्ये सविस्तर लिहा.
- प्र.5 दीर्घोत्तरी प्रश्न 16**
- आजच्या युगातील प्रसारमाध्यमे लोकशाहीस तारक की मारक चर्चा करा.

Seat No.	
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M.A. (Political Science) (Sem - III) (CBCS) Examination: Oct/Nov-2023
International Organization (MA02306)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
 2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) संयुक्त राष्ट्रसंघटनेची स्थापना केव्हा झाली?

अ) 1950	ब) 1945
क) 1948	ड) 1952
- 2) राष्ट्रसंघाची स्थापना केव्हा झाली?

अ) 1942	ब) 1914
क) 1935	ड) 1920
- 3) सार्क संघटनेची स्थापना केव्हा झाली?

अ) 1987	ब) 1985
क) 1980	ड) 1975
- 4) एशियनची स्थापना केव्हा करण्यात आली?

अ) 1964	ब) 1968
क) 1967	ड) 1969
- 5) नाटोला प्रतिउत्तर म्हणून कोणता करार झाला?

अ) सिटों	ब) सेन्टों
क) अरबलीग	ड) वॉर्सा
- 6) यापैकी 'एशियनचा' ASEAN सदस्य नाही.

अ) इंडोनेशिया	ब) मलेशिया
क) भारत	ड) फिलिपाईन्स
- 7) सार्क संघटनेत किती सदस्य देश आहेत?

अ) 7	ब) 9
क) 11	ड) 8
- 8) आंतरराष्ट्रीय न्यायालय कोठे आहे?

अ) पॅरिस	ब) हेग
क) बर्लिन	ड) न्यूयॉर्क

- प्र.3 दीर्घोत्तरी प्रश्न (चार पैकी दोन) 16**
- अ) युरोपियन युनियनचे उद्देश काय आहेत?
ब) राष्ट्रसंघाचे यशापयाश
क) यूनो मार्फत सोडविलेल्या प्रश्नांची चर्चा करा.
ड) सुरक्षा समितीची कार्ये सांगा.
- प्र.4 दीर्घोत्तरी प्रश्न (दोन पैकी एक) 16**
- अ) संयुक्त राष्ट्रांच्या यशापयशाचे मूल्यमापन करा.
ब) सार्कचे ध्येय आणि उद्देश सांगा.
- प्र.5 सविस्तर उत्तर लिहा. 16**
- संयुक्त राष्ट्रांच्या महासभेची रचना, अधिकार, कार्ये स्पष्ट करा.

Seat No.	
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M.A. (Political Science) (Sem - III) (CBCS) Examination: Oct/Nov-2023
International Organization (MA02306)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Choose the correct alternative.

16

- 1) United Nations organization established in _____.
 a) 1950
 b) 1945
 c) 1948
 d) 1952
- 2) League of Nations organization established in _____.
 a) 1942
 b) 1914
 c) 1935
 d) 1920
- 3) SAARC organization established in _____.
 a) 1987
 b) 1985
 c) 1980
 d) 1975
- 4) 'ASEAN' organization established in _____.
 a) 1964
 b) 1968
 c) 1967
 d) 1969
- 5) Which treaty is the NATO treaty of Anti-Reaction?
 a) SEATO
 b) CENTO
 c) Arableague
 d) WARSA
- 6) Which Nation is not the member of 'ASEAN'?
 a) Indonesia
 b) Malaysia
 c) India
 d) Philippiness
- 7) How many member country are there in SAARC organization?
 a) 7
 b) 9
 c) 11
 d) 8
- 8) Where is the International Court?
 a) Paris
 b) Hague
 c) Berlin
 d) New York
- 9) When was NATO established?
 a) 1948
 b) 1950
 c) 1949
 d) 1951
- 10) What the world is identified in the contemporary International politics?
 a) Unipolar
 b) Multipolar
 c) Third
 d) Bi-Polar
- 11) How many countries are members of UNO?
 a) 193
 b) 200
 c) 199
 d) None of these

- 10) "संवाद कौमुदी" हे वृत्तपत्र ---- यांनी सुरु केले.
 अ) राजा राममोहन रॉय ब) महात्मा फुले
 क) स्वामी दयानंद सरस्वती ड) स्वामी विवेकानंद
- 11) 'शारदा सदन' या संस्थेची स्थापना ---- यांनी केली.
 अ) सावित्रीबाई फुले ब) रमाबाई रानडे
 क) पंडिता रमाबाई ड) ताराबाई शिंदे
- 12) राष्ट्रीय सभेच्या स्थापनेच्या वेळी ---- हे भारताचे व्हाईसरॉय होते.
 अ) लॉर्ड रिपन ब) लॉर्ड डफरिन
 क) लॉर्ड कॅनिंग ड) लॉर्ड बेंटिंग
- 13) ---- यांनी बंगाल फाळणीची योजना तयार केली होती.
 अ) सर अँड्रयु फ्रेझर ब) सर हाफकीन
 क) सर सायमन ड) लॉर्ड मेकॉले
- 14) दलितांच्या उध्दारासाठी ---- यांनी "डिप्रेड क्लास मिशन" ची स्थापना केली.
 अ) महात्मा फुले ब) राजा राममोहन रॉय
 क) स्वामी दयानंद सरस्वती ड) महर्षी विठ्ठल रामजी शिंदे
- 15) राष्ट्रीय काँग्रेसच्या ---- अधिवेशनात जहाल व मवाळ यांच्यात फुट पडली.
 अ) मुंबई ब) कलकत्ता
 क) बनारस ड) सुरत
- 16) लोकमान्य टिळकांनी मंडालेच्या तुरुंगात असताना ---- हा ग्रंथ लिहिला.
 अ) काळेपाणी ब) डोंगरीच्या किल्लातील 101 दिवस
 क) गीतारहस्य ड) गीतांजली

प्र.2 खालील पैकी कोणत्याही चार प्रश्नांची थोडक्यात उत्तरे लिहा.

16

- अ) राणीचा जाहीरनामा याविषयी माहिती लिहा.
 ब) आर्यसमाजाची प्रमुख तत्वे याविषयी माहिती सांगा.
 क) राष्ट्रीय सभेची उद्दिष्टे याविषयी माहिती लिहा.
 ड) जहालांचा चतुःसुत्री कार्यक्रम याबद्दल माहिती सांगा.
 इ) राष्ट्रीय उत्पन्न ही संकल्पना याविषयी माहिती सांगा.
 ई) भारतीय शेतीच्या व्यापारीकरणाची प्रमुख कारणे सांगा.

प्र.3 लघुत्तरी प्रश्न. (कोणत्याही दोन)

16

- अ) 1858 चा भारत प्रशासन कायदा
 ब) ब्रिटिशकालीन-भारतीय कापड उद्योग
 क) जहालवादांच्या उदयाची कारणे
 ड) हंटर आयोग

प्र.4 दीर्घोत्तरी प्रश्न

16

ब्रिटिश सत्तेने साम्राज्यवादाच्या वाढीसाठी भारतात केलेल्या विविध प्रशासकीय सुधारणांचा आढावा घ्या.

किंवा

भारतीय स्वातंत्र्यचळवळीत लोकमान्य टिळकांनी दिलेल्या योगदानाची माहिती सांगा.

प्र.5 भारतीय राष्ट्रीय सभेच्या स्थापनेची पार्श्वभूमी सांगून मवाळ गटाच्या कामगिरीचा आढावा घ्या.

Seat No.	
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Set **P**

M.A. (History) (Semester - III) (CBCS) Examination: Oct/Nov-2023
History of India (1858 A. D. - 1964 A. D.) (MA01306)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Choose the correct Alternative from the options. 16

- 1) The administration of East India Company in India was terminated by the _____ act.
 - a) 1858
 - b) 1861
 - c) 1892
 - d) 1909
- 2) The Third British Burmese war _____ took place during the viceroy's time.
 - a) Lord Ripan
 - b) Lord Dufferin
 - c) Lord Curzon
 - d) Lord Lytton
- 3) _____ was appointed as the first British Viceroy of India.
 - a) Lord Dalhousie
 - b) Lord Canning
 - c) Lord Macaulat
 - d) Lord Mayo
- 4) _____ is known as the father of local self- government.
 - a) Lord Canning
 - b) Lord Dufferrin
 - c) Lord Ripan
 - d) Lord Curzon
- 5) _____ put forth the "Economic Drainage Theory".
 - a) S. N. Banerjee
 - b) R. C. Datta
 - c) Gopal Krishna Gokhale
 - d) Dadabhai Nairoji
- 6) The factory "Tata Iron and Steel Company "was established in _____ year.
 - a) 1875
 - b) 1892
 - c) 1902
 - d) 1907
- 7) 'Indian Jute Mills Association' was established in _____ to limit the production of jute.
 - a) 1861
 - b) 1872
 - c) 1884
 - d) 1907
- 8) _____ is known as the "Magnacharta of Indian Education".
 - a) Macaulay Commission
 - b) Chrles wood's khalita
 - c) Hunter Commission
 - d) Indian University Act
- 9) The British government passed the 'Hindu Widow Remarriage Act' in the year _____.
 - a) 1848
 - b) 1856
 - c) 1858
 - d) 1862
- 10) The newspaper "Sanvad Kaumudi "was started by _____.
 - a) Raja Rammohan Roy
 - b) Mahatma Phule
 - c) Swami Dayanand Saraswati
 - d) Swami Vivekanand
- 11) "Sharada Sadan" was founded by _____.
 - a) Savitribai Phule
 - b) Ramabai Ranade
 - c) Pandita Ramabai
 - d) Tarabai Shinde

- 9) दिवाळी नृत्याला ---- असे म्हटले जाते
 अ) भवाई नृत्य ब) झूमर नृत्य
 क) गरबा नृत्य ड) घूमर नृत्य
- 10) लोकसंगीतात बहुधा ---- या तालाचा वापर केला जातो.
 अ) तीनताल ब) एकताल
 क) केहरवा ड) अर्ध्या
- 11) कोणत्याही रागाशी संबंध नसलेले गीतप्रकार म्हणजे ---- होय.
 अ) लोककला ब) श्रमगीत
 क) ओवीगीत ड) यापैकी सर्व
- 12) ढोलकी हे वाद्य ---- या गीतप्रकारासाठी वाजवली जाते.
 अ) भजन ब) किर्तन
 क) ओवीगान ड) यापैकी सर्व
- 13) भारुड या गीतप्रकारासाठी वाजवले जाणारे वाद्य ----.
 अ) ढोलकी/तबला ब) नगाडा/चंडु
 क) पखवाज/ढोलकी ड) यापैकी नाही
- 14) भजन या गीतप्रकारासाठी प्रामुख्याने वाजवले जाणारे वाद्य ----.
 अ) डफ ब) ढोलकी
 क) तबला ड) चंडु
- 15) खालीलपैकी कोणते वाद्य भजन या गीत प्रकारात वाजवले जात नाही.
 अ) तबला ब) पखवाज
 क) टाळ ड) ढोलकी
- 16) तबला या वाद्याप्रमाणे रचना असणारे आणि पारंपारिक गोंधळ या गीतप्रकारासाठी वाजवले जाणारे वाद्य ---- हे आहे.
 अ) नगाडा ब) संबळ
 क) दिमडी ड) पखवाज

प्र.2 खालीलपैकी प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही चार)

- अ) भावगीत या गीतप्रकारावर टिप लिहा.
 ब) लावणी
 क) बालगीत
 ड) भक्तीगीत
 इ) अभंग
 ई) गझल

16

- प्र.3 खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) 16**
- अ) लोकगीत म्हणजे काय? यावर सविस्तर चर्चा करा.
- ब) प्राचीन काळात राजा-महाराजांची स्तुती करणारा गीत प्रकार कोणता ते सांगून यावर सविस्तर चर्चा करा.
- क) संस्कार गीते यावर सविस्तर चर्चा करा.
- ड) लोकसंगीतातील लावणी या गीतप्रकाराची चर्चा करा.
- प्र.4 खालील प्रश्नाचे सविस्तर उत्तर लिहा. (कोणताही एक) 16**
- भारुड हा गीतप्रकाराबद्दल सविस्तर माहिती लिहा आणि तो कशासाठी गातात हे देखील स्पष्ट करा.
- किंवा**
- श्रमगीते आणि शेतकरी गीते यावर टिपणी तयार करा.
- प्र.5 खालील प्रश्नाचे सविस्तर उत्तर लिहा. 16**
- लोकसंगीतातील 'गवळण' आणि 'लावणी' गीतप्रकार काय आहेत? ते सांगून यावर सविस्तर चर्चा करा.

Seat
No.**M.A. (Tabla/Pakhavaj) (Semester - III) (CBCS) Examination:
Oct/Nov-2023****Essay Writing – I (MA21308)**Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 योग्य पर्याय निवडा.

16

- 1) भजन या लोककला प्रकारासाठी ---- हे वादय वापरतात.
अ) ढोल, नगारा ब) तबला, पखवाज
क) मोरचंग, तुनतुने ड) यापैकी नाही
- 2) संबळ या वादयांचा वापर ---- या प्रकारासाठी होतो.
अ) भजन ब) लावणी
क) गोंधळ ड) यापैकी नाही
- 3) पं. शिवकुमार शर्मा हे ---- या वादयाशी संबंधित आहेत.
अ) तबला ब) सतार
क) सरोद ड) संतूर
- 4) "ऐसी लागी लगन" या गाण्याचे मुळ गायक आहेत.
अ) पं. भिमसेन जोशी ब) उ. राशीद खान
क) अनुप जलोटा ड) पं. कुमार गंधर्व
- 5) चित्रपट गीतांसाठी ---- हे ताल वापरतात.
अ) दादरा ब) केरवा
क) रूपक ड) हे सर्व
- 6) भगवान शंकर यांच्या हातातील वादय
अ) ढोल ब) तबला
क) डमरु ड) यापैकी नाही
- 7) तबला या वादयामध्ये प्रमुख ---- घराणी आहेत.
अ) सहा ब) सात
क) आठ ड) नऊ
- 8) "आन मिलो सजना" हे गीत ---- या चित्रपटातील आहे.
अ) गदर ब) पदमावत
क) इंडीयन ड) लगान
- 9) उ. बिस्मील्ला खाँ हे ---- या वादयाशी संबंधित आहेत.
अ) बासरी ब) शहनाई
क) संतूर ड) तबला

- 10) पं. शंकर महादेवन यांनी गायलेले सुप्रसिद्ध गणेशाचे संस्कृत गीत
 अ) गणनायकाय ब) लंबोदर पंचतुंड
 क) गणाधीशा ड) यापैकी नाही
- 11) दादरा ताल हा ——— मात्रेचा आहे.
 अ) चार ब) सहा
 क) आठ ड) दहा
- 12) “मधुबन” में जो कन्हय्या” हे गाणे ——— या चित्रपटातील आहे.
 अ) गदर ब) पदमावत
 क) लगान ड) नटरंग
- 13) खालीलपैकी पदमश्री सन्मान प्राप्त कलाकार आहेत.
 अ) पं. सुरेश तळवळकर ब) उ. झाकीर हुसेन
 क) पं. स्वपन चौधरी ड) हे सर्व
- 14) “मोहे रंग दो लाल” हे गाणे ——— या चित्रपटातील आहे.
 अ) पदमावत ब) बाजीराव मस्तानी
 क) गदर ड) यापैकी नाही
- 15) चित्रपटासाठी संगीत देणाऱ्या व्यक्तीस ——— म्हणतात.
 अ) संगीत दिग्दर्शक ब) फिल्म दिग्दर्शक
 क) शास्त्र दिग्दर्शक ड) यापैकी नाही
- 16) पखवाज या वादयाला साम्य दर्शवणारे वादय
 अ) संबळ ब) नगारा
 क) ढोलकी ड) चौघडा

प्र.2 टिपा लिहा (कोणत्याही चार)

16

- अ) ढोलकी या वादयाचा वापर व महत्त्व
 ब) ताल दादरा
 क) तबला वादनातील बनारस घराणे
 ड) चित्रपट संगीत
 इ) ताल खेमटा
 ई) पोवाडा म्हणजे काय व चित्रपटातील वापर लिहा.

प्र.3 थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) तबल्याची बाज व बनावट याविषयी माहिती लिहा.
 ब) केरवा तालाची माहिती लिहा.
 क) तबलावादनातील दिल्ली घराणे
 ड) तबला या वादयाचे महत्त्व लिहा.
 इ) अभंग या प्रकाराचा चित्रपटातील वापर
 ई) लोकगीत व शास्त्रीय गायन फरक लिहा.

- प्र.4 खालीलपैकी कोणत्याही एका प्रश्नाचे उत्तरे लिहा. 16
- अ) चित्रपट संगीतात तबला या वादयाचे स्थान व महत्त्व
किंवा
- ब) तबला वादयाचे सचित्र वर्णन करा.
- प्र.5 चित्रपट संगीतात वापरल्या जाणाऱ्या वादयांची माहिती लिहा. (कोणतेही पाच वादये) 16

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**M.A. (Drama) (Semester - III) (CBCS) Examination: Oct/Nov-2023
Sanskrit Natya Parampara (MA22308)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

सूचना :- सर्व प्रश्न अनिवार्य आहे.
उजवीकडील अंक पूर्ण गुण दर्शवितात.

- प्र.1 अ) रिकाम्या जागा भरा. 04
- 1) भरतमुनींनी लिहिलेले अमृत मंथन हे पहिले ---- होय.
अ) काव्य ब) नाटक
क) ऋचा ड) गीत
 - 2) सारीपुत्र प्रकरण हे ---- लिहिलेले नाटक आहे.
अ) केसरीपुत्राने ब) वासुकीपुत्राने
क) रामपुत्राने ड) अश्वघोषाने
 - 3) भरतमुनींच्या ---- ग्रंथाप्रमाणे नाटक शोकांत असू नये.
अ) सुखांतशास्त्र ब) नाट्यशास्त्र
क) विनोदशास्त्र ड) मिश्रशास्त्र
 - 4) संस्कृत ---- सादरीकरणाचे तंत्र विशुद्ध होते.
अ) लिखाणाच्या ब) नृत्याच्या
क) नाटकाच्या ड) गीतांच्या
- ब) चूक की बरोबर ओळखा. 04
- 1) नाट्यशास्त्रामध्ये अभिनयाचे एकूण चाळीस प्रकार सांगितले आहेत.
 - 2) भरत प्रणीत रंगमंचाचे प्रकार 3 आहेत.
 - 3) वेशभूषा आहार्य अभिनयाचा भाग नाही.
 - 4) पौराणिक कथा संस्कृत रंगभूमीच्या प्राण होत्या.
- क) योग्य जोड्या जुळवा. 04
- | | |
|--------------|------------|
| a) पूर्वरंग | i) अवतरण |
| b) प्रवृत्ती | ii) अवंती |
| c) करण | iii) लीन |
| d) वृत्ती | iv) कैशिकी |

Codes:

	(a)	(b)	(c)	(d)
(A)	(ii)	(i)	(iv)	(iii)
(B)	(i)	(ii)	(iii)	(iv)
(C)	(iii)	(iv)	(i)	(ii)
(D)	(iv)	(iii)	(ii)	(i)

ड) योग्य की अयोग्य ओळखा.

- 1) अंगिक—रचना
- 2) सात्त्विक—संतुलित अवस्था
- 3) वाचिक—गायन
- 4) आहार्य—मुद्रा

प्र.2 टिपा लिहा. (कोणत्याही चार)

16

- 1) शुद्रक
- 2) कालीदास
- 3) उत्तररामचरीत
- 4) पंचरात्र
- 5) मालविकाग्नीमित्र
- 6) भवभूती

प्र.3 खालीलपैकी कोणत्याही दोन प्रश्नांची उत्तरे लिहा.

16

- 1) विकृष्ट, त्रयस्त आणि चतुरस्त्र नाट्यगृहांची रचना मांडा.
- 2) भारती, आरभाटी, कैशीकी आणि सात्वती म्हणजे काय?
- 3) कालीदासांची नाट्यसृष्टी यावर सविस्तर लिहा.
- 4) मृच्छकटीकम बदल माहिती लिहा.

प्र.4 खालीलपैकी कोणत्याही एका प्रश्नाचे दीर्घ उत्तर लिहा.

16

- 1) संस्कृत नाट्य परंपरेचा सविस्तर मागोवा घ्या.
- 2) भारतीय पारंपारिक रंगभूमीच्या ऱ्हासाची कारणे सांगा.

प्र.5 'संस्कृत रंगभूमीचा सुवर्णकाळ' या विषयी सविस्तर लिहा.

16

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**M.A. (Mass Communication) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Film Studies (MA23309)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) चित्रपट निर्मितीमध्ये ——— हे कॅप्टन ऑफ द शिप म्हणून ओळखले जातात.
अ) संकलक
ब) नृत्य दिग्दर्शक
क) संहिता लेखक
ड) यापैकी नाही
- 2) ——— हे चित्रपट निर्मितीचा भाग नाही.
अ) कथानक
ब) दृक संवाद
क) पात्रे
ड) यापैकी नाही
- 3) 1895 मध्ये, ——— भावंडानी सिनेमोटोग्राफीला जन्म दिला.
अ) ल्युमियर
ब) जोन्स
क) हार्ले
ड) यापैकी नाही
- 4) कट्यार काळजात घुसली चित्रपटात मुख्य भूमिका ——— यांची आहे.
अ) श्रेयस तळपदे
ब) आकाश ठोसर
क) सुबोध भावे
ड) यापैकी नाही
- 5) ——— हा चित्रपट समीक्षेचा भाग नाही.
अ) कलाकारांची नावे
ब) निर्मिती संस्था
क) कथानक
ड) यापैकी नाही
- 6) शॉटची श्रृंखला म्हणजे ——— होय.
अ) प्रसंग
ब) फ्रेम
क) अँगल
ड) डॉली
- 7) फेड इन ही संज्ञा ——— मध्ये वापरतात.
अ) कलाकारांची निवड करणे
ब) संकलन
क) चित्रीकरण
ड) संहिता लिहिणे
- 8) वरून—खाली कॅमेऱ्याची हालचाल म्हणजे ——— होय.
अ) पॅन
ब) झूम
क) टिल्ट
ड) यापैकी नाही

- 9) संहितेमध्ये व्हीएफएक्स म्हणजे ---- होय.
 अ) एक्सवट्रीम क्लोज शॉट ब) स्टँडर्ड शॉट
 क) स्पेशियल इफेक्ट ड) कट
- 10) ---- ही अभिनेता चित्रपटातील भूमिकेसाठी योग्य आहे की नाही हे तपासण्यासाठी चित्रित केलेली चाचणी आहे.
 अ) स्क्रिप्ट टेस्ट ब) स्क्रीन टेस्ट
 क) व्हिज्युअल टेस्ट ड) यापैकी नाही
- 11) कट,कॉपी आणि पेस्ट ही मूलभूत साधने ---- ची आहेत.
 अ) ध्वनी संकलन ब) ध्वनी रेकॉर्डिंग
 क) ध्वनी चित्रीकरण ड) ध्वनी डबिंग
- 12) शॉट ही संज्ञा ---- मध्ये वापरतात.
 अ) व्हॉइस रेकॉर्डिंग ब) व्हॉइस एडिटिंग
 क) चित्रीकरण ड) डबिंग
- 13) अनु मलिक हे ---- आहेत.
 अ) नृत्य दिग्दर्शक ब) संगीत दिग्दर्शक
 क) कला दिग्दर्शक ड) यापैकी नाही
- 14) ---- प्रसिध्द कला दिग्दर्शक आहेत.
 अ) सुहास कामत ब) नितीन देसाई
 क) विनोद शर्मा ड) यापैकी नाही
- 15) ---- हयाचा वेशभूषेमध्ये समावेश होत नाही.
 अ) पात्र ब) प्रसंग
 क) कथा ड) यापैकी नाही
- 16) ---- संवादांचे पुन्हा रेकॉर्डिंग ---- म्हणून ओळखले जाते.
 अ) डबिंग ब) व्हॉइस ओव्हर
 क) री-डायलॉग ड) यापैकी नाही

प्र.2 खालीलपैकी चार प्रश्नांची थोडक्यात उत्तरे लिहा.

16

- अ) 'चित्रपटात पार्श्वसंगीताचे महत्त्व' यावर एक संक्षिप्त टीप लिहा.
 ब) चित्रपट निर्मिती प्रक्रियेत दिग्दर्शकाची भूमिका काय असते?
 क) सिनेमात रंगांचे महत्त्व काय आहे?
 ड) चित्रपटसृष्टीवर नवीन तंत्रज्ञानाच्या प्रभावाची चर्चा करा.
 इ) नागराज मंजुळे यांच्या वरती संक्षिप्त टिप लिहा.
 ई) 'भारतीय चित्रपटांचे मूक युग' यावरती संक्षिप्त टीप लिहा.

प्र.3 खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन)

16

- अ) राष्ट्रीय चित्रपट विकास महामंडळावर लिहा.
 ब) 'श्याम बेनेगल' यांचे जीवन आणि कारकीर्द यावर चर्चा करा.
 क) दादासाहेब फाळके यांच्यावरती टिप लिहा.
 ड) दादा कोंडकेंच्या चित्रपटांची वैशिष्ट्ये कोणती आहेत?

- प्र.4** खालील प्रश्नांची उत्तरे लिहा. (कोणताही एक) **16**
चित्रपट समीक्षा आणि चित्रपट रसस्वाद यांच्या व्याख्या करा. चित्रपट समीक्षेचे घटक स्पष्ट करा.
- किंवा**
- चित्रपटाचे प्रकार कोणते आहेत? उदाहरणांसह स्पष्ट करा.
- प्र.5** चित्रपट निर्मितीचे टप्पे कोणते आहेत? **16**

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**M.A. (Mass Communication) (Semester - III) (CBCS) Examination:
Oct/Nov-2023
Film Studies (MA23309)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options.

16

- 1) _____ is known as the captain of the ship in the film production.
 - a) Editor
 - b) Dance Director
 - c) Script Writer
 - d) None of these
- 2) _____ is not part of filmmaking.
 - a) Plot
 - b) Visual Communication
 - c) Characters
 - d) None of these
- 3) In 1895, _____ brothers gave birth to the Cinématography.
 - a) Lumière
 - b) Jones
 - c) Harley
 - d) None of these
- 4) _____ is the male lead in Katyar Kaljat Ghusali Movie is.
 - a) Sreyas Talpade
 - b) Akash Thosar
 - c) Subodh Bhave
 - d) None of these
- 5) _____ is not part of the film review.
 - a) Names of Actors
 - b) Production House
 - c) Plot
 - d) None of these
- 6) A series of shot means _____.
 - a) Scene
 - b) Frame
 - c) Angle
 - d) Dolly
- 7) Fade In term used in _____.
 - a) Casting
 - b) Editing
 - c) Shooting
 - d) Script Writing
- 8) Movement of camera from up to down is type of _____.
 - a) Pan
 - b) Zoom
 - c) Tilt
 - d) None of these
- 9) In a script, VFX stands for _____.
 - a) Extreme close shot
 - b) Standard shot
 - c) Special effects
 - d) Cut
- 10) _____ is a filmed test to ascertain whether an actor is suitable for a film role.
 - a) Script Test
 - b) Screen Test
 - c) Visual Test
 - d) None of these
- 11) Cut, Copy & paste these are basic tools of _____.
 - a) Sound Editing
 - b) Sound Recording
 - c) Sound Shooting
 - d) Sound Dubbing

- 12) Shot term used in _____.
 a) Voice Recording b) Voice Editing
 c) Shooting d) Dubbing
- 13) Anu Malik is _____.
 a) Dance Director b) Music Director
 c) Art Director d) None of these
- 14) _____ is a famous art director.
 a) Suhas Kamat b) Nitin Desai
 c) Vinod Sharma d) None of these
- 15) _____ not includes in the movie drapery.
 a) Character b) Situation
 c) Story d) None of these
- 16) Re-recording of dialogues is known as _____.
 a) Daubing b) Voice Over
 c) Re-dialogues d) None of these

Q.2 Answer the following questions. (Any Four) 16

- Write a short note on the 'Importance of background music In Films'
- What is the role of the director in the filmmaking process?
- What is the importance of colors in cinema?
- Discuss the impact of new technology on cinema.
- Write short note on 'Nagraj Manjule'
- Write short note on 'Silent Era of Indian Movies'

Q.3 Answer the following questions. (Any Two) 16

- Write on National Film Development Corporation.
- Discuss the life and career of 'Shyam Benegal'.
- Write note on the topic 'Dadasaheb Falake'
- What are the characteristics of Dada Kondake's cinema?

Q.4 Answer the following questions. (Any One) 16

Define Film Review and Film Appreciation. Explain contents of film review.

OR

What are the types of cinema? Explain with examples.

Q.5 What are the stages of film production? 16

Seat No.	
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**M.Com. (Sem - III) (CBCS) Examination: Oct/Nov-2023
Entrepreneurship Development (4063-13)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternatives from the options. 10

- 1) _____ is the purposeful activities of an individual or a group of associated individuals under taken to initiate, maintain or organize a profit- oriented business unit.
 - a) Entrepreneurship Development
 - b) Motivation
 - c) Management
 - d) Project Management
- 2) The maximum loan sanctioned under _____ category is Rs. 50,000.
 - a) Kishor
 - b) Tarun
 - c) Shishu
 - d) None of these
- 3) A _____ is a workspace created to offer startups and new ventures access to the resources they need, all under one roof.
 - a) Business incubator
 - b) Inexpensive workplace
 - c) Business environment
 - d) None of these
- 4) _____ is a project of the govt. of Maharashtra state in India & it is the leading corporation of Maharashtra.
 - a) DIC
 - b) SIDBI
 - c) MCED
 - d) MIDC
- 5) The uncertainty Bearing theory is classified by _____.
 - a) Mc Clelland
 - b) Schumpeter
 - c) Knight
 - d) Peter Drucker
- 6) _____ is a revolutionary scheme that has been started to help the people who wish to start their own business.
 - a) Startup
 - b) Standup
 - c) Make in India
 - d) Incubation Centre
- 7) _____ argues that business uncertainty can be reduced through consolidation.
 - a) Knight
 - b) F.W. Taylor
 - c) Henry Fayol
 - d) Mc Clelland
- 8) MUDRA loans based on _____ categories of parameters.
 - a) 3
 - b) 4
 - c) 6
 - d) 5
- 9) _____ is one who always searches for change, responds to it & takes an opportunity.
 - a) Manger
 - b) Employee
 - c) Entrepreneur
 - d) Director

- 10) _____ is a twelve-digit Unique Identification Number.
- a) PIN number
 - b) Udyog Aadhaar
 - c) License number
 - d) UPI number

B) Fill in the blanks.

06

- 1) MUDRA was registered as a company in _____.
- 2) Make in India is initially based on _____ pillars.
- 3) FDI stands for _____.
- 4) PMMY stands for _____.
- 5) _____ is a central sector scheme with the objective of promoting small village & cottage industries in a particular area.
- 6) MSME stands for _____.

Q.2 Answer the following.

16

- a) Describe MUDRA loan details.
- b) Explain the concept of MIDC. Give the functions of it.
- c) Explain – Udyog Aadhaar
- d) What is Entrepreneurship Development? Give the objectives of it.

Q.3 Answer the following.

16

- a) Explain-Make in India. Give the objectives of Make in India.
- b) Explain the Innovation theory.

Q.4 Answer the following questions. (Any One)

16

- a) What is meant by Entrepreneurship Development? Give the characteristics & process of it.

OR

- b) What is meant by Project Management? Give the stages of it.

Q.5 Answer the following questions. (Any One)

16

- a) Describe MSME.

OR

- b) Describe EDII & SIDBI in detail.

Seat No.	
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**MCA (Semester - III) (CBCS) Examination: Oct/Nov-2023
Fundamental of Web Designing (MSC18310)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

- Instructions:** 1) Q. Nos. 1 and. 2 are compulsory.
2) Attempt any three questions from Q. No. 3 to Q. No. 7
3) Figure to right indicate full marks.

Q.1 A) Fill in the blanks by choosing correct alternatives given below 10

- 1) Web pages contain _____, which are specially formatted words or phrases that enable you to access another page on the Web.
 - a) Hyperlinks
 - b) Higherlinks
 - c) Hidden links
 - d) Hexalinks
- 2) The document's _____, meta information, and, in most cases, document scripts are all contained in the section
 - a) Table name
 - b) File name
 - c) Body
 - d) Title
- 3) <p> is used to delimit entire _____ of text.
 - a) Headings
 - b) Body
 - c) Page
 - d) Paragraphs
- 4) There are six predefined levels of _____.
 - a) Headings
 - b) HTML
 - c) Website
 - d) Graphics
- 5) Use _____ tag for the small size of the text.
 - a) <i>
 - b) <u>
 - c) <t>
 - d) <a>
- 6) Rows of data are defined and delimited by _____ tags.
 - a) <tc>
 - b) <tk>
 - c) <tr>
 - d) <tt>
- 7) HTML _____ provide the standard of GUI elements, including text boxes, check boxes, pull down lists, and more.
 - a) Forms
 - b) Forum
 - c) Focus
 - d) Famous
- 8) Using _____, users can select from multiple question types, drag-and-drop to reorder questions, and customize values as easily as pasting a list.
 - a) Google Slides
 - b) Google Forms
 - c) Google Sheets
 - d) Google Docs
- 9) Using _____, users can establish a ground truth for data in online spreadsheets, with easy sharing and real-time editing.
 - a) Microsoft access
 - b) Libreoffice
 - c) Ubuntu office
 - d) Google Sheets

- 10) Google Drive can provide encrypted and secure access to your ____.
- a) Files
 - b) Firmware
 - c) Messages
 - d) Mails

B) Write True or False.**06**

- 1) WWW stands for World Wide Web.
- 2) HTML stands for HighLevel Team Management Lead.
- 3) There are lots of tags and they are all in pairs; there are opening tags and closing tags.
- 4) The text inside the curly brackets explains the purpose of the tag.
- 5) Whole document is contained between opening < html > and closing < /html > tags.
- 6) Google Classroom is a free blended learning platform developed by Google for educational institutions that aims to simplify creating, distributing, and grading assignments.

Q.2 Answer the following.**16**

- a) What do you mean by Web page?
- b) What is a Web browser?
- c) What is </body> tag?
- d) Describe GMail?

Q.3 Answer the following.

- a) What are the various types of list? State and explain related HTML tags to create a list with examples? **08**
- b) Enlist Google Apps for Education? Explain components of Google Forms Design with suitable example? **08**

Q.4 Answer the following.

- a) What do you mean by heading in HTML? State heading tag in HTML with suitable example? **08**
- b) Define Hyperlinks. Explain in detail working with Hyperlinks in HTML? **08**

Q.5 Answer the following.

- a) What is HTML? Explain in detail the basic structure of a HTML Document. **08**
- b) Discuss in detail five golden rules of website design? **08**

Q.6 Answer the following.

- a) Illustrate the use of font tag for formatting font styles such as font name, color, size? **08**
- b) Explain in detail the Table tags for creating tables in HTML with suitable example? **08**

Q.7 Answer the following.

- a) Discuss various applications of Google for teaching, learning and research? **08**
- b) Explain in detail different types of Websites with suitable examples? **08**

Seat
No.

M.A. (History Campus) (Semester - III) (CBCS) Examination: Oct/Nov-2023
History of Solapur (MAH221309)

Day & Date: Friday, 29-12-2023

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- सूचना : 1) सर्व प्रश्न अनिवार्य आहेत.
 2) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.1 खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

16

- 1) सोलापूर चा समावेश सातवाहन राज्यांमध्ये असताना सातवाहनांची राजधानी कोणती होती.
 अ) तेर
 ब) वेरूळ
 क) पैठण
 ड) सोलापूर
- 2) सातवाहन कालखंडातील अवशेष सोलापूर जिल्हयातील ——— येथील उत्खननात सापडले.
 अ) शेवगाव
 ब) सिद्धापूर
 क) वरवडे
 ड) कामती
- 3) सोलापूर चे प्राचीन नाव ——— हे होते.
 अ) सोन्नलगी
 ब) कुंतल
 क) तगर
 ड) यापैकी नाही
- 4) सोलापूर चा समावेश ——— या प्राचीन देशात होता.
 अ) कुंतल
 ब) पैठण
 क) धाराशिव
 ड) अहमदनगर
- 5) अक्कलकोट येथे ——— या राजाचा शिलालेख मिळतो.
 अ) विक्रमादित्य
 ब) विक्रमादित्य सहावा
 क) विक्रमसिंह
 ड) यापैकी नाही
- 6) कारकल ता. द. सोलापूर येथे झालेल्या उत्खननात ——— युगाचे अवशेष मिळाले आहेत.
 अ) पुराश्मयुग
 ब) मध्यात्मयुग
 क) ताम्रपाषाणयुग
 ड) यापैकी नाही
- 7) औरंगजेब द. स्वारीवर असताना त्याच्या लष्करी छावणीचा मुक्काम सोलापूर जिल्हयातील ——— या ठिकाणी होता.
 अ) ब्रम्हपुरी
 ब) माळशिरस
 क) कासेगाव
 ड) गेरडी
- 8) मराठे व इंग्रज यांच्यातील शेवटचे युद्ध ——— या गावी झाले.
 अ) मोहोळ
 ब) आष्टी
 क) सोलापूर
 ड) पंढरपूर

- 9) शिवाजी महाराजांची एक मुलगी सोलापूर जिल्हयातील ---- या गावातील निंबाळकरांच्या घराण्यात दिली होती.
 अ) पिलिव ब) माढा
 क) पानगाव ड) भाळवणी
- 10) दि. सोलापूर स्पिनिंग अँड विव्हिंग मिल्स ही गिरणी इ. स. 1874 मध्ये ---- यांनी स्थापन केली.
 अ) शेट मोरारजी गोकुळदास ब) शेट जमनालाल
 क) शेट माणिकचंद ड) यापैकी नाही
- 11) सोलापूर समाचार हे दैनिक ---- यांनी सोलापूर मध्ये सुरू केले.
 अ) जक्कल ब) नरसिंग गिरजी
 क) वारद ड) यापैकी नाही
- 12) भारताबरोबरच परदेशात ---- या उत्पादनासाठी सोलापूर प्रसिद्ध आहे.
 अ) साडी ब) गोणपाट
 क) चादर ड) रेशम
- 13) कांदा मुळा भाजी, अवघि विटाई माझी। असे म्हणून आपल्या कामाला श्रेष्ठ समजणारा भक्ती संप्रदायातील संत म्हणजे ---- होतं.
 अ) संत बसवेश्वर ब) संत चोखामेळा
 क) संत सावता माळी ड) संत बहिणाबाई
- 14) ---- हे जगप्रसिद्ध धार्मिक तीर्थक्षेत्र सोलापूर जिल्हयात आहे.
 अ) पंढरपूर ब) कासेगाव
 क) माळशिरस ड) शिराळ
- 15) सोलापूर चा समावेश ---- या प्राचीन देशात केला जात होता.
 अ) पैठण ब) कुंतल
 क) धाराशीव ड) अहमदनगर
- 16) सोलापूर ला मार्शल लॉ कधी पुकारण्यात आला.
 अ) 1930 ब) 1931
 क) 1932 ड) 1933

प्र.2 खालीलपैकी प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही चार)

- अ) सोलापूर जिल्हयात झालेली उत्खनने
 ब) सोलापूर चे चार हुतात्मे
 क) सोलापूरचा भुईकोट किल्ला
 ड) आष्टीची लढाई
 इ) सोलापूर चे विडी कामगार
 ई) सोलापूरमधील कारखानदारीचा विकास

- प्र.3** खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही दोन) **16**
- अ) सोलापूरमधील प्राचीन मंदिरांची माहिती सांगा.
ब) सोलापूर चे मध्ययुगीन इतिहासातील महत्त्व स्पष्ट करा.
क) वारकरी संप्रदायाची माहिती लिहा.
ड) स्वातंत्र्य चळवळीतील सोलापूर चे योगदान स्पष्ट करा.
- प्र.4** खालील प्रश्नाचे सविस्तर उत्तर लिहा. (कोणताही एक) **16**
- सोलापूर मधील पुरातत्त्विय साधनांची माहिती सांगून सोलापूरचे ऐतिहासिक महत्त्व स्पष्ट करा.
- किंवा**
- कापड उद्योग आणि सोलापूरच्या आर्थिक परिस्थितीत झालेले बदल याचे मूल्यमापन करा.
- प्र.5** सोलापूर जिल्हयातील धार्मिक पर्यटन स्थळांची माहिती लिहून त्याचे सोलापूरच्या आर्थिक जीवनावर झालेल्या परिणामांची चर्चा करा. **16**

Seat No.	
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**M.A. (History Campus) (Semester - III) (CBCS) Examination: Oct/Nov-2023
History of Solapur (MAH221309)**

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. 16

- 1) _____ was the capital of the Satavahanas when Solapur was included in the Satavahana states.
 - a) Ter
 - b) Verul
 - c) Paithan
 - d) Solapur
- 2) Remains of the Satavahana period were found in _____ excavations at Solapur district.
 - a) Shevgaon
 - b) Siddhapur
 - c) Varvade
 - d) Kamati
- 3) Ancient name of Solapur was _____.
 - a) Sonnalagi
 - b) Kuntal
 - c) Tagar
 - d) None of these
- 4) Inclusion of Solapur in _____ ancient country.
 - a) Kuntal
 - b) Paithan
 - c) Dharashiva
 - d) Ahmednagar
- 5) An inscription of _____ king is found at Akkalkot.
 - a) Vikramaditya
 - b) Vikramaditya VI
 - c) Vikram Singh
 - d) None of these
- 6) Excavations at Karkal Dist. Solapur have yielded remains of _____ era.
 - a) Paleolithic Age
 - b) Middle Age
 - c) Copper Age
 - d) None of these
- 7) Aurangzeb's military camp stays in Solapur district _____ while he was in deccan.
 - a) Bramhpuri
 - b) Malshiras
 - c) Kasegaon
 - d) Gerdi
- 8) The last war between Marathas and British took place in _____ village.
 - a) Mohol
 - b) Ashti
 - c) Solapur
 - d) Pandharpur
- 9) A daughter of Chtrapati Shivaji Maharaj was given to the Solapur district family, of the Nimbalkars of _____ village.
 - a) Pilliv
 - b) Madha
 - c) Pangaon
 - d) Bhalvani
- 10) The Solapur Spinning and Weaving Mills established by _____ in 1874.
 - a) Sheth Morarji Gokuldas
 - b) Sheth Jamnalal
 - c) Sheth Manikchand
 - d) None of these

- 7) ---- एक भावनिक अवस्था ज्याची तीव्रता सौम्य चिडचिड ते तीव्र क्रोध आणि रागापर्यंत बदलते.
 अ) हिंसा
 ब) ताण
 क) राग
 ड) नैराश्य
- 8) ---- हे रागाचे प्रेरक आणि इंधन आहे.
 अ) सर्जनशील विचार
 ब) नालायकपणाची भावना
 क) असहायपणाची भावना
 ड) नकारात्मक विचार पद्धती
- 9) खोल श्वास घेणे आणि उलट मोजणे ---- कमी करू शकते.
 अ) राग
 ब) नैराश्य
 क) ऑटिझम
 ड) स्किझोफ्रेनिया
- 10) ---- म्हणजे एखाद्या पदार्थाचा वापर करणे किंवा वर्तणुकीत अडकून राहणे ज्यामध्ये मानसिक किंवा शारीरिक नुकसान होऊ शकते तरीही.
 अ) सामान्य सवय
 ब) व्यसन
 क) मद्यपान
 ड) वेड
- 11) AUD चे पूर्ण रूप ---- आहे.
 अ) ऑटिझम डिसऑर्डर
 ब) एन्झाईटी डिसऑर्डर
 क) अल्कोहोल यूज डिसऑर्डर
 ड) ऍडिक्शन डिसऑर्डर
- 12) "EMDR" ---- चे पूर्ण रूप आहे
 अ) आई मोमेन्ट डिस्ट्रक्शन अँड रिप्रोसेसिंग
 ब) इयर मोमेन्ट डिसेन्सीटीझेशन अँड रिप्रोसेसिंग
 क) आई मिझरमेन्ट डिवाईस अँड रिप्रोसेसिंग
 ड) आई मोमेन्ट डिसेन्सीटीझेशन अँड रिप्रोसेसिंग
- 13) मानसशास्त्रज्ञ बी. एफ. स्किनर हे मानसशास्त्राच्या ---- क्षेत्राशी संबंधित आहेत.
 अ) वर्तनवाद
 ब) कार्यशीलता
 क) संरचनावाद
 ड) गेस्टाल्ट
- 14) ---- समायोजन, अपंगत्व आणि अस्वस्थता या समस्या समजून घेण्यासाठी, अंदाज लावण्यासाठी आणि दूर करण्यासाठी आम्ही विज्ञान, सिद्धांत आणि सरावाचा अभ्यास करतो.
 अ) क्लिनिकल मानसशास्त्र
 ब) फॉरेन्सिक मानसशास्त्र
 क) क्रीडा मानसशास्त्र
 ड) बाल मानसशास्त्र
- 15) ---- हा पैशाशी संबंधित तणावाचा स्रोत नाही.
 अ) पैशाची किंवा फायद्याची चिंता
 ब) गरिबीत जगणे
 क) कर्जाचे व्यवस्थापन
 ड) चौनीच्या वस्तूवर पैसे खर्च करणे
- 16) ---- राग एखाद्या प्रिय व्यक्तीवर निर्देशित केला जातो.
 अ) निराशेवर आधारित राग
 ब) निष्क्रीय राग
 क) वेदना बेस क्रोध
 ड) तीव्र राग

प्र.2 थोडक्यात उत्तरे लिहा. (कोणतेही चार)

- अ) मनोविश्लेषण दृष्टिकोनाचा उदय स्पष्ट करा.
 ब) नैदानिक / चिकित्सक मानसशास्त्र ही मानसशास्त्राची एकशाखा म्हणून स्पष्ट करा.
 क) ताण म्हणजे काय? तणावाचे शारीरिक लक्षणे स्पष्ट करा.
 ड) तणाव व्यवस्थापनाचे तंत्र म्हणून झोपेचे महत्त्व स्पष्ट करा.
 इ) निष्क्रिय राग म्हणजे काय? ते स्पष्ट करा.
 ई) वर्तणूक व्यसन म्हणजे काय? ते स्पष्ट करा.

प्र.3 लघुत्तरी प्रश्न (चार पैकी दोन)

- अ) क्रोध/राग म्हणजे काय? क्रोधाचे/ रागाचे प्रकार स्पष्ट करा.
 ब) दारूचे व्यसन म्हणजे काय? दारूच्या व्यसनाची कारणे स्पष्ट करा.
 क) व्यसन म्हणजे काय? व्यसनमुक्तीसाठी मानसोपचार पद्धती स्पष्ट करा.
 ड) मानसशास्त्र म्हणजे काय? मानसशास्त्राच्या कोणत्याही चार शाखा स्पष्ट करा.

प्र.4 दीर्घोत्तरी प्रश्न (दोन पैकी एक)

- अ) क्रोध/राग व्यवस्थापन म्हणजे काय? क्रोधाचे/रागाचे व्यवस्थापन तंत्र स्पष्ट करा.
 ब) स्व-व्यवस्थापन म्हणजे काय? स्व-व्यवस्थापनाचे तंत्र स्पष्ट करा.

प्र.5 दीर्घोत्तरी प्रश्न (एकच प्रश्न)

तणाव म्हणजे काय? तणावाचे स्रोत स्पष्ट करा आणि तणाव व्यवस्थापनाचे मानसशास्त्रीय तंत्र स्पष्ट करा.

Seat No.	
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Set **P**

M.A. (Semester - III) (CBCS) Examination: Oct/Nov-2023
APPLIED PSYCHOLOGY
Psychology in Everyday Life (MAAP01308)

Day & Date: Friday, 29-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q.1 Choose the correct alternative.**16**

- 1) _____ a scientific discipline that studies mental states and processes and behavior in humans and other animals.
 - a) Psychology
 - b) Philosophy
 - c) Zoology
 - d) Anthropology
- 2) German physiologist _____ opened the world's first psychology lab in 1879 at the University of Leipzig.
 - a) B. F. Skinner
 - b) Albert Bandura
 - c) John Watson
 - d) Wilhelm Wundt
- 3) Psychologist _____ proposed hierarchy of needs theory of human motivation.
 - a) Carl Rogers
 - b) Abraham Maslow
 - c) Remand Cattle
 - d) John Bolbey
- 4) _____ can be defined as a state of worry or mental tension caused by a difficult situation.
 - a) Autism
 - b) Thinking
 - c) Stress
 - d) Schizophrenia
- 5) _____ is not a source of stress
 - a) Day Dreaming
 - b) Illness or injury
 - c) Infertility and problems not having children
 - d) Experiencing abuse
- 6) _____ involves bringing your awareness to the present moment with a nonjudgmental and accepting attitude.
 - a) Thinking
 - b) Mindfulness
 - c) Dreaming
 - d) Listening Music
- 7) _____ an emotional state that varies in intensity from mild irritation to intense fury and rage.
 - a) Violence
 - b) Stress
 - c) Anger
 - d) Depression
- 8) _____ is the trigger and fuel of anger.
 - a) Creative Thinking
 - b) Feeling of worthlessness
 - c) Feeling of helpless
 - d) Negative thinking patterns
- 9) Deep breathing and reverse counting can reduce _____.
 - a) Anger
 - b) Depression
 - c) Autism
 - d) Schizophrenia

Seat No.	
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M.B.A. (Semester - III) (CBCS) Examination: Oct/Nov-2023
Entrepreneurship Development (4063-13)

Day & Date: Friday, 29-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

Instructions: 1) All questions are compulsory.

Q.1 Multiple choice questions.

16

- 1) _____ is a person who sets up a business or businesses, taking on financial risks in the hope of profit.
 - a) Entrepreneur
 - b) Intreprenneur
 - c) Leader
 - d) Manager
- 2) To provide financial assistance to entrepreneurs the government has set up a number of _____.
 - a) Financial advisors
 - b) Financial intermediaries
 - c) Industrial estates
 - d) Financial institutions
- 3) Key features of a well written business plan would include _____.
 - a) Financial plan
 - b) Production plan
 - c) An analysis of the market
 - d) All of these
- 4) District Industries Centres are located _____.
 - a) in each district
 - b) in each state
 - c) only in selected districts
 - d) only in selected states
- 5) The financial assistance to small business provided by the Small Business Administration takes the form of _____.
 - a) direct loans
 - b) guidance in locating lenders
 - c) loan guarantees
 - d) assistance in filling out paperwork
- 6) The function of entrepreneur is/are _____.
 - a) To imagine a business idea
 - b) To study project feasibility
 - c) To setup enterprise
 - d) All the above
- 7) Importance of Entrepreneurship includes _____.
 - a) Economic & dynamic activity
 - b) Innovation & Profit potential
 - c) Risk bearing
 - d) All of these
- 8) SIDBI was set up in the year _____.
 - a) 1990
 - b) 1988
 - c) 1989
 - d) 1991
- 9) EDPs are conducted by _____.
 - a) Entrepreneurs
 - b) Specialised institutions
 - c) Business community
 - d) Government

In spite of such hurdles, Mr. Sanjay Tiwari was able to persevere and continue to support the biotech research in India. Once Mr. Sanjay Tiwari managed to convince the then Chairman of Millipore to invest in Millipore India, and finally Millipore India was created as a 60-40% venture between Mr. Sanjay Tiwari and Millipore Corp, USA, respectively. Millipore India's operations have been growing at a healthy rate of 25-30% over the last few years as the biotech and pharma market in India has been growing substantially. For even further growth, Sanjay has constantly pushed Millipore Corp. to consider India for outsourcing manufacturing of its high-tech products. Along with following his passion for biotechnology, Mr. Tiwari also bought over Kamyia Pvt. Ltd., a Bangalorebased pharmaceutical company, in 1985. At that time, the company's operations included manufacturing and marketing finished pharmaceutical products and an API production plant. The company was also making a substantial loss each year. Mr. Sanjay realized that the only way to turn the company around was to take some bold decisions and he closed down the pharmaceutical marketing business completely, changing track to become a 100% contract manufacturing company. Mr. Sanjay realized early that though the large pharmaceutical companies had captive manufacturing facilities then, their high cost structures would soon drive them to start outsourcing their manufacturing requirements. While Mr. Sanjay Tiwari tried to continuously improve Kamyia's systems and facilities, most Indian manufacturing companies failed to achieve true international standards and were thus unable to win over any new companies to outsource from India. After twenty years of operating in the domestic market, Mr. Sanjay decided it was time for Kamyia to go global. Studying the trends of outsourcing in various industries, Sanjay realized that the pharmaceutical industry worldwide would also have to start outsourcing to increase profitability. It was Sanjay's vision to construct India's largest contract manufacturing facility for exporting tablets with a capacity of 5 billion tablets.

Questions:

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| 1) Analyse the case and suggest title for the case | 05 |
| 2) How Mr. Sanjay became entrepreneur? | 05 |
| 3) Discuss entrepreneurial skills you find in Mr. Subhash? | 06 |