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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
AGROCHEMICAL AND PEST MANAGEMENT
Analysis of Agrochemicals (MSC26312)

Day & Date: Wednesday, 22-05-2024
 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 nuclei having spin _____ are known as magnetic nuclei.
 - a) $I = 0$
 - b) $I > 0$
 - c) $I < 0$
 - d) None of these
- 2) The purpose of secondary filter in fluorescence spectroscopy is _____.
 - a) Allows only excitation radiations
 - b) Allows only emission radiations
 - c) Allows both excitation and emission radiations
 - d) All of these
- 3) The nitrile shows IR absorption peak at about _____ cm^{-1} .
 - a) 2260- 2240
 - b) 2730- 2700
 - c) 1720- 1700
 - d) 1650- 1600
- 4) Which of the following is used as fluorescence indicator?
 - a) Phenolphthalein
 - b) Methyl orange
 - c) Eosin
 - d) Eriochrome Black-T
- 5) 100 % intensity is assigned to _____ peak in mass spectroscopy.
 - a) Molecular ion
 - b) Base peak
 - c) Rearrangement peak
 - d) All of these
- 6) Helium nuclei particles are called _____ particles.
 - a) Gamma
 - b) Beta
 - c) Alpha
 - d) All of these
- 7) The vicinal coupling is also known as _____ coupling.
 - a) 1,2
 - b) 1,1
 - c) 1,3
 - d) 1,4
- 8) The main components of HPLC are _____.
 - a) High pressure pump
 - b) Injector system
 - c) Detector
 - d) All of these
- 9) Which electrons are very loosely bound in a molecule?
 - a) π
 - b) σ
 - c) n
 - d) None of these
- 10) Which of the following is IR active?
 - a) HBr
 - b) CO_2
 - c) N_2
 - d) H_2

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

- 1) When the sample is bombarded by slow neutrons, the mass number of element is increased by _____ unit.
- 2) Which gas is used in polarography for blowing purpose?
- 3) The presence of isotope of _____ element in, a molecule shows M+2 peak in mass spectroscopy in 3:1 ratio.
- 4) In NMR spectroscopy, the multiplicity of peak due to proton on adjacent carbon atom is given by _____ rule.
- 5) In Ilkovic equation, n stands for _____.
- 6) In 2- butanone, methylene protons appears as _____.

Q.2 Answer the following**16**

- a) Write Classification of Chromatography.
- b) Write types of developments of chromatogram in paper chromatography.
- c) Write applications of fluorescence spectroscopy.
- d) Write a note on health hazards by radioactivity.

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

- a) Explain various types of electronic transitions in UV spectroscopy.
- b) Write principle, methodology and applications of HPLC.

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

- a) Write note on various regions of IR spectroscopy.
- b) Describe analysis of SO₂ and CO₂.

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

- a) Explain applications of radioisotopes in agriculture.
- b) Explain shielding and deshielding effect with example.

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

- a) Write applications of UV spectrophotometer in analysis of agrochemicals, pest residue and metabolites.
- b) How many NMR signals are possible for following compounds.
 - 1) H₃C-CH₂-CH₃
 - 2) H₃C-COOH
 - 3) H₃C-CH₂-CH₂-CH₃
 - 4) H₃C-CH₂-O-CH₃

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

- a) Explain various factors affecting on IR absorption frequency with example.
- b) Write a brief note on GC-MS technique.

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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.

10

- 1) Scientific method is committed to _____.
a) Objectivity b) Ethics
c) Proposition d) Neutrality
- 2) An essential Criterion of Scientific study is _____.
a) Belief b) Value
c) Objectivity d) Subjectivity
- 3) Research through experiment and observation is called _____.
a) Clinical Research b) Experimental Research
c) Laboratory Research d) Empirical Research
- 4) The role of a project supervisor is to: _____.
a) give you a reading list.
b) provide academic support, guidance and critical feedback on your work.
c) negotiate access to the research setting on the student's behalf.
d) ensure you keep to your schedule and deadlines.
- 5) The F-test: _____.
a) Is essentially a two-tailed test.
b) Is essentially a one-tailed test.
c) Can be one-tailed as well as two-tailed depending on the hypotheses.
d) Can never be one tailed test
- 6) What is the shortcut key for find in Microsoft word document?
a) Ctrl + K b) Ctrl + G
c) Ctrl + I d) Ctrl + F
- 7) The first page of the research report is _____.
a) Appendix b) Title page
c) Certificate d) Acknowledgement
- 8) 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
- 9) Which of the following is not a "Graphic representation"?
a) Pie Chart b) Table
c) Bar Chart d) Histogram

- 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) Every research study always begins with a hypothesis. (True / False)
- 2) The data collection methods may be classified into _____ and _____ data methods.
- 3) In basic research, the context is vast and the time period is flexible. (True / False)
- 4) Research always requires a _____ and _____ method of enquiry.
- 5) The group of individual from whom one needs to collect data for the study is called as sample. (True / False)
- 6) Research is done for proving existing theories or arriving at new models. (True / False)

Q.2 Answer the following.

16

- a) Write a note on importance of ISSN.
- b) Power point presentation.
- c) Write a note on significance of research.
- d) Write a note coral draw.

Q.3 Answer the following.

08

- a) Explain in detail about science abstract.
- b) types of research.

08

Q.4 Answer the following.

08

- a) Write a note on importance of MS - word for research article writing.
- b) Brief account on SCOPUS index and h- index.

08

Q.5 Answer the following.

08

- a) Write a note on plagiarism.
- b) Data collection and record keeping

08

Q.6 Answer the following.

08

- a) Give brief account on power point presentation for research work presentation.
- b) Write a note on various search engine available for research.

08

Q.7 Answer the following.

08

- a) Purpose of literature.
- b) Short note on SPSS.

08

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
APPLIED ELECTRONICS
Communication & Digital Electronics (MSC5310)

Day & Date: Wednesday, 22-05-2024
 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 NOR gate is OR gate followed by _____.
 a) AND gate b) NAND gate
 c) NOT gate d) None of the above
- 2) The NAND gate is AND gate followed by _____.
 a) NOT gate b) OR gate
 c) AND gate d) None of the above
- 3) Digital circuit can be made by the repeated use of _____.
 a) OR gates b) NOT gates
 c) NAND gates d) None of the above
- 4) The only function of NOT gate is to _____.
 a) Stop signal b) Invert input signal
 c) Act as a universal gate d) None of the above
- 5) Modulation is required for _____.
 a) Reducing noise while transmission
 b) Multiplexing the signals
 c) Reduction of Antenna height
 d) All of the above
- 6) Bandwidth required in SSB-SC signal is (f_m is modulating frequency): _____.
 a) $2f_m$ b) $< 2f_m$
 c) $> 2f_m$ d) f_m
- 7) For over modulation, the value of modulation index m is _____.
 a) $m < 1$ b) $m = 1$
 c) $m > 1$ d) Not predetermined
- 8) Types of analog modulation are: _____.
 a) Phase modulation b) Frequency modulation
 c) Amplitude modulation d) All of the above
- 9) QPSK system uses a phase shift of _____.
 a) Π b) $\Pi/2$
 c) $\Pi/4$ d) 2Π
- 10) The maximum bandwidth is occupied by _____.
 a) ASK b) BPSK
 c) FSK d) None of above

B) State True OR False.**06**

- 1) NOT is called universal gate.
- 2) Super heterodyne receivers have better sensitivity.
- 3) The AM spectrum consists of carrier frequency.
- 4) Standard intermediate frequency used for AM receiver is 455Hz.
- 5) The modulation technique that uses the minimum channel bandwidth and transmitted power is SSB.
- 6) The modulation techniques used to convert analog signal into digital signal are delta modulation.

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

- a) With a neat labelled block diagram explain working of Superheterodyne Receiver.
- b) Write a short note on Pulse Position Modulation.
- c) Write a note on modulation techniques.
- d) Explain cross talk in TDM.

Q.3 Answer the following.

- a) With a neat block diagram, explain the FM detector.
- b) Write the advantages of FM over AM.

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

- a) Explain the working of an AM detector circuit.
- b) Explain block diagram of satellite transponder.

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

- a) Explain De Morgan's theorem using example.
- b) Explain associative, distributive & commutative law.

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

- a) Explain using diagram how NAND Gates are Universal Gate.
- b) Explain basic gates with truth table.

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

- a) Explain basic cellular communication CDMA & GSM.
- b) Explain terms:
 - i) Bluetooth
 - ii) WiFi
 - iii) Wi-Max

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
BIOINFORMATICS
Advanced Molecular Biology (MSC27310)

Day & Date: Wednesday, 22-05-2024
 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) *Thermus aquaticus* is the source of _____.
 a) Vent polymerase b) Primase enzyme
 c) Taq polymerase d) Both a and c
- 2) What is the main enzyme component of Sanger sequencing?
 a) Helicase b) Polymerase
 c) Nuclease d) Gyrase
- 3) Which enzyme is used to join together two different types of DNA molecules?
 a) ligase b) endonuclease
 c) exonuclease d) protease
- 4) A genomic library is a collection of _____.
 a) Genes b) Proteins
 c) Vectors d) Recombinants
- 5) Which of the following is a Sanger's reagent?
 a) 1-fluoro-2, 4-dinitrobenzene
 b) 1-fluoro-2, 3-dinitrobenzene
 c) 1-fluoro-2, 4-trinitrobenzene
 d) 1-fluoro-2, 3-trinitrobenzene
- 6) What is used to transfer nucleic acid from gels to membranes for further analysis?
 a) Gel electrophoresis b) PFGE
 c) Blotting d) PCR
- 7) Larger DNA fragments require a _____ transfer time.
 a) Longer b) Shorter
 c) Medium d) Very high
- 8) How DNA can be as a useful tool in the forensic applications?
 a) Showing the same degree of polymorphism with hair follicles
 b) Showing different degrees of polymorphism with saliva
 c) By not possessing any hereditary information
 d) By the presence of lysozymes in it
- 9) Reverse transcription PCR uses _____.
 a) RNA as a template to form DNA
 b) mRNA as a template to form cDNA
 c) DNA as a template to form ssDNA
 d) All of the above

10) From the given options below which is a chemically synthesized oligonucleotide.

- a) Klenow fragment b) DNA
- c) Primer d) RNA

B) Fill in the blanks OR write True/False.

06

- 1) PVDF membrane type have higher autofluorescence
 - a) True b) False
- 2) A molecular marker is defined as any DNA sequence that shows polymorphism and can be detected using a molecular technique.
 - a) True b) False
- 3) A cDNA library is a collection of cloned DNA sequences that are complementary to the mRNA that was extracted from an organism or tissue
 - a) True b) False
- 4) Linkers are very long, non-synthetic single-stranded DNA oligomers.
 - a) True b) False
- 5) The probe is often a synthetic oligonucleotide whose sequence was inferred from known amino acid sequences.
 - a) True b) False
- 6) Agarose have greater binding capacity than nitrocellulose membranes
 - a) True b) False

Q.2 Answer the following.

16

- a) Write a short note on ultrafiltration.
- b) What is meant by Ammonium sulfate precipitation.
- c) Write a note on 2D electrophoresis.
- d) Write a note on detecting protein on gel.

Q.3 Answer the following.

- a) What is meant by the ExPASy tool and explain its applications? **08**
- b) Explain what is meant by MASCOT and mention its applications in bioinformatics **08**

Q.4 Answer the following.

- a) Explain in detail the 16S rRNA and mention how 16S rRNA primers are designed **08**
- b) What is site-directed mutagenesis and mention its applications. **08**

Q.5 Answer the following.

- a) Explain what is meant by western blot. **08**
- b) Describe the methods of preparation of cDNA library. **08**

Q.6 Answer the following.

- a) Random amplification of polymorphic DNA (RAPD) and simple sequence length polymorphism. **08**
- b) Explain what is meant by spot detection and quantification. **08**

Q.7 Answer the following.

- a) Explain in detail about the stacking and running gel in SDS PAGE technique **08**
- b) Explain the preparation of DNA and RNA probes **08**

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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.

10

- 1) In SRSWOR, the same sampling unit may be included in the sample _____.
a) only once b) two times
c) more than once d) none of these
- 2) Sampling error can be reduced by _____.
a) increasing the population b) increasing the sample size
c) decreasing the sample size d) none of these
- 3) Most preferred type of average for index number is _____.
a) arithmetic mean b) harmonic mean
c) geometric mean d) none of these
- 4) 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
- 5) The condition for the factor reversal test to hold good with usual notations is _____.
a) $P_{01} \times Q_{01} = V_{01}$ b) $\frac{P_{01} \times Q_{01}}{V_{01}} = 1$
c) $\frac{P_{01} \times Q_{01}}{V_{01}} = -1 = 0$ d) All the above
- 6) Vital rates are customarily expressed as _____.
a) percentages b) per thousand
c) per million d) none of these
- 7) The value of $NRR < 1$ indicative of _____.
a) increase in population b) constancy in population
c) reduction in population d) all the above
- 8) Variation due to assignable causes in the product occurs due to _____.
a) faulty process b) carelessness of operators
c) poor quality of raw material d) all the above

- 9) The type of inspection that classifies items as being good or defective is _____.
 a) attribute inspection b) variable inspection
 c) fixed inspection d) all the above
- 10) The sales of departmental stores on Diwali and Dushera are associated with _____ component of time series.
 a) secular trend b) seasonal variation
 c) irregular variation d) all the above

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

- 1) The Census Bureau in India takes a complete population count at every _____ years.
- 2) Combining two series of indices with different base periods into one series with common base period is known as _____.
- 3) Life table contains _____ columns in all.
- 4) Control chart R is used to monitor _____ of a quality characteristic.
- 5) The component representing long term fluctuations of a time series is called _____.
- 6) Lockups and strike in a factory affecting the production represent _____ component of time series.

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 mean by deflating the index numbers and how can it be done?
- c) A control chart is to be formed for a process in which laptops are produced. The inspection unit is one laptop and control chart for the number of defects is to be used. Preliminary data are recorded and 45 defects are found in 30 laptops. Compute the control limits for the C chart.
- d) Explain the additive and multiplicative models of time series stating clearly the assumptions.

Q.3 Answer the following.

- a) Discuss the concept of stratification. Describe proportional allocation and optimum allocation methods for allocating a sample size n to different strata of a population. **08**
- b) A sample of 30 students is to be drawn from a population consisting of 300 students belonging to two colleges A and B. The total number of students and standard deviation of their marks are given below: **08**

Collage	A	B
No. of students	200	100
Std. deviation	10	40

Find the number of students to be selected from each college according to (i) proportional allocation and (ii) optimum allocation.

Q.4 Answer the following.

- a) What is index number? Explain (i) Laspeyre's index number (ii) Paasche's index number and (iii) Fisher's ideal index number. **08**
- b) From the following data, calculate price index numbers for 1996 with 1986 as base by (i) Laspeyre's formula (ii) Paasche's formula and (iii) Fisher's formula. **08**

Item	1986		1996	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

Q.5 Answer the following.

- a) Define crude death rate and age specific death rates. Discuss their merits and demerits. **08**
- b) From the following data, compute STDR for populations A and B. **08**

Age Group	Population A		Population B		Standard Population
	Population	No. of deaths	Population	No. of deaths	
0-10	5000	35	3000	33	3000
10-50	10000	45	10000	100	7000
50 & above	5000	90	7000	84	6000

Q.6 Answer the following.

- a) What is control chart? Explain how it helps to control the quality of manufactured product. **08**
- b) The data shows the sample mean and range for 10 samples for size 5 each. Find the control limits for the mean chart and range chart. **08**

Sample	1	2	3	4	5	6	7	8	9	10
Mean	21	26	23	18	19	15	14	20	16	10
Range	5	6	9	7	4	6	8	9	4	7

(Given for $n = 5$, $A_2 = 0.58$, $D_3 = 0$ and $D_4 = 2.11$)

Q.7 Answer the following.

- a) What is a time series? State various components of time series and explain any two of them. **08**
- b) Calculate four yearly centered moving averages for the data given below: **08**

Year	1	2	3	4	5	6	7	8	9	10
Value	21	15	16	29	51	58	36	16	23	28

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
BIOTECHNOLOGY
Advanced Pharmaceuticals (MSC33311)

Day & Date: Wednesday, 22-05-2024
 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 is a branched polymer?
 - a) Low density polymers
 - b) Polyester
 - c) High density polymers
 - d) Nylon
- 2) Which of the following does not undergo additional polymerization?
 - a) Vinyl Chloride
 - b) Butadiene
 - c) Styrene
 - d) None of the Above
- 3) The surfactants which contain both cationic and anionic centres attached to the same molecules is called as _____ surfactant.
 - a) Anionic
 - b) cationic
 - c) Amphoteric
 - d) Non-Ionic
- 4) The _____ are agents used to reduce the surface tension.
 - a) Reverse micelles
 - b) Surfactants
 - c) Binders
 - d) Counter ions
- 5) USP-II Type apparatus is _____.
 - a) Paddle
 - b) Basket
 - c) Paddle over Disk
 - d) Flow through Disk
- 6) One micrometre is equal to: _____.
 - a) 10^{-6} centimetre
 - b) 10^{-3} centimetre
 - c) 10^{-6} meter
 - d) 10^{-3} meter
- 7) Particle size increases then dissolution rate _____.
 - a) Decreases
 - b) Increases
 - c) Does not change
 - d) None of the above
- 8) Andreasen apparatus used to determine _____.
 - a) Density
 - b) Viscosity
 - c) Particles size
 - d) Surface tension
- 9) Which of the following is example of Ampholytic surfactant?
 - a) Alkyl Sulphate
 - b) Lecithin
 - c) Cetrimide
 - d) Sorbitan
- 10) The concentration at which micelle formation occurs is termed as _____.
 - a) CMC
 - b) Kraft Point
 - c) Cloud Point
 - d) Isoelectric point

06

B) Fill in the blanks OR write True/False.

- In case of solubility of solid, temperature increases then solubility of solid increases.
 - True
 - False
- Particle Size can be determined by sieve analysis method.
 - True
 - False
- Cationic surfactants water-wet limestone up to pH.
 - True
 - False
- In passive transport of drug its required energy.
 - True
 - False
- As particle size decreases then dissolution rate is also decreases.
 - True
 - False
- Amphiphillic surfactants in water lead to aggregation.
 - True
 - False

Q.2 Answer the following.

16

- Discuss in detail Solubility of drug.
- Explain the different rate limiting steps of drug dissolution.
- Explain in detail methods for determination of order of reaction.
- What are the Applications of polymers?

Q.3 Answer the following.

16

- Describe in detail Clinical trial phase I and II.
- Explain in detail methods used for determination of particle size and size distribution.

Q.4 Answer the following.

16

- Write note on biological application of surfactant.
- Define Polymer. Give its classification in details.

Q.5 Answer the following.

16

- Define Half-life. Explain in detail methods for determination of Half-life of drug.
- What are the different official methods of drug dissolution?

Q.6 Answer the following.

16

- Explain in detail methods for enhancement of drug dissolution.
- Discuss in detail pharmaceutical aspects of solubilization.

Q.7 Answer the following.

16

- Explain in detail different parameters of evaluation of pharmaceutical granules.
- Write note on Hydrotrophy in pharmaceuticals.

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Plant growth and Development (MSC24314)

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) Draw neat and labelled diagrams wherever necessary.
- 4) Figure to right indicate full marks.

10

- 1) Jasmonates are obtained from _____.
a) *Brassica napus*
c) *Canavalia gladiata*
b) *Jasminum officinarum*
d) *Butea monosperma*
- 2) _____ types of GA is mostly used.
a) GA 125
c) GA128
b) GA 160
d) GA3
- 3) GA discovered by _____.
a) Yebuta
c) Kurosowa
b) Greek
d) All
- 4) Seedless fruits are called as _____.
a) True fruits
c) False fruit
b) Parthenocarpic
d) Composite fruit
- 5) _____ mutant present in *Arabidopsis* for flowering.
a) APETALA
c) APETALA 1
b) CHOH
d) Both a &c
- 6) _____ are the photosynthetic compounds.
a) Phytochrome
c) Both a & b
b) Cytochrome
d) Bundle sheath cell
- 7) Pfr absorbs the light in the range of _____.
a) 550 nm
c) 640nm
b) 730nm
d) 770 nm
- 8) In ripening fruits wall of fruits become _____.
a) Hard
c) No change
b) Soft
d) Become rough
- 9) For storage of fruits _____ conditions maintained
a) Drying
c) Cleaning
b) Sorting
d) All
- 10) Brassinosteroids are obtained from _____.
a) *Carica papaya*
c) *Brassica napus*
b) *Phyllanthus emblica*
d) *Acer zapota*

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

- 1) Salicylic acids are _____.
- 2) Presence of _____ plant part is important for flowering
- 3) _____ is the first step during vegetable storage.
- 4) _____ chemical nature of brassinosteroids.
- 5) _____ plant is model of plant development.
- 6) In leaves _____ chlorophyll pigments increases during senescence.

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

- a) What are phytochrome & cytochromes?
- b) Give physiological role of ABA.
- c) What are morphactins?
- d) What are the properties of plant growth regulators?

Q.3 Answer the following.

- a) Describe mutants in *Arabidopsis thaliana*.
- b) Describe leaf & petal senescence.

08**08****Q.4 Answer the following.**

- a) Describe mechanism of action of gibberellin
- b) Describe the role of Maleic hydrazide as growth retardant

08**08****Q.5 Answer the following.**

- a) Write a note on physiology of seed germination
- b) Describe process of ripening of fruits

08**08****Q.6 Answer the following.**

- a) Give the role of Brassinosteroids.
- b) Describe mechanism of action of Phytochrome & cytochrome.

08**08****Q.7 Answer the following.**

- a) Describe signalling mechanism of cytokinin along with its physiological importance.
- b) Describe metabolism of stored seeds.

08**08**

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No.**

Day & Date: Wednesday, 22-05-2024
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.

10

- 1) The study of use of medicinal plants is known as _____.
a) Herbarium b) Pharmacognosy
c) Herbalism d) Herbs
- 2) Which of the following is a biological method to control the pest?
a) Crop improvement
b) Crop rotation
c) Pathogen is destroyed by another living organism
d) Ploughing the fields deeply.
- 3) The genus *Tinospora cordifolia* belongs to family _____.
a) *Liliaceae* b) *Menispermaceae*
c) *Fabaceae* d) *Mimicoeae*
- 4) Ginger and turmeric are spices made from _____.
a) The inner bark of trees b) Rhizomes
c) Dried flower buds d) Fermented and dried berries
- 5) Following are the processes used for extraction except _____.
a) Maceration b) Sublimation
c) Digestion d) Percolation
- 6) Standardization of Asawas includes which of the following parameters?
a) Organoleptic parameters b) Chemical parameters
c) Physical parameters d) Biological parameters
- 7) In fractional distillation, a mixture of liquids is separated based on their _____.
a) Boiling point b) solubility
c) Density d) chemical composition
- 8) Wagner test is used to detect the presence of _____.
a) Steroids b) Alkaloids
c) Terpenes d) Glycosides
- 9) Ion exchange chromatography is based on the _____.
a) Electrostatic attraction.
b) Electrical mobility of ionic species.
c) Adsorption chromatography.
d) Partition chromatography.

10) Which of the following is a Major chemical constituent of turmeric?

- a) Cineole
- b) Camphene
- c) Alpha -Phellandrene
- d) Curcuminoid

B) Write True/ False.

06

- 1) While screening, the material which is left on the screen is called as Underflow.
- 2) Helium gas is used in gas chromatography.
- 3) Common name of *Boerhavia diffusa* is Ashwagandha.
- 4) For a ball mill, finer product produced if the weight of ball increases.
- 5) Disc filter comes under continuous filtration.
- 6) Tridosha is Vata, pitta andrasa.

Q.2 Answer the following.

16

- a) Define herb and add a note on herbs selection and sources.
- b) Give the chemical constitute and uses of *Aloe vera*.
- c) What are the characteristics of filter medium?
- d) Write a short note on Distillation.

Q.3 Answer the following.

- a) Define pest and Explain pest management in medicinal plants.
- b) Explain the preparation and standardisation of Aristas and Asawas.

08

08

Q.4 Answer the following.

- a) Explain the systematic position, chemical constituents and uses of *Ocimum sanctum*.
- b) What are the basic principles involved in Ayurveda?

08

08

Q.5 Answer the following.

- a) Define screening and explain biological screening in detail.
- b) Describe the methods of drug evaluation.

08

08

Q.6 Answer the following.

- a) Explain solvent extraction in detail.
- b) Define chromatography & explain thin layer chromatography.

08

08

Q.7 Answer the following.

- a) Explain the phytochemical screening test for phenolic and Terpenoids.
- b) Define distillation add a note on process of distillation.

08

08

Seat No.	
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Set **P**

M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
ORGANIC CHEMISTRY
Applied Organic Chemistry (MSC07310)

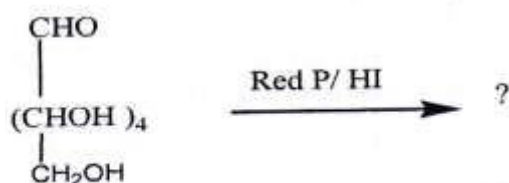
Day & Date: Wednesday, 22-05-2024
 Time: 11:00 AM To 02:00 PM

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 is the examples of Epimers?
 a) Glucose & Talose b) Glucose & Ribose
 c) Mannose & Glucose d) fructose and glucose
- $C_2H_4 + \frac{1}{2} O_2 \rightarrow C_2H_4O$
 (Ethylene oxide).
 This reaction will take place under presence of catalyst. Find out the % atom economy.
 a) 25% b) 50%
 c) 75% d) 100%
- A method in which sound energy is used to affect chemical processes is called as _____.
 a) Ultrasonication b) Microwave assisted reaction
 c) Ultraviolet reaction d) None of these.
- Two strands in DNA are held together by _____.
 a) Covalent bond b) Vander Waal's forces
 c) Hydrogen bond d) Electrostatic force of attraction
- Product of the following reaction is:



- a) Gluconic acid b) n-Hexane
 c) Mannitol d) Tartaric acid
- Chrysenes are _____ compound.
 a) Ortho fused b) Peri fused
 c) Ortho and peri fused d) Meta fused
- Anthracene and phenanthrene may be prepared by the action of sodium on o-bromobenzyl bromide in the _____ reaction.
 a) Fittig b) Friedel Crafts
 c) Elbs d) mannich
- Bicyclic crown ethers and crown ethers of higher order (tri, tetra... cycles) are called as _____.
 a) Iariat ethers b) Spherands
 c) Podands d) Cryptands

- 9) _____ is the term that refers to fixing or limiting the geometry of the molecule to assist in their binding.
- | | |
|-----------------------|---------------------|
| a) macrocyclic effect | b) Solvent effect |
| c) Preorganization | d) Binding constant |
- 10) Which of the following is more preorganized?
- | | |
|-------------|----------------|
| a) cryptand | b) crown ether |
| c) podand | d) spherand |

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

- 1) _____ is a organic salt in the liquid state whose M.P. is below 100°C.
- 2) The principal sugar in blood is _____.
- 3) _____ reagent is the mixture of copper sulphate, sodium citrate and sodium carbonate solution.
- 4) Pyrene is _____ fused Polynuclear Hydrocarbon.
- 5) In polycyclic aromatic compounds aromatic rings should share at least _____ side.
- 6) Crown type macrocycle with Podand side arm is called _____.

Q.2 Answer the following**16**

- a) What are mutarotations? Explain with suitable example.
- b) Write a note on D and L configuration of Monosaccharides.
- c) Write a note on aqueous phase reactions.
- d) Explain any four basic principles of Green Chemistry.

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

- a)
 - 1) What are carbohydrates? How they are classified?
 - 2) Explain anomeric effect.
- b) Explain the followings
 - 1) Microwave assisted reactions
 - 2) Ultrasonication

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

- a) Explain the synthesis of the phenanthrene by following methods
 - 1) Stobbe condensation
 - 2) Bardhan -Sengupta synthesis
- b) What are Cyclodextrins? Write a note on structure, synthesis and applications Of Cyclodextrin.

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

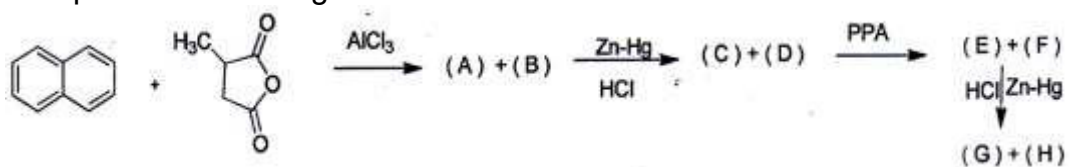
- a) Write a note on podands with respect to structure, synthesis and its application
- b) Explain the various chemical reactions of glucose.

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

- a) Explain the following concepts in host guest complex formation
 - 1) Preorganization
 - 2) Macrocyclic effect
- b) Give one synthesis of each of the following
 - 1) Pyrene
 - 2) Perylene
 - 3) 1,2-benzanthracene
 - 4) Piecene

Q.7 Answer the following.

a) Complete the following reaction



b) Explain the following in case of host guest complex formation

- 1) Binding constant
- 2) Solvent effect

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
INDUSTRIAL CHEMISTRY

Advanced Topics in Industrial Chemistry – I (MSC06309)

Day & Date: Wednesday, 22-05-2024

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

- 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) During tablets manufacturing, _____ operations are involved.
 - a) dispensing
 - b) sizing, granulation
 - c) drying, compression
 - d) all of these
- 2) _____ capsules in which their drug release is controlled over a long period.
 - a) Hard gelatin
 - b) Soft gelatin
 - c) Controlled release
 - d) both a & b
- 3) _____ tablets dissolves slowly in the cheek pouch of the mouth.
 - a) Buccal
 - b) Coated
 - c) Chewable
 - d) Ordinary
- 4) _____ are alcoholic formulations.
 - a) Elixirs
 - b) Spirits
 - c) Tinctures
 - d) All of these
- 5) The type of the formulation depends upon _____ of the patient.
 - a) age
 - b) sex
 - c) health condition
 - d) All of these
- 6) In case of chewable tablets, chemical disruption is also caused by _____.
 - a) interaction with saliva
 - b) rubbing
 - c) both a & b
 - d) None of these
- 7) Some tablets are _____ coated tablets.
 - a) sugar
 - b) gelatin
 - c) film
 - d) All of these
- 8) _____ are tablet-like formulations that are intended for slow dissolution in the mouth.
 - a) effervescent
 - b) chewable
 - c) buccal
 - d) lozenges
- 9) _____ are the preparations of various substances in an oily, soapy or alcoholic base applied to the skin by rubbing.
 - a) capsules
 - b) liniments
 - c) powders
 - d) salines
- 10) The tablet may contains _____ along with active drug.
 - a) filler
 - b) binder
 - c) colorant
 - d) All of these

B) Write True OR False**06**

- 1) The suppositories are semisolid formulations which are taken through vaginal track.
- 2) In content uniformity test, the uniformity of active pharmaceutical ingredient is determined.
- 3) CCl_4 is greenest solvent used for synthesis of organic chemical industries.
- 4) An acoustic cavitation is a characteristic occurrence in sonochemistry.
- 5) An ultrasound is defined by the American National Standard Institute as the sound at frequencies greater than 20 kHz.
- 6) An excretion is a process of entering a drug into the blood stream of the patient.

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

- a) Explain lethal dose (LD_{50}) and median effective dose (ED_{50}).
- b) Enlist any four principles of green chemistry.
- c) Write a short note on disintegration test used in pharmacopoeial analysis.
- d) Draw the structures of
 - 1) Salbutamol
 - 2) Ibuprofen

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

- a) Mention the role of nitrogen in plants and discuss Kjeldahl's method for the determination of nitrogen.
- b) What is calorific value and write its units. Describe Bomb calorimeter method for the determination of calorific value of fuel.

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

- a) What is drug? Write its need and the pharmacokinetics (ADME) of drug in human body.
- 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 methyldopa and alprazolam.
- b) Describe the receptors and explain the G-protein-coupled receptors along with its diagram.

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

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

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

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

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
POLYMER CHEMISTRY

Spectral and Instrumental Analysis of Polymers (MSC05312)

Day & Date: Wednesday, 22-05-2024
 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. (Each question carries one mark) 10

- 1) _____ of the following characteristics of a sample that can affect the thermo-gravimetric result.
 - a) Particle size
 - b) Previous history of the sample
 - c) Compactness of sample
 - d) All of these
- 2) The _____ transformation is a mathematical conversion of time domain data into frequency domain data.
 - a) Fourier
 - b) Frequency
 - c) Time
 - d) Concentration
- 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 shows _____ 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) $-CH_3$
- c) $-CH_2$ d) $-C$
- 10) ATR spectra generally shows the same band pattern of sample like a _____ spectrum.
- a) transmission b) absorption
- c) reflection d) refraction

B) Fill in the blanks.

06

- 1) In ATR, for solid sample _____ is applied to ensure good contact between sample & ATR crystal.
- 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.

16

- Explain in brief distortionless enhancement by polarization transfer (DEPT) technique.
- Describe solid state CMR & its limitations.
- Write down the difference between IR & Raman spectroscopy.
- Define Pyrolysis and give its types according to mass spectroscopy.

Q.3 Answer the following.

16

- Describe any three applications of Raman spectroscopy for polymers analysis with the suitable example.
- Explain any three applications of UV-Visible spectroscopy in the polymers characterization with an example.

Q.4 Answer the following.

16

- What is the meaning of 2D NMR spectroscopy? Explain working of COSY technique.
- Describe the general method for the production of X-rays with an atomic diagram.

Q.5 Answer the following.

16

- Define Spherulites & Give details about POM technique for study of spherulites.
- What is the principle of XPS technique? Describe its instrumentation technique.

Q.6 Answer the following.

16

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

Q.7 Answer the following.

16

- Derive Bragg's diffraction law: $n\lambda = 2d \sin \theta$.
- Explain FT-NMR technique & Give its advantages.

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
PHYSICAL CHEMISTRY
Solid State Chemistry (MSC11310)

Day & Date: Wednesday, 22-05-2024
 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) As the temperature increases of semiconductor, the conductivity _____.
 a) increases
 b) decreases
 c) no change
 d) first increases and decreases afterwards
- 2) The number of atoms in hexagonal close packed unit cell is _____.
 a) 4
 b) 6
 c) 12
 d) 17
- 3) The number of atoms is present in body centered cubic (BCC) in unit cell are _____.
 a) 1
 b) 4
 c) 3
 d) 2
- 4) The _____ and citrate solution are used as reducing agent in chemical reduction method.
 a) hydrazine hydrate
 b) hydrazine
 c) hydrazone
 d) semi carbazene
- 5) The appearance of colour in solid alkali metal halides is generally due to.
 a) Schottky defect
 b) Frenkel effect
 c) F centres
 d) Interstitial position
- 6) For which measurement of solid materials BET instrument is used of solid materials _____.
 a) Density
 b) Surface area
 c) Absorbance
 d) Conductivity
- 7) Which of the precursor is preferably used in sol-gel technique _____.
 a) Metal oxides
 b) Metal dioxides
 c) Metal alkoxides
 d) Metal fluorides
- 8) Which kind of defects is introduced by doping?
 a) Dislocation defect
 b) Schottky defect
 c) Frenkel defects
 d) Electronic defects
- 9) Most widely used nano particles as catalyst is _____.
 a) Silver
 b) Copper
 c) Gold
 d) Cerium

- 10) In the zone melting method _____ of the charge is melted at any one time. Fill up the correct option for the blank space from the choices given below.
- | | |
|---------------|-----------------|
| a) Large part | b) Small part |
| c) Solid part | d) Anionic part |

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

- 1) The total number of atoms in FCC unit cell is four. [True/False]
- 2) Solids are compressible. [True/False]
- 3) Cations are present in the interstitial sites in _____ defect.
- 4) The band gap in Silicon semiconductor is _____ eV.
- 5) The lattice site in a pure crystal cannot be occupied by _____.
- 6) In cubic crystals, the lattice parameters a, b, c and angles α , β and γ are always same. [True/False]

Q.2 Answer the following**16**

- a) Illustrate the method of systematic absence of lines in XRD pattern for cubic systems.
- b) Write a note on Wagner's mechanism of reaction for the sulfiding of silver.
- c) Draw neat labelled diagram for Czochralski method for single crystal growth and discuss the method.
- d) Explain co-precipitation method for the preparation of nanomaterials

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

- a) Describe Debye-Sherrer method of X-ray structure analysis of crystals.
- b) Mention different types of line defects and plane defects. Describe edge dislocations.

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

- a) What are the different types of solid-solid reactions? Explain addition reactions with suitable example.
- b) Explain the effect of the following crystalline defects on properties of materials:
 - 1) Points defects
 - 2) Line defects

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

- a) Write a note on Doped organic and inorganic crystalline materials for device application.
- b) Illustrate Bridgmann and Czochralski methods of growing single crystal.

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

- a) Illustrate the unique nanomaterial features.
- b) Write on applications of Nanoscience and nanotechnology.

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

- a) Discuss the factors influencing reactivity in solid state chemical reactions.
- b) Explain in detail size and surface, morphological analysis of nanostructures using SEM.

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
ANALYTICAL CHEMISTRY
Analytical Spectroscopy (MSC013310)

Day & Date: Wednesday, 22-05-2024
 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

- The most widely used reference in ESR Spectroscopy is _____.
 a) Picryl hydrazyl free radical
 b) 1,1 -diphenyl-2-picrylhydrazyl free radical
 c) 1,1-diphenyl-2-hydrazyl cation
 d) 1,1-diphenyl-2-picryl radical
- The Source used in ESR Spectroscopy _____.
 a) Nernst Glower
 b) LASER
 c) Klystron valve
 d) Deuterium lamp
- Selection Rule in ESR _____.
 a) $\Delta m_l = 0$ and $\Delta m_s = \pm 1$
 b) $\Delta m_l = 0$ and $\Delta m_s = \pm 0$
 c) $\Delta m_l = \frac{1}{2}$ and $\Delta m_s = \pm \frac{1}{2}$
 d) $\Delta m_l = \frac{1}{2}$ and $\Delta m_s = \pm 0$
- If the incident radiation is x-ray, then the spectroscopic technique is called as _____.
 a) UPS
 b) ESCA
 c) Infra Red
 d) NMR
- In XPS _____ of ejected electron is measured.
 a) Ionization energy
 b) Binding Energy
 c) Kinetic energy
 d) Binding Energy + Kinetic energy
- When the electron density of a molecule is symmetrical polarizability is _____.
 a) Anisotropic
 b) Isotropic
 c) Different in all direction
 d) None of the above
- Raman band is characterized not only by its wave number shift and intensity but also by its _____.
 a) Polarization characteristics
 b) Half Band width
 c) Shape
 d) All of the above
- In NQR, η is measure of _____.
 a) Spin
 b) Couplings
 c) Non symmetry of EFG
 d) Symmetry of EFG
- Number of lines in ESR spectrum of CD_3 is _____ [$I=1$]
 a) 3
 b) 5
 c) 7
 d) 9

- 10) Photoelectron spectroscopy is based on _____ effect.
- Light absorption effect.
 - Joule Thomson effect
 - Screening effect.
 - Photoelectric effect

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

- _____ spectroscopy is most useful in the study of free radicals.
- Water and alcohol are not suitable solvents for ESR spectroscopic study. (True or False).
- Nuclear recoil velocity is of the order of _____.
- The splitting is observed only when _____ 's' electron distribution gives rise to a field gradient.
- Kinetic energy is the energy of an object due to its motion. (True or False)
- Ultraviolet photoelectron spectroscopy can be used to study inner shell electrons. (True or False)

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

- Write a note on Scanning Tunneling Microscopy.
- Write a short note on quantum mechanical theory of Raman effect.
- What are the scope and limitations of ESCA.
- Write a short note on quadrupole interaction.

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

- Write a note on difference between electron spectroscopy and electron microscopy and explain Scanning Tunneling microscopic technique in detail.
- Describe the Instrumentation, and applications of Raman Spectroscopy.

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

- Describe the Instrumentation, and applications of Mossbauer spectroscopy.
- Explain principle and give chemical applications of Photoacoustic spectroscopy.

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

- Working principle diagram of AFM and mention Applications of Atomic Force Microscopy in various fields.
- Explain the term Resonance Raman effect?

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

- Give the principle and instrumentation of nuclear quadrupole resonance spectroscopy.
- Discuss instrumentation of ESCA.

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

- Applications of Electron Spin Resonance spectroscopy.
- Give the applications of Raman spectroscopy.

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
PHARMACEUTICAL CHEMISTRY
Medicinal Chemistry (MSC012310)

Day & Date: Wednesday, 22-05-2024
 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) Which of the following is easily blocked by antivirals?
 - a) Virus penetration
 - b) Nucleic acid replication
 - c) Virus absorption
 - d) Removal of the virus from the cell
- 2) The only antifungal drug which has some activity against moulds like *Mucor* and *Aspergillus* is _____.
 - a) Itraconazole
 - b) Miconazole
 - c) Fluconazole
 - 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) Protonsil
 - b) PABA
 - c) Sulphanilamide
 - d) Both a & b
- 6) Which of the following belongs to dihydropyridine category?
 - a) Amiloride
 - b) Nifedipine
 - c) Propranolol
 - 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) Omeprazole
 - d) Chloramphenicol
- 8) The most serious adverse effect of insulin is _____.
 - a) Hypoglycemia
 - b) Nephrotoxicity
 - c) Fever
 - d) Sweating
- 9) Phenytoin belongs to the class _____.
 - a) Hydantoin
 - b) Barbiturates
 - c) Benzodiazepine
 - d) Succinimides

10) Which of the following histamine receptor increases the release of gastric acid?

- a) H₁ receptor
- b) H₂ receptor
- c) H₃ receptor
- d) All of the above

B) Write True or False.

06

- 1) Adenine and Guanine nucleotides are the building blocks of DNA and RNA.
- 2) The peptidoglycan chains are made up of amino sugars like N-acetyl glucosamine and N-acetylmuramic acid.
- 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) Hepatitis is a viral infection that inflames the liver.

Q.2 Answer the following.

16

- a) What is antibiotic? Give the MOA of Ampicillin.
- b) Give the synthesis of Thiopental.
- c) Give classification and uses of antihistamines.
- 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) Discuss synthesis of Chloramphenicol and give its SAR.

Q.4 Answer the following.

16

- a) Give the MOA and SAR of folic acid analogues.
- b) What is neoplasm? Describe SAR and MOA of Nitrogen mustard.

Q.5 Answer the following.

16

- a) Explain in detail the pharmacology of Captopril.
- b) Explain in detail the pharmacology of Propranolol.

Q.6 Answer the following.

16

- a) Write a detail note on synthesis and SAR of Ibuprofen.
- b) Explain in detail the pharmacology of Aspirin.

Q.7 Answer the following.

16

- a) Explain the following.
 - i) Mode of action and SAR of Barbiturates
 - ii) Describe the synthesis of chloroquine.
- b) Describe the MOA and SAR of Diphenylhydramine.

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
MEDICINAL CHEMISTRY
Applied Organic Chemistry (MSC07310)

Day & Date: Wednesday, 22-05-2024
 Time: 11:00 AM To 02:00 PM

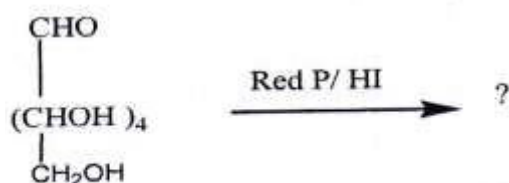
Max. Marks: 80

- 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 is the examples of Epimers?
 a) Glucose & Talose b) Glucose & Ribose
 c) Mannose & Glucose d) fructose and glucose
- $C_2H_4 + \frac{1}{2} O_2 \rightarrow C_2H_4O$
 (Ethylene oxide).
 This reaction will take place under presence of catalyst. Find out the % atom economy.
 a) 25% b) 50%
 c) 75% d) 100%
- A method in which sound energy is used to affect chemical processes is called as _____.
 a) Ultrasonication b) Microwave assisted reaction
 c) Ultraviolet reaction d) None of these.
- Two strands in DNA are held together by _____.
 a) Covalent bond b) Vander Waal's forces
 c) Hydrogen bond d) Electrostatic force of attraction
- Product of the following reaction is:



- a) Gluconic acid b) n-Hexane
 c) Mannitol d) Tartaric acid
- Chrysenes are _____ compound.
 a) Ortho fused b) Peri fused
 c) Ortho and peri fused d) Meta fused
- Anthracene and phenanthrene may be prepared by the action of sodium on o-bromobenzyl bromide in the _____ reaction.
 a) Fittig b) Friedel Crafts
 c) Elbs d) mannich
- Bicyclic crown ethers and crown ethers of higher order (tri, tetra... cycles) are called as _____.
 a) Iariat ethers b) Spherands
 c) Podands d) Cryptands

- 9) _____ is the term that refers to fixing or limiting the geometry of the molecule to assist in their binding.
- | | |
|-----------------------|---------------------|
| a) macrocyclic effect | b) Solvent effect |
| c) Preorganization | d) Binding constant |
- 10) Which of the following is more preorganized?
- | | |
|-------------|----------------|
| a) cryptand | b) crown ether |
| c) podand | d) spherand |

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

- 1) _____ is a organic salt in the liquid state whose M.P. is below 100°C.
- 2) The principal sugar in blood is _____.
- 3) _____ reagent is the mixture of copper sulphate, sodium citrate and sodium carbonate solution.
- 4) Pyrene is _____ fused Polynuclear Hydrocarbon.
- 5) In polycyclic aromatic compounds aromatic rings should share at least _____ side.
- 6) Crown type macrocycle with Podand side arm is called _____.

Q.2 Answer the following**16**

- a) What are mutarotations? Explain with suitable example.
- b) Write a note on D and L configuration of Monosaccharides.
- c) Write a note on aqueous phase reactions.
- d) Explain any four basic principles of Green Chemistry.

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

- a)
 - 1) What are carbohydrates? How they are classified?
 - 2) Explain anomeric effect.
- b) Explain the followings
 - 1) Microwave assisted reactions
 - 2) Ultrasonication

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

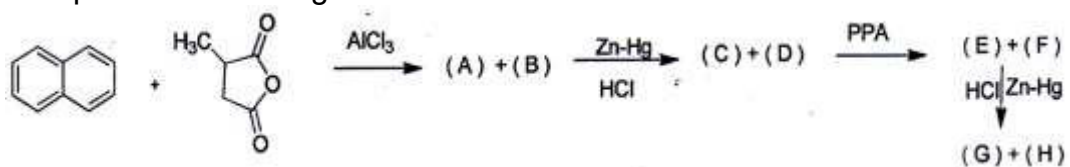
- a) Explain the synthesis of the phenanthrene by following methods
 - 1) Stobbe condensation
 - 2) Bardhan -Sengupta synthesis
- b) What are Cyclodextrins? Write a note on structure, synthesis and applications Of Cyclodextrin.

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

- a) Write a note on podands with respect to structure, synthesis and its application
- b) Explain the various chemical reactions of glucose.

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

- a) Explain the following concepts in host guest complex formation
 - 1) Preorganization
 - 2) Macrocyclic effect
- b) Give one synthesis of each of the following
 - 1) Pyrene
 - 2) Perylene
 - 3) 1,2-benzanthracene
 - 4) Piecene

Q.7 Answer the following.**a)** Complete the following reaction**b)** Explain the following in case of host guest complex formation

- 1) Binding constant
- 2) Solvent effect

**Seat
No.**

Day & Date: Wednesday, 22-05-2024
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) The unit comprising only a sugar and a base is referred to as a _____.
a) nucleotide b) nucleoside
c) nucleus d) chromosome
- 2) In anion exchange chromatography proteins with a more _____ net charge move Faster and elute earlier.
a) +Ve b) Neutral
c) - Ve d) +Ve &-Ve
- 3) _____ of the following equation is suitable in all cellular DNA's regardless of species.
a) $A + G = T + U$ b) $A + C = G + T$
c) $A + T = G + C$ d) $A + G = T + C$
- 4) D- Glucose undergo reduction in presence of sodium amalgam to form _____.
a) Xylitol b) Ribitol
c) Glycol d) Sorbitol
- 5) _____ base occurs in three tautomeric forms as lactam, lactim and double lactim.
a) Thyamine b) Uracil
c) Cytosine d) Guanine
- 6) In Sangers method 1 -fluro-2,4 -dinitrobenzene reacted with free amino group in protein to produce _____ derivative of amino acids.
a) Mononitrophenyl b) Imino
c) Dinitrophenyl d) Amino
- 7) A clearly defined nucleus and membrane bound organelles is the characteristics of _____.
a) prokaryotic cells b) protest cells
c) eukaryotic cells d) none of these
- 8) _____ are fat soluble Vitamins.
a) Vitamin A, Vitamin D b) Vitamin E, Vitamin K
c) Vitamin C, Vitamin B12 d) Both a & b
- 9) Proteins consist of unbranched chains of amino acids joined by _____ bonds.
a) Sigma b) Pi
c) Coordinate d) Peptide

10) Many metalloproteins contain organic compounds in addition to the protein itself these are often referred to as ____.

- a) Functional groups
- b) Prosthetic group
- c) Charge carrier
- d) None of these

B) Fill in the blanks.

06

- 1) High density lipoproteins are mostly synthesized in ____.
- 2) ____ imino acid found in protein structure.
- 3) ____ undergo reduction in presence of sodium amalgam to form sorbitol.
- 4) The non-reducing disaccharide is ____.
- 5) Bleomycin is an antitumor antibiotic isolated from the ____.
- 6) Nitrogen mustard is alkylating type of mutagenic alteration in ____.

Q.2 Answer the following.

16

- a) Define monosaccharide with example and describe cyclic forms of monosaccharides.
- b) Define amino acid and write the structural classification of amino acids.
- c) Explain in brief phosphodiester linkages in the covalent backbone of successive nucleotide in nucleic acid.
- d) Define vitamin and write down the history, classification and nomenclature of vitamins.

Q.3 Answer the following.

- a) Write the Wohls method for the conversion of D- Glucose into D- Arabinose and How will you convert aldose (D- Glucose) into ketose (D- Fructose). **08**
- b) Describe in details the structural hierarchy in the molecular organization of cells and write any five scope of biochemistry in pharmaceutical sciences. **08**

Q.4 Answer the following.

- a) Describe the physical and chemical properties of amino acids and define term PI. **08**
- b) Explain how proteins can be separated and characterized by electrophoresis method. **08**

Q.5 Answer the following.

- a) Write short note on following **08**
 - 1) DNA Replication
 - 2) DNA Transcription
 - 3) DNA Translation
- b) Explain the formation of dimmers induced by UV light and discuss the chemical agent that cause DNA damage? **08**

Q.6 Answer the following.

- a) Define lipoprotein and chylomicron. Write down the function and structure of chylomicron. **08**
- b) Explain in detail the biochemical functions, recommended dietary allowance and dietary sources of Vitamin A. **08**

Q.7 Answer the following.

- a)** Explain with figure the metalloregulation of uptake and storage of iron. **08**
- b)** Describe the following metal binding biomolecules with figures. **08**
 - 1) Prosthetic group
 - 2) Coenzyme B-12
 - 3) Bleomycin and Siderophores

Seat No.	
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Set P

M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
COMPUTER SCIENCE
Fundamental of Web Designing (MSC18310)

Day & Date: Wednesday, 22-05-2024
 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) _____ is a set of rules or procedures, called protocols, that enables computers to exchange information over the Web.
 - a) HyperText Transfer Protocol (HTTP)
 - b) HyperText Transfer Practise (HTTP)
 - c) HigherText Transfer Process (HTTP)
 - d) HyperTech Transfer Program (HTTP)
- 2) The _____ tag delimits the heading of the HTML document.
 - a) <tail>
 - b) <hod>
 - c) <head>
 - d) <body>
- 3) The paragraph tag _____ is used to delimit entire paragraphs of text.
 - a) <para>
 - b) <p>
 - c) <paragraph>
 - d) <graph>
- 4) There are _____ predefined levels of headings.
 - a) Seven
 - b) Five
 - c) Six
 - d) Three
- 5) Use _____ tag for Bold the text.
 - a)
 - b) <c>
 - c) <d>
 - d) <o>
- 6) The table definition itself is defined and delimited by _____ tags.
 - a) <toss>
 - b) <tent>
 - c) <table>
 - d) <top>
- 7) HTML _____ provides a method to use standard GUI elements to display and collect data.
 - a) Firms
 - b) Folder
 - c) Fonts
 - d) Forms
- 8) Use _____, users can easily create and share online forms and surveys, and analyze responses in real-time.
 - a) Google Sheets
 - b) Google Slides
 - c) Google Forms
 - d) Google Docs
- 9) Using _____, Create and collaborate on online spreadsheets in real-time and from any device.
 - a) Google Excel
 - b) Google Microsoft
 - c) Google Access
 - d) Google Sheets

- 10) Using _____, users can store, share, and collaborate on files and folders from your mobile device, tablet, or computer.
- a) Google Analytics
 - b) Google AI
 - c) Google Drive
 - d) Google Data

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

- 1) WWW stands for World Wooden Web.
- 2) HTML stands for HyperText Markup Language.
- 3) There are lots of tags and they are all in pairs; there are Head tags and tail tags.
- 4) The text inside the angled brackets explains the purpose of the tag.
- 5) Whole document is contained between opening < page > and closing < /page > tags.
- 6) Google Sites is a structured wiki and web page creation tool included as part of the free, web-based Google Docs Editors suite offered by Google.

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

- a) What is the Internet?
- b) What do you mean by Website?
- c) What is <body> tag?
- d) Describe Google Search?

Q.3 Answer the following.

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

Q.4 Answer the following.

- a) Explain heading tag in HTML with suitable example? **08**
- b) Discuss in detail working with Hyperlinks in HTML? **08**

Q.5 Answer the following.

- a) State and explain in detail five golden rules of the website design? **08**
- b) Define HTML. Explain in detail the basic structure of a HTML Document? **08**

Q.6 Answer the following.

- a) Discuss the Table tags for creating tables in HTML with suitable example? **08**
- b) State and explain font tag for formatting font styles such as font name, color, size? **08**

Q.7 Answer the following.

- a) State and explain the application of Google for teaching, learning and research? **08**
- b) Discuss various types of Websites with suitable examples? **08**

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Set **P****M.Sc. (Semester - III) (CBCS) Examination: March/April-2024****CONDENSED MATTER PHYSICS****Energy Harvesting Devices (MSC04310)**

Day & Date: Wednesday, 22-05-2024

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) In solar PV technology CdTe is _____.
 a) Direct band gap semiconductor
 b) Indirect band gap semiconductor
 c) Direct band gap conductor
 d) All a, b, c
- 2) The first dye-sensitized solar cell concept is presented by _____.
 a) De-Broglie b) Richard Feynman
 c) Regan and Agratzel d) Kroon
- 3) Ultrasonic transducers used to convert electric energy in to _____.
 a) Mechanical form b) Sound energy
 c) Magnetic energy d) Photon energy
- 4) _____ are non-conventional energy sources available in nature.
 a) Solar energy b) Wind energy
 c) Ocean energy d) All a, b, c
- 5) The creation of electron-hole pair is called _____.
 a) Recombination b) Generation
 c) Insulator d) None of a, b, c
- 6) In battery electrical capacity gets lost when a battery is not being used it is called _____.
 a) Self-discharge b) Deep discharge
 c) Rating d) All a, b, c
- 7) The optimum thermodynamic efficiency of heat engine is equal to _____.
 a) $1 + \frac{T_1}{T_2}$ b) $1 - \frac{T_1}{T_2}$
 c) $1 + \frac{T_2}{T_1}$ d) $1 - \frac{T_2}{T_1}$
- 8) A Supercapacitor typically store 10 to 100 times more energy per unit volume than _____.
 a) Electrolytic capacitor b) Paper capacitor
 c) Pseudo capacitor d) Ultracapacitor

- 9) When volumetric energy density of supercapacitor increases then _____ increases.
- a) Resistance
 - b) Voltage
 - c) Impedance
 - d) None of a, b, c
- 10) Ruthenium oxide (RuO_2) is used as _____.
a) Electrochemical super capacitor material
b) Electrode material
c) Electrocatalytic surface
d) All a, b, c

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

- 1) The practical S.I. unit of electric energy is _____.
- 2) Long form of ARC is _____.
- 3) A fuel cell is an electrical cell which converts _____.
- 4) The induced charges are proportional to the mechanical stress is called _____.
- 5) Fuel cells are used for residential building, automobile and motorcycle. Is it true or false?
- 6) Supercapacitors are used in applications for slowcharge cycle. Is it true or false?

Q.2 Attempt the following.**16**

- a) What are the losses in solar cell?
- b) Write a short note on piezoelectric polycrystalline ceramic materials.
- c) What is difference between battery and supercapacitor?
- d) What are the applications of fuel cells?

Q.3 Answer the following.

- a) Describe the construction and working of CdS solar cell.
- b) Explain characteristics of solar cell.

10**06****Q.4 Answer the following.****16**

- a) What is supercapacitor? Explain cathodic and anodic materials for supercapacitor.
- b) Describe the Rogan plot of energy storage domains for various electrochemical energy conversion system.

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

- a) Discuss the piezoelectric thin film techniques.
- b) Explain in detail energy harvesting circuits.

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

- a) What is fuel cell? Discuss fuel cell characterization.
- b) Which material used for fuel cell? Why?

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

- a) Explain construction and working of organic polymer solar cell.
- b) Explain electric double capacitor, pseudocapacitor and hybrid capacitor.

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
ELECTRONICS
Medical Instrumentation (MSC21310)

Day & Date: Wednesday, 22-05-2024
 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 the right indicate full marks.

Q.1 A) Choose the correct alternatives from the options. 10

- 1) The internal resting potential within a cell is approximately _____ with reference to the outside of the cell.
 - a) -90 mv
 - b) +90 mv
 - c) -120mv
 - d) +120mv
- 2) Pregelled disposable electrode diameter range from _____.
 - a) 1-2cm
 - b) 2-3cm
 - c) 3-4cm
 - d) 4-6cm
- 3) Which of the following is not preferred for electrode making?
 - a) Ag-AgCl
 - b) Copper
 - c) Stainless-steel
 - d) Gold
- 4) What is the frequency range of ECG?
 - a) 70-120 Hz
 - b) 0.05-120 Hz
 - c) 5-120 Hz
 - d) 12-120 Hz
- 5) From equipment point of view, the respiratory system in the human body is a _____ system.
 - a) hydraulic
 - b) pneumatic
 - c) mechanical
 - d) electrical
- 6) Metallic micro electrodes have impedance _____ compared to conventional electrodes?
 - a) equal
 - b) smaller
 - c) high
 - d) very-high
- 7) The circulatory path for blood flow through the lungs is called _____.
 - a) Pulmonary circulation
 - b) Systemic circulation
 - c) Body circulation
 - d) Both a and b
- 8) The _____ is the enclosed and lies between the inferior and superior vena cava.
 - a) Right atrium
 - b) Left atrium
 - c) Right ventricles
 - d) Left ventricles
- 9) What does the P wave represent?
 - a) Depolarization of the atria
 - b) Depolarization of the ventricles
 - c) Represents the repolarization of the ventricles
 - d) Depolarization of the atria and ventricles

- 10) The heart pumps about _____ liters of blood per minute.
- | | |
|------|------|
| a) 3 | b) 4 |
| c) 5 | d) 6 |

B) State true or false.**06**

- 1) The Doppler ultrasound instrument detects the motion of blood flow through a vessel and creates an audible trace.
- 2) The silver/ silver chloride (Ag/AgCl) is considered an unstable reference electrode.
- 3) The X-ray picture is called as radiology.
- 4) The body fluid is slightly acidic.
- 5) The Capillaries are the smallest and last level of blood vessels.
- 6) The differential amplifier always provides the protection against leakage currents.

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

- a) Write note on Electrode for ECG.
- b) Write note on pulse rate.
- c) Write note on Electric shock hazards.
- d) Write note on Sources of bioelectric potentials.

Q.3 Answer the following.

- a) Write note on Electromyograph (EMG).
- b) Explain in detail Nernst equation.

08**08****Q.4 Answer the following.**

- a) Explain the concept The Engineering model of the Heart.
- b) Explain -Electroencephalograph (EEG)

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

- a) Explain Blood-Glucose sensors with suitable diagram.
- b) Explain blood flow measurement system.

08**08****Q.6 Answer the following.**

- a) Explain Basic principles and general architecture of modern imaging systems.
- b) Explain in detail Use of WSN technology in central monitoring system with suitable block diagram.

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

- a) Explain heart rate Measurement system.
- b) Write note on Temperature measurement systems.

10**06**

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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
ELECTRONIC SCIENCE

Digital Electronics and Communication System (MSC02311)

Day & Date: Wednesday, 22-05-2024
 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 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 the above
- 2) 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) $A*B = B*A$
- 3) 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
- 4) GPRS and EDGE are the standards of _____ communication system.
 - a) 2.5G
 - b) 2G
 - c) 3G
 - d) 4G
- 5) 1's complement of 1110001 is _____.
 - a) 0100111
 - b) 0101100
 - c) 0100110
 - d) 0001110
- 6) By modulation, Antenna size gets _____.
 - a) Reduced
 - b) Increased
 - c) Enhanced
 - d) All of these
- 7) According to Boolean law: $A + 0 = ?$
 - a) 1
 - b) A
 - c) 0
 - d) A'
- 8) The AND, OR and NOT gates are known as _____.
 - a) universal gates
 - b) basic gates
 - c) special gates
 - d) All of these
- 9) The base or radix of binary number system is _____.
 - a) 2
 - b) 8
 - c) 10
 - d) 16
- 10) _____ allocates a single time per frame to different users.
 - a) TDMA
 - b) FDMA
 - c) CDMA
 - d) OFDMA

- B) Write true/false.** **06**
- 1) Diameter of femto cell is more than pico cell.
 - 2) In BPSK technique, the sine wave carrier takes two phase reversals such as 0° and 180° .
 - 3) The process of reconstructing back the original signal is called as Modulation.
 - 4) The primary use of communication satellites is in long-distance telephone service.
 - 5) The transmitter-receiver combination in the satellite is known as a Transponder.
 - 6) Cellular concept replaces many low power transmitters to a single high power transmitter.
- Q.2 Answer the following.** **16**
- 1) What is Bluetooth?
 - 2) What is TDM?
 - 3) Define the following term:
 - i) Modulation
 - ii) Demodulation
 - iii) Multiplexing
 - iv) Logic gate
 - 4) Explain NAND gate with its truth table.
- Q.3 Answer the following.**
- a) Explain different generations of communication system with its merits and demerits. **10**
 - b) Explain in detail cellular concept. **06**
- Q.4 Answer the following.**
- a) Convert the following decimal number to binary. **10**
 - 1) Convert 123_{10} to binary
 - 2) Convert 85_{10} to binary
 - b) Explain Boolean Laws. **06**
- Q.5 Answer the following.**
- a) With a neat block diagram, explain the following digital modulation techniques. **10**
 - 1) ASK
 - 2) FSK
 - b) Explain CDMA with its advantages and disadvantages. **06**
- Q.6 Answer the following.**
- a) What is satellite communication? With a neat block diagram, explain satellite transponder. **10**
 - b) Explain sampling theorem.
- Q.7 Answer the following.**
- a) Explain the following gates with its gate representation and truth table: **10**
 - 1) Basic gate
 - 2) Universal gate
 - b) State and Explain Demorgan's theorem. **06**

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Day & Date: Wednesday, 22-05-2024
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.
5) आवश्यक तेथे सबक आकृत्या काढा.

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

10

- 1) ——— वंशातील लोकांचे डोळे अर्धवट उघडे असतात.
अ) निग्रोईड ब) मंगोलॉईड
क) कॉकेसॉईड ड) अल्पाईन
- 2) ऑक्सिडेंटल रिस्म प्रामुख्याने ——— भागात विभागला आहे.
अ) दोन ब) चार
क) सहा ड) दहा
- 3) ——— हा मानवाचा प्राथमिक व्यवसाय आहे.
अ) शिकार ब) उद्योगधंदे
क) पर्यटन ड) वकील
- 4) सांस्कृतिक क्षेत्रामध्ये सांस्कृतिक लक्षणात ——— असते.
अ) एकरूपता ब) अनियमितपणा
क) असमरूपता ड) समरूपता
- 5) 'कॉन्फ्यूसीयानीझम' हा ——— देशातील वैशिष्ट्यपूर्ण धर्म आहे.
अ) चीन ब) जपान
क) आफ्रिका ड) अमेरिका
- 6) टांझानिया व केनियाच्या गवताळ प्रदेशावर आढळणारी ——— ही जमात होय.
अ) एक्विमो ब) रेड इंडियन
क) पिग्मी ड) मसाई
- 7) इसवी सन 1950 पासून ——— या ज्ञानशाखेच्या विकासाला मोठ्या प्रमाणावर सुरुवात झाली.
अ) सांस्कृतिक भूगोल ब) वर्तणूक भूगोल
क) राजकीय भूगोल ड) आर्थिक भूगोल

- 8) एका पिढीतून दुसऱ्या पिढीत हस्तांतरित होणाऱ्या विशिष्ट शारीरिक लक्षणांनी युक्त असा एक जीवशास्त्रीय समूह म्हणजे ——— होय.
अ) वंश ब) भाषा
क) धर्म ड) संस्कृती
- 9) ——— ही मुख्य भाषा ‘गोंड’ हया आदिम जमातीची आहे.
अ) गोंडी ब) कोकणी
क) संधाली ड) नागा
- 10) सामाजिक क्षेमकुशलची संकल्पना ——— यांनी प्रतिपादीत केली.
अ) ड्रेनोवस्कर ब) रिटर
क) रॅटझेल ड) टेलर

ब) रिकाम्या जागा भरा.

06

- 1) चीनी संस्कृतीचा उगम ——— नदीच्या वरच्या खोऱ्यात झाला.
- 2) केरळमध्ये ——— ही कार्यालयीन भाषा आहे.
- 3) सांस्कृतिक भूगोल ही ——— भूगोलाची आधुनिक शाखा आहे.
- 4) पशुपालन व दूध व्यवसाय हे ——— आदिम जमातीचे मुख्य व्यवसाय आहे.
- 5) ——— धर्मात श्वेतांबर व दिगंबर असे दोन मुख्य पंथ आहेत.
- 6) ——— या वंशाचा सर्वाधिक प्रभुत्व रक्त गट 'बी' आहे.

प्र.2 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) सांस्कृतिक भूगोलाचे महत्त्व
ब) संस्कृतीच्या उगमस्थानाची संकल्पना
क) सामाजिक क्षेमकुशलचे दर्शक
ड) भारतातील आदिम जमात— 'नागा'

प्र.3 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) जगातील शेती आणि आधुनिक तांत्रिक बदलाचा वृत्तांत द्या.
ब) भारतातील सामाजिक व सांस्कृतिक प्रक्रिया स्पष्ट करा.

प्र.4 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) जगातील प्रमुख मानवी वंश स्पष्ट करा.
ब) सांस्कृतिक भूगोलाचे व्याप्ती स्पष्ट करा.

प्र.5 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) भारतातील सांस्कृतिक विविधता व प्रादेशिकरण यावर वृत्तांत द्या.
ब) मसाई या आदिम जमातीच्या सामाजिक-आर्थिक पार्श्वभूमीवर चर्चा करा.

प्र.6 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) जागतिक हिंदू धर्माच्या प्रसाराच्या प्रक्रियेवर चर्चा करा.
ब) जगातील प्रमुख सांस्कृतिक विभाग स्पष्ट करा.

प्र.7 खालील प्रश्नांची उत्तरे लिहा.

16

- अ) संस्कृतीचे घटक स्पष्ट करा.
ब) ग्रामीण व नागरी समाजाच्या सांस्कृतिक प्रारूपाची चर्चा करा.

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

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

- 1) People of _____ descent have their eyes half open.
a) Negroids b) Mongoloid
c) Caucasoid d) Alpine
- 2) Occidental realm is subdivided in to _____ sub-realms.
a) Two b) Four
c) Six d) Ten
- 3) _____ is Primary of human activity.
a) Hunting b) Industry
c) Tourism d) Lawyer
- 4) In the cultural sphere there is _____ in cultural traits.
a) Uniformity b) Irregularity
c) Asymmetry d) Symmetry
- 5) 'Confucianism' is an ethnic religion of _____.
a) China b) Japan
c) South Africa d) America
- 6) _____ are a tribe found in the grasslands of Tanzania and Kenya.
a) Eskimo b) Red Indian
c) Pygmy d) Masai
- 7) From the year 1950 onwards, the development of the field of knowledge of _____ began on a large scale.
a) Cultural geography b) Behavioural geography
c) Political geography d) Economic geography
- 8) A genus is a biological group with specific physical characteristics that are passed down from one generation to another.
a) Race b) Language
c) Religion d) Culture
- 9) _____ is the main language of the Gond primitive tribe.
a) Gondi b) Kokani
c) Santhali d) Naga

- 10) Concept of social wellbeing is given by _____.
a) Drenrovask b) Ritter
c) Ratzel d) Talor

B) Fill in the blanks.

06

- 1) Origin of Chinese civilization is in upper river basin of _____.
- 2) _____ is official language of Kerala.
- 3) Cultural geography is a modern branch of _____ geography.
- 4) Animal husbandry and milk business is the main occupation of the _____ primitive tribe.
- 5) There are two main sects in _____ religion of 'Shwetambar and Digambar'.
- 6) 'B' is most dominant blood group of _____ race.

Q.2 Answer the following.

16

- Significance of Cultural Geography.
- Concept of Cultural hearths.
- Indicators of Social Wellbeing.
- Tribal community in India- 'Naga'.

Q.3 Answer the following.

16

- Give an account of Agricultural and modern technological changes.
- Explain the Social and Cultural processes in India.

Q.4 Answer the following.

16

- Explain the Major human race in the world.
- Explain the Scope of Cultural geography.

Q.5 Answer the following.

16

- a) Give an account of Cultural diversity and regionalization in India.
- b) Discuss the Socio-economic background of Masai tribal community.

Q.6 Answer the following.

16

- Discuss the Religious diffusion process of world Hindu religion.
- Explain the Major World of cultural realms.

Q.7 Answer the following.

16

- Explain the Element of Culture.
- Discuss the Cultural pattern of rural and urban society.

Seat No.	
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Commercial Geography (MAG311)

Max. Marks: 80

सूचना : 1) प्रश्न क्र. 1 व 2 अनिवार्य आहेत.
2) प्रश्न क्र. 3 ते 7 पैकी कोणतेही 3 प्रश्न सोडवा.
3) र्स प्रश्नांना समान गुण आहेत.
4) नकाशा स्टेन्सिल वापरण्यास परवानगी आहे.

10

- 1) व्यापारी भूगोल ही ——— भूगोलाची उपशाखा आहे.
अ) आर्थिक ब) सामाजिक
क) राजकीय ड) प्राकृतिक
- 2) ——— भूगोल हे पुस्तक पी. एन. पाडे यांनी लिहले.
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 पद्धती आहेत.
अ) फिरती ब) साठा
क) किरकोळ ड) यापैकी नाही
- 5) ——— हा जगातील पेट्रोलियम उत्पादने निर्यात करणाऱ्या देशाचा संघ आहे.
अ) ओपेक ब) डब्ल्यूटीओ
क) सार्क ड) यापैकी नाही
- 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 द्या. (कोणतेही दोन)

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 द्या.

16

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

प्र.4 खालील प्रश्नांची उत्तरे द्या.

16

- अ) व्यापारी भूगोलाची व्याप्ति व स्वरूप स्पष्ट करा.
ब) व्यापारी भूगोलाचा दृष्टीकोन स्पष्ट करा.

प्र.5 खालील प्रश्नांची उत्तरे द्या.

16

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

प्र.6 खालील प्रश्नांची उत्तरे द्या.

16

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

प्र.7 खालील प्रश्नांची उत्तरे द्या.

16

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

Seat No.	
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Set **P**

**M.A./M.Sc. (Geography) (Semester - III) (CBCS) Examination:
March/April-2024
Commercial Geography (MAG311)**

Day & Date: Wednesday, 22-05-2024
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.
4) Use of Maps Stencils is allowed.

Q.1 A) Choose correct alternative.**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

- Q.1 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 Questions.** **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 Question.** **16**
- a) Describe in brief Agro-tourism development in India.
 - b) Explain the classification of economic activities of man.
- Q.4 Answer the following Question.** **16**
- a) Describe Commercial Geography Nature and Scope.
 - b) Explain the approaches of Commercial Geography.
- Q.5 Answer the following Question.** **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 Question.** **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 Question.** **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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Fundamentals of GIS and Remote Sensing (MSC017310)

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.

10

- 1) Altitude of geostationary satellite is _____.
a) 20000Km b) 36000 Km
c) 900 Km d) 700 Km
- 2) Spatial resolution of Linear Imaging Self Scanner (LISS-4) is _____.
a) 10 m b) 90 m
c) 5.8 m d) 72.5 m
- 3) FCC stands for _____.
a) Falles Colour Composite b) False Colour Composite
c) Few Colour complex d) All of above
- 4) G.P.S. provides data of _____.
a) Latitude b) Longitude
c) Height d) All of the above
- 5) Full form of TIN is _____.
a) Triangulated Irregular Net
b) Triangulated Irregular Network
c) Triple Irregular Network
d) None of the above
- 6) A _____ file in ARCGIS is an Esri vector data storage format for storing the location, shape, and attributes of geographic features.
a) .dwg b) .shp
c) .coverage d) .tiger
- 7) GLONASS is global position system operated by _____ country.
a) Russia b) Japan
c) Europe d) U.S.A
- 8) the minimum number of satellites requires for GPS to determine its position precisely are _____.
a) 4 b) 24
c) 8 d) 16
- 9) Airplanes are the most common _____ Platform.
a) Airborne b) Space borne
c) Ground based d) None of these
- 10) Remote sensing uses which of the following waves in its procedure?
a) Electric field b) Sonar waves
c) Gamma- rays d) Electro-magnetic waves

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

- 1) The resolution of CartoSat-1 DEM is 10 m (true / false).
- 2) For Land use and land cover analysis the software's like ARCGIS, ERDAS can be used (true/False)
- 3) In India, the polyconic projection is commonly used by Survey of India (SOI) (true/false)
- 4) Vector method is the fundamental method of representing GIS entities? (true / false)
- 5) The distance between two successive crest or trough is called as Amplitude (true / false)
- 6) Vector Data files typically require less storage space than raster data files (true / false)

Q.2 Answer the following. 16

- a) GIS in groundwater exploration.
- b) Brief note on terrain elements.
 - i) Texture
 - ii) Tone
- c) MSS.
- d) Raster data.

Q.3 Answer the following.

- a) Write a full process of Georeferencing. 08
- b) Write down basic concept & components of GIS. 08

Q.4 Answer the following.

- a) What is a resolution? Explain in details various types of resolution. 08
- b) What are the characteristics of LANDSAT and IRS. 08

Q.5 Answer the following.

- a) Types of projections. 08
- b) Applications and limitations of GPS. 08

Q.6 Answer the following.

- a) Write a note on types of aerial photographs. 08
- b) What do you understand by Digital elevation model (DEM). 08

Q.7 Answer the following.

- a) What is Electromagnetic energy? Discuss Interaction of EMR with atmosphere and earth material. 08
- b) Give applications of remote sensing techniques in Geology. 08

Seat No.	
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B) Answer the following. 06

- 1) Katabatic wind is also called as down valley or mountain breeze. (True/False)
- 2) Cyclones rotate anticlockwise in northern hemisphere. (True/False)
- 3) Winds blow from low pressure areas towards high pressure areas. (True/ False)
- 4) _____ is the temperature at which the condensation begins when the air is cooled.
- 5) The first written document on atmosphere was _____.
- 6) Thunderstorms result from the rapid upward movement of warm and moist air. (True/False)

Q.2 Write notes on. 16

- a) Distinguish between weather and climate.
- b) Hydrological cycle.
- c) Unicellular circulation model.
- d) Eddy theory

Q.3 Answer the following. 16

- a) Write a detailed note on historical background of climatology.
- b) Explain Humidity and its types in detail.

Q.4 Answer the following. 16

- a) Write a note on Tricellular model of atmospheric circulation with labelled diagram.
- b) What is condensation? Write a note on its various forms.

Q.5 Answer the following. 16

- a) Write a detailed note on regional climatology and its groups.
- b) Explain the structure of atmosphere.

Q.6 Answer the following. 16

- a) Write a note on land breeze and sea breeze with suitable diagrams.
- b) Write a note on tornado in detail.

Q.7 Answer the following. 16

- a) Write a note on jet streams and its significance in brief.
- b) Write a detailed note on hurricane.

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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 amount of photo generated current increases slightly with an increase in _____.
a) Temperature
b) Photons
c) Diode current
d) Shunt
- 2) Which of the following highest power density value?
a) Capacitor
b) Battery
c) Supercapacitor
d) None of these
- 3) The piezoelectric materials used for converting energy are called as _____.
a) Transition Devices
b) Converter
c) Transducer
d) Dielectric
- 4) Piezoelectricity is shown by substances which are _____.
a) Polar
b) Non-polar
c) Symmetric
d) Asymmetric
- 5) Solid oxide fuel cells operate at high, temperature as high as _____ °C.
a) 250
b) 500
c) 1000
d) 2000
- 6) _____ material is used as window layer in the solar cell.
a) CdSe
b) CdTe
c) ZnO
d) CuInSe₂
- 7) Pseudocapacitors store the charges through _____ reactions.
a) Faradaic
b) Non-faradaic reactions
c) Electrostatically
d) None of these
- 8) Polymer electrolyte membrane fuel cell operate in the temperature range _____ °C.
a) 10-30
b) 60-80
c) 120-150
d) above 1000
- 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) The standard emf of the hydrogen-oxygen fuel cell is _____.
a) 1.23 V b) 2.54 V
c) 3.96 V d) 0.58 V

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

06

- 1) CdS/Cu₂S based solar cells are a fourth-generation solar cell. (True / False)
- 2) The efficiency of QDSSC is lower than DSSC because Multiple excitons. (True / False)
- 3) Fill factor is ratio of $FF = \frac{V_m \times I_m}{V_{oc} \times I_{sc}}$ (True / False)
- 4) _____ is one of the most preferable electrolytes for liquid solar cell.
- 5) _____ is redox mediator.
- 6) The piezoelectric materials used for converting energy are called as _____.

Q.2 Answer the following.

16

- Piezoelectric materials.
- Dye sensitized solar cells.
- p-n junction solar cell.
- Distinguish between battery and supercapacitor.

Q.3 Answer the following.

- Explain in detail about Photoelectrolysis cells.
- What are the Solar Cell characterizations?

10

06

Q.4 Answer the following.

- Elaborate the working of Solid Oxide Fuel Cell.
- Write a short note on Polyaniline-based supercapacitors.

10

06

Q.5 Answer the following.

- a) Write in detail about hybrid supercapacitors.
- b) Explain about the magnetoelectric composites.

10

06

Q.6 Answer the following.

- Write in detail about Proton exchange membrane fuel cell.
- Explain in short about the types of supercapacitors.

10

06

Q.7 Answer the following.

- Write in detail about Ultra-thin absorber solar cells.
- What is the photovoltaic effect?

10

06

Seat No.	
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- 9) The inverse of the matrix $\begin{bmatrix} 1 & -1 & 1 \\ 1 & 1 & 1 \\ 1 & 2 & 4 \end{bmatrix}$ is ____.
- a) $\frac{1}{6} \begin{bmatrix} 1 & 1 & 1 \\ 0 & -1 & 1 \\ 1 & 3 & 4 \end{bmatrix}$ b) $\frac{1}{6} \begin{bmatrix} 1 & -1 & 1 \\ 8 & 1 & 6 \\ 1 & 2 & 4 \end{bmatrix}$
- c) $\frac{1}{6} \begin{bmatrix} 1 & 1 & 1 \\ 5 & -1 & 6 \\ 1 & 6 & 4 \end{bmatrix}$ d) $\frac{1}{6} \begin{bmatrix} 2 & 6 & -2 \\ -3 & 3 & 0 \\ 1 & -3 & 2 \end{bmatrix}$
- 10) If a function is real and continuous in the region from a to b and f(a), f(b) have opposite signs then there is ____ root between a and b.
- a) no real b) real
c) rational d) irrational

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

- 1) LU decomposition is more efficient than Gauss elimination when solving for the inverse of a matrix.
- 2) The order of convergence of the Bisection method is 2.
- 3) Newton's forward difference interpolation formula is useful for interpolation near the end of tabular values.
- 4) The Newton Raphson method fails if $f'(x)$ is non zero.
- 5) The Secant method is also called as 2-point method.
- 6) The positive root of the equation $x^3 - 4x - 9 = 0$ using Regula Falsi method and correct to 4 decimal is 2.7065

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

- a) Show that, $\mu E = E\mu$
- b) Construct a formula for Newton-Raphson method.
- c) Evaluate the sum $S = \sqrt{101} + \sqrt{41} + \sqrt{7}$ correct to three significant figures and find absolute and relative error.
- d) Write a note on Euler's method.

Q.3 Answer the following.

- a) Find a real root of the equation $x^3 - x - 1 = 0$ by Bisection method, correct upto three decimal places. **08**
- b) Solve the following system of equations: **08**
 $x + y + z = 1, 3x + y - 3z = 5, x - y - 5z = 10$
 by using LU decomposition.

Q.4 Answer the following.

- a) Find the unique polynomial of degree three such that **08**
 $f(-2) = -12, f(-1) = -8, f(2) = 3$ and $f(3) = 5$ using Lagrange's Interpolation formula.
- b) Evaluate $\int_0^1 e^x dx$ using Simpson's $\frac{1}{3}$ -rule by taking $h = \frac{1}{6}$ **08**

Q.5 Answer the following.

- a) Find all the given values and eigen vectors of the matrix **08**

$$\begin{bmatrix} 3 & 4 & -2 \\ 1 & 4 & -1 \\ 2 & 6 & -1 \end{bmatrix}$$

- b) Show that $e^x \left(u_0 + x\Delta u_0 + \frac{x^2}{2!} \Delta^2 u_0 + \dots \right) = u_0 + u_1 x + u_2 \frac{x^2}{2!} + \dots$ **08**

Q.6 Answer the following.

- a) Find a real root of the equation $x^3 - 2x - 5 = 0$ by using secant method. **10**
 b) Derive a newton's forward interpolation formula. **06**

Q.7 Answer the following.

- a) Reduce the matrix $A = \begin{bmatrix} 1 & 3 & 4 \\ 3 & 1 & 2 \\ 4 & 2 & 1 \end{bmatrix}$ to the tridiagonal form. **08**
 b) Find a formula of Simpsons $\frac{1}{3}$ rule using general formula for numerical integration. **08**

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Set **P**

M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
MICROBIOLOGY (CAMPUS)

Environmental Microbiology and Waste Management (MSC01311)

Day & Date: Wednesday, 22-05-2024

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) Melanoidin pigments are present in _____ industry waste water.
 - a) Distillery
 - b) Textile
 - c) Paper and pulp
 - d) Cyanide
- 2) Which of the following is not a closed tank system process of advanced activated sludge process?
 - a) UNOX
 - b) Megox system
 - c) OASES
 - d) Forced Free fall system F3O system All of these
- 3) _____ organism play important role in acceleration of eutrophication.
 - a) Fungi
 - b) Algae
 - c) Viruses
 - d) Protozoa
- 4) EIA is _____.
 - a) Environmental Impact Assessment
 - b) Environmental Information Assessment
 - c) Environmental Indian Association
 - d) Environmental Implementation Association
- 5) The waste water generated by _____ industry is called 'Spent wash'.
 - a) Paper & pulp
 - b) Cyanide
 - c) Textile
 - d) Distillery
- 6) The primary technique used in gathering audit information is _____.
 - a) Documentation
 - b) Audit interviews
 - c) Public disclosure
 - d) Presentation
- 7) The concept of putting microbes to help clean up the environment is called _____.
 - a) Pasteurization
 - b) Bioremediation
 - c) Fermentation
 - d) Biolistics
- 8) The filtering medium of trickling filters is coated with microbial flora known as _____.
 - a) Zoological film
 - b) Geological film
 - c) Zoogeleal film
 - d) None of these
- 9) The term ecology was proposed by German ecologist _____.
 - a) A.G. Tansley
 - b) Ernst Haeckel
 - c) Robert Warden
 - d) Rachel carson

- 10) _____ is used as an indicator in determination of COD.
- | | |
|---------------|----------------------|
| a) Starch | b) Ferroin |
| c) Phenol red | d) None of the above |

B) Write True/False**06**

- 1) Edaphology is the relationship between soil and living organisms.

a) True	b) False
---------	----------
- 2) In activated sludge process, MCRT stands for Mass cell reaction time.

a) True	b) False
---------	----------
- 3) In effluent treatment plant (ETP) a grit chamber is usually installed before primary sedimentation tanks.

a) True	b) False
---------	----------
- 4) Acetogenesis is a chemical reaction that occurs during anaerobic digestion of wastewater treatment system.

a) True	b) False
---------	----------
- 5) The filtering medium of trickling filters is coated with microbial flora known as geological film.

a) True	b) False
---------	----------
- 6) In cometabolism both the substrates are act as carbon & energy source for the growth of microorganisms.

a) True	b) False
---------	----------

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

- a) Describe in detail about food web.
- b) Define the term Ecology and Ecosystem.
- c) Write a note on impacts of pollutants on biotreatment with respect to cometabolism & Low concentration of substrate situation.
- d) Write a note on treatability test.

Q.3 Answer the following.

- a) Explain in detail about the classification of biological aerobic treatment used for treatment of different industrial waste water & describe in detail any two methods of treatment. **10**
- b) Write a note on environmental audit. **06**

Q.4 Answer the following.

- a) Explain in detail about the physical, chemical & biological characteristics of different waste water. **10**
- b) Write a note on application of bioaugmentation. **06**

Q.5 Answer the following.

- a) Write in detail about factors which are responsible for eutrophication. **10**
- b) Write a note on critical operation parameters of bioreactor with respect to mean cell residence time. **06**

Q.6 Answer the following.

- a) Write a note on biosorption. **10**
- b) Write a note on biotic and abiotic environment. **06**

Q.7 Answer the following.

- a) Write about microorganisms in waste treatment with reference to source, enrichment, acclimatization, isolations and mass scale production. **10**
- b) Write a note on water tracing. **06**

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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) Soil organic matter a good indicator of _____.
a) Biological health b) Chemical health
c) Physical health d) All of the above
- 2) _____ is capable of oxidizing sulfur to sulfates.
a) Thiobacillusthiooxidans b) Rhodomicrobium
c) Desulfotomaculum d) Rhodospirillum
- 3) Biofertilizers include _____.
a) Cow dung manure and farmyard waste
b) A quick growing crop ploughed back
c) BGA/Anabaena and Azolla
d) All of the above
- 4) Leghaemoglobin takes part in _____.
a) Energy release
b) Stimulating growth of Rhizobium
c) Protecting nitrogenase
d) N₂ absorption
- 5) Mechanism of phosphorus solubilisation is by _____.
a) Chelation b) Iron reduction
c) Acid production d) All of the above
- 6) Siderophores are _____.
a) High affinity iron chelating compounds
b) Transport iron into bacterial cell
c) None
d) Both a and b
- 7) Humus is _____.
a) Partially decomposed organic matter
b) Dominant food reservoir
c) Also called fat of the land
d) All of the above
- 8) Organic soil may contain bacteria up to _____ in significant number.
a) 10 cm b) 20 cm
c) 160 cm d) 40 cm
- 9) A biocontrol agent against plant diseases is _____.
a) Trichoderma b) Glomus
c) Bacillus thuringiensis d) baculovirus

- 10) Fungal pathogen such as _____ is known to affect mosquito populations.
- | | |
|------------------|---------------------|
| a) Lagenidium | b) Coelomomyces |
| c) Culicinomyces | d) all of the above |

B) Fill in the blanks

06

- 1) _____ is called as Father of Soil Microbiology.
- 2) _____ are small, high-affinity iron-chelating compounds that are secreted by microorganisms such as bacteria and fungi.
- 3) The _____ is the aerial region of the plant colonized by microbes.
- 4) _____ is a mixture that consists largely of decayed organic matter and is used as plant fertilizer and to improve soil's physical, chemical and biological properties.
- 5) The increased nutrient availability from _____ is thought to be due to the additional absorbing surface provided by the fungi.
- 6) NPV is used to control _____, the most important lepidopteran pest of cotton and tobacco budworm.

Q.2 Answer the following.

16

- Mosquito control by fungi
- Vermi-composting
- Anaerobic digestion agricultural waste
- Antibiotics and siderophore in biocontrol of plant pathogens

Q.3 Answer the following.

- | | | |
|-----------|---|-----------|
| a) | Discuss in detail Physicochemical and biological properties of soil, soil microorganisms, and soil enzymes. | 10 |
| b) | Write on Nitrogen cycle. | 06 |

Q.4 Answer the following.

- | | | |
|-----------|---|-----------|
| a) | Describe Frankia induced nodulation in actinorrhizal plants and legume plants. Give its significance. | 10 |
| b) | Role of microorganisms in Rhizosphere and Phyllosphere with suitable example. | 06 |

Q.5 Answer the following.

- | | | |
|-----------|---|-----------|
| a) | Write in detail on saccharification of cellulosic wastes. | 08 |
| b) | Discuss plant tissue culture types and formulation of its growth media. | 08 |

Q.6 Answer the following.

- | | | |
|-----------|---|-----------|
| a) | Describe Production of biofertilizers with respect to: screening, selection of potential strains of bacterial, algal and fungal biofertilizers. | 10 |
| b) | Take a detailed account on Blue green algae and Mycorrhizae as biofertilizers. | 06 |

Q.7 Answer the following

- Write on Pest control of crop by using *B. thuringiensis* and NPVs. **10**
- Give the details of economic and future prospects of biopesticides. **06**

Seat No.	
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Environment and Waste Management Technology (MSC023311)

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) _____ of the following is coliform bacterium.
a) Bacillus b) Clostridium
c) Escherichia d) Pseudomonas
- 2) _____ of the following is a water borne microbial disease.
a) Hepatitis A b) AIDS
c) SARS d) African sleeping sickness
- 3) _____ of the following can be found in polluted water.
a) Ptroteus vulgaris b) AIDS virus
c) Plasmodium falciparum d) Pneumocystis carinii
- 4) _____ test for oxygen consumption in water.
a) SPC b) BOD
c) SOM d) MPN
- 5) Most of the marine bacteria are _____.
a) Gram positive, motile b) Gram positive, nonmotile
c) Gram negative, motile d) Gram negative, nonmotile
- 6) _____ of the following is not a diarrhoeal waterborne disease.
a) Amoebiasis b) Giardiasis
c) Gastroenteritis d) Poliomyelitis
- 7) The process in which dewatered sludge undergoes decomposition is described as _____.
a) Composting b) Sludge digestion
c) Activated sludge process d) Lagooning
- 8) Tertiary treatment of sewage is designed to remove _____.
a) BOD b) Bacteria
c) Nitrates and phosphate d) Protozoa
- 9) More amount of biochemical oxygen demand (BOD)in sewage is removed by _____.
a) Activated sludge b) Flocculation
c) Primary treatment d) Sludge digestion
- 10) The most predominant group of microorganisms in soil with respect to number and diversity is _____.
a) Bacteria b) Fungi
c) Algae d) Protozoa

- B) Write True or False.** **06**
- 1) The primary means of municipal solid waste disposal is incineration.
 - 2) One of the main problems associated with mining is water pollution.
 - 3) The current problem with recycling is the inability to mix different plastics.
 - 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) MPN test is used to determine potability of water.
- Q.2 Answer the following.** **16**
- a) Write a short note on biotic and abiotic environment
 - b) Write short note on Food chains
 - c) Write in details on Environmental Audit
 - d) Global warming
- Q.3 Answer the following.** **16**
- a) Novel Methods of Pollution Control
 - b) Describe microorganisms used in waste water treatment.
- Q.4 Answer the following.** **16**
- a) Describe Eutrophication
 - b) Write in details on Vermicomposting
- Q.5 Answer the following.** **16**
- a) Explain BOD & COD.
 - b) Write in details on RFLP
- Q.6 Answer the following.** **16**
- a) Write low cost waste treatment systems
 - b) Waste management in paper and Pulp industry.
- Q.7 Answer the following.** **16**
- a) Write Ecosystem characteristics, structure and function
 - b) Describe Sources of water pollution.

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Set **P**

M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
NANO PHYSICS
Energy Harvesting Devices (MSC09310)

Day & Date: Wednesday, 22-05-2024
 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) In solar PV technology CdTe is _____.
 a) direct band gap semiconductor
 b) indirect band gap semiconductor
 c) direct band gap conductor
 d) none of the a, b, c.
- 2) The practical S. I. unit of electric energy is _____.
 a) Watt. Second
 b) Horse Power
 c) Kilo Watt hours
 d) None of the a, b, c
- 3) Ultrasonic transducers used to convert electric energy in to _____.
 a) mechanical form
 b) sound energy
 c) magnetic energy
 d) photon energy
- 4) Long form of ARC is _____.
 a) All Radio Centres
 b) Anti Rabbis Cells
 c) Anti Reflective Coating
 d) Anti Red Coating
- 5) _____ were developed to suppress mechanical noise vibration.
 a) Piezoelectronics
 b) Magneto static
 c) Photo electronics
 d) Amplifier
- 6) A supercapacitor is high capacity capacitor which is also known as _____.
 a) paper capacitor
 b) carbon capacitor
 c) electrolyte capacitor
 d) ultracapacitor
- 7) When volumetric energy density of supercapacitor increases then _____ increases.
 a) resistance
 b) voltage
 c) impedance
 d) none of the a, b, c
- 8) Relation of the fill factor of solar cell is equal to _____.
 a) $FF = V_M.I_{SC} / I_M.V_{OC}$
 b) $FF = I_M.V_{OC} / V_M.I_{SC}$
 c) $FF = V_M.I_M / I_{SC}.V_{OC}$
 d) $FF = I_{SC}.V_{OC} / V_M.I_M$
- 9) The DSSCs stands for _____.
 a) Dye Synthesis Solar Cells
 b) Dye Sensitized Supercapacitor Cells
 c) Dye Sensitized Solar Cells
 d) Dye Synthesis Supercapacitor Cells

10) The induced charges are proportional to the mechanical stress is called _____.

- a) photoelectric effect
- b) piezoelectric effect
- c) compton effect
- d) raman effect

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

06

- 1) In thin film solar cell technology, absorption coefficient should be _____.
- 2) Polymer solar cell, also named _____.
- 3) The membrane electrode assembly is heart of the _____.
- 4) Short circuit current increase with _____ in band gap energy.
- 5) Supercapacitor does not support to alternating current application (True/ False)
- 6) In thin film solar cell, ideal I-V curve of solar cell is straight (True/False)

Q.2 Answer the following.

16

- a) Write in brief about Pizoelectric thin films.
- b) Write a short note photoelectrochemical cells.
- c) Compare between fuel cell and batteries.
- d) Write a note on RuO₂ supercapacitor.

Q.3 Answer the following.

- a) Describe principal, construction and working of DSSC.
- b) What is photovoltaic effect? Write the types of solar cell.

10

06

Q.4 Answer the following.

- a) Explain in detail hybrid supercapacitor.
- b) What are the applications of supercapacitor?

10

06

Q.5 Answer the following.

- a) Elaborate the construction and working of metal oxide fuel cell.
- b) Explain in brief phosphoric acid fuel cell.

10

06

Q.6 Answer the following.

- a) Explain in detail Piezoelectric bulk power generator.
- b) Write a note on Piezoelectric thin film.

10

06

Q.7 Answer the following.

- a) Explain the construction and working of CdS based solar cell.
- b) Explain in brief Piezoelectric transducers.

10

06

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024

SOLID STATE PHYSICS

Energy Harvesting Devices (MSC10313)

Day & Date: Wednesday, 22-05-2024
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 region where the electrons and holes diffused across the junction is called _____.
 a) Depletion junction b) Depletion region
 c) Depletion space d) Depletion boundary
- 2) The correct relation between power density (P_g) and energy density (E_g) of supercapacitor is _____, where Δt is discharging time.
 a) $P_g = \frac{E_g}{\Delta t}$ b) $P_g = \frac{\Delta t}{E_g}$
 c) $P_g = \frac{E_g}{\Delta t} \times C_p$ d) $P_g = \frac{\Delta t}{E_g} C_p$
- 3) The piezoelectric materials used for converting energy are called as _____.
 a) Transition Devices b) Converter
 c) Dielectric d) Transducer
- 4) In fuel cells, the catalytic converters _____.
 a) Convert elements into gases
 b) Convert atoms into ions
 c) Split hydrogen atoms into hydrogen ions and electrons
 d) Convert molecules into atoms
- 5) In traditional three electrode system to record CV, the electrode under test is called as _____.
 a) Counter electrode b) Reference electrode
 c) Working electrode d) Combine electrode
- 6) Which of these should not be a property of fuel cell electrodes?
 a) Good electrical conductors
 b) Highly resistant to corrosive environment
 c) Should perform charge separation
 d) Take part in chemical reactions
- 7) In MIS solar cells, the carriers flow through the insulating layer by _____.
 a) Quantum mechanical tunneling effect
 b) Diffusion effect
 c) Metal insulator throttling effect
 d) Electron affinity effect

- 8) In Galvanostatic Charge Discharge (GCD), the supercapacitor is charged at a constant _____.
 - a) current
 - b) time
 - c) voltage
 - d) resistance
- 9) Increasing the number of cells in the fuel cell stack connected in series increases the _____.
 - a) voltage
 - b) current
 - c) resistance
 - d) capacitance
- 10) The selection of piezoelectric ceramic composition for a particular application depends on _____.
 - a) Operating temperature range
 - b) Operating frequency range
 - c) External force and lifetime
 - d) All of the above

B) State True or False**06**

- 1) Energy in EDLC supercapacitor is stored as electrostatic charge. (True/ False)
- 2) Cantilever structure with tip mass is the most widely used configuration for piezoelectric energy harvesting device. (True/ False)
- 3) Solid oxide fuel cells use an electrolyte that conducts oxide (O^{2-}) ions from the anode to the cathode. (True/ False)
- 4) Graphene is a structural arrangement of sp^2 bonded carbon atoms in a honeycombed single layer. (True/ False)
- 5) The I-V characteristics of a solar cell are drawn in the second quadrant. (True/ False)
- 6) Organic polymer solar cells are made from Polyphenylene. (True/ False)

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

- a) Write a note on solar cell characteristics.
- b) What are direct and converse piezoelectric effects?
- c) Write a note on cyclic voltammetry.
- d) Give comparison of fuel cells with batteries.

Q.3 Answer the following.

- a) Give detailed account of dye sensitized solar cell (DSSC) in terms of basic concept, working and materials used. **10**
- b) Explain in brief concept and working of organic solar cell. **06**

Q.4 Answer the following.

- a) Explain energy storage mechanism in supercapacitors. **10**
- b) Write a note on classification of supercapacitors according to materials. **06**

Q.5 Answer the following.

- a) Write a note on phosphoric acid fuel cell. **10**
- b) Write a note on galvanic cell. **06**

Q.6 Answer the following.

- a) Discuss parameters affecting piezoelectric performance. **10**
- b) Give detailed account of piezoelectric nanogenerators. **06**

Q.7 Answer the following.

- | | | |
|-----------|---|-----------|
| a) | Write a note on Electrochemical Impedance Spectroscopy (EIS) characterization of supercapacitors. | 08 |
| b) | Discuss proton exchange membrane fuel cell. | 08 |

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

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.

10

- 1) In SRSWOR, the same sampling unit may be included in the sample _____.
a) only once b) two times
c) more than once d) none of these
- 2) Sampling error can be reduced by _____.
a) increasing the population b) increasing the sample size
c) decreasing the sample size d) none of these
- 3) Most preferred type of average for index number is _____.
a) arithmetic mean b) harmonic mean
c) geometric mean d) none of these
- 4) 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
- 5) The condition for the factor reversal test to hold good with usual notations is _____.
a) $P_{01} \times Q_{01} = V_{01}$ b) $\frac{P_{01} \times Q_{01}}{V_{01}} = 1$
c) $\frac{P_{01} \times Q_{01}}{V_{01}} = -1 = 0$ d) All the above
- 6) Vital rates are customarily expressed as _____.
a) percentages b) per thousand
c) per million d) none of these
- 7) The value of $NRR < 1$ indicative of _____.
a) increase in population b) constancy in population
c) reduction in population d) all the above
- 8) Variation due to assignable causes in the product occurs due to _____.
a) faulty process b) carelessness of operators
c) poor quality of raw material d) all the above

- 9) The type of inspection that classifies items as being good or defective is _____.
 a) attribute inspection b) variable inspection
 c) fixed inspection d) all the above
- 10) The sales of departmental stores on Diwali and Dushera are associated with _____ component of time series.
 a) secular trend b) seasonal variation
 c) irregular variation d) all the above

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

- 1) The Census Bureau in India takes a complete population count at every _____ years.
- 2) Combining two series of indices with different base periods into one series with common base period is known as _____.
- 3) Life table contains _____ columns in all.
- 4) Control chart R is used to monitor _____ of a quality characteristic.
- 5) The component representing long term fluctuations of a time series is called _____.
- 6) Lockups and strike in a factory affecting the production represent _____ component of time series.

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 mean by deflating the index numbers and how can it be done?
- c) A control chart is to be formed for a process in which laptops are produced. The inspection unit is one laptop and control chart for the number of defects is to be used. Preliminary data are recorded and 45 defects are found in 30 laptops. Compute the control limits for the C chart.
- d) Explain the additive and multiplicative models of time series stating clearly the assumptions.

Q.3 Answer the following.

- a) Discuss the concept of stratification. Describe proportional allocation and optimum allocation methods for allocating a sample size n to different strata of a population. **08**
- b) A sample of 30 students is to be drawn from a population consisting of 300 students belonging to two colleges A and B. The total number of students and standard deviation of their marks are given below: **08**

Collage	A	B
No. of students	200	100
Std. deviation	10	40

Find the number of students to be selected from each college according to
 (i) proportional allocation and (ii) optimum allocation.

Q.4 Answer the following.

- a) What is index number? Explain (i) Laspeyre's index number (ii) Paasche's index number and (iii) Fisher's ideal index number. **08**
- b) From the following data, calculate price index numbers for 1996 with 1986 as base by (i) Laspeyre's formula (ii) Paasche's formula and (iii) Fisher's formula. **08**

Item	1986		1996	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

Q.5 Answer the following.

- a) Define crude death rate and age specific death rates. Discuss their merits and demerits. **08**
- b) From the following data, compute STDR for populations A and B. **08**

Age Group	Population A		Population B		Standard Population
	Population	No. of deaths	Population	No. of deaths	
0-10	5000	35	3000	33	3000
10-50	10000	45	10000	100	7000
50 & above	5000	90	7000	84	6000

Q.6 Answer the following.

- a) What is control chart? Explain how it helps to control the quality of manufactured product. **08**
- b) The data shows the sample mean and range for 10 samples for size 5 each. Find the control limits for the mean chart and range chart. **08**

Sample	1	2	3	4	5	6	7	8	9	10
Mean	21	26	23	18	19	15	14	20	16	10
Range	5	6	9	7	4	6	8	9	4	7

(Given for $n = 5$, $A_2 = 0.58$, $D_3 = 0$ and $D_4 = 2.11$)

Q.7 Answer the following.

- a) What is a time series? State various components of time series and explain any two of them. **08**
- b) Calculate four yearly centered moving averages for the data given below: **08**

Year	1	2	3	4	5	6	7	8	9	10
Value	21	15	16	29	51	58	36	16	23	28

Seat No.	
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M.Sc. (Semester - III) (CBCS) Examination: March/April-2024
ZOOLOGY

Wild Life and Conservation Biology (MSC31310)

Day & Date: Wednesday, 22-05-2024

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 correct alternative.

10

- 1) The collection of individuals which belongs to the same species when live together in a region is known as _____.
 a) Keystone species b) Community
 c) Guild d) Population
- 2) In ecological succession, the intermediate developmental phase is known by _____ name.
 a) ecesis b) climax
 c) nudation d) serel
- 3) In ecological succession, the final stable community is known as _____.
 a) climax community b) ultimate community
 c) final community d) seral community
- 4) _____ Is one of the most prevalent hotspots of biodiversity in India.
 a) Western Ghats b) Ganges
 c) Semi-arid landscape d) Deccan peninsular
- 5) Sunlight, air, soil, and water are examples of _____.
 a) Renewable resources b) Non- Renewable resources
 c) Conventional resources d) Non-natural resources
- 6) _____ is the non-renewable energy resource from the following:
 a) Fuel cells b) Wind power
 c) Wave power d) Coal
- 7) The species that are responsible for making characteristics of the community are called as _____.
 a) Recessive community b) Dominant community
 c) Special species d) Extraordinarily species
- 8) IUCN status of Great Indian Bustard is _____.
 a) Least Concern b) Data Deficient
 c) Critically Endangered d) Endangered
- 9) Indian Forest Act was enacted in the year _____.
 a) 1972 b) 1980
 c) 1982 d) 1992
- 10) _____ is an area strictly reserved for the betterment of wildlife and where activities like Foresry, Grazing and Cultivation is not permitted.
 a) Wildlife Sanctuaries b) Community Reserves
 c) National Parks d) Sacred Grooves

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

- 1) Secondary Ecological succession initiates with soil formation.
- 2) An Organism that has been introduced into an area outside their normal distribution is known as Exotic species.
- 3) Competition can be of both types Interspecific and Intraspecific.
- 4) Heterotrophs can be primary producers.
- 5) The sequence of transfer of matter and energy in the form of food from organism to organism is known as Food chain.
- 6) Autecology is study of whole ecosystem.

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

- a) Write a short note on: Ecotone.
- b) Explain Environment Impact Assessment.
- c) What is Red Data Book?
- d) Explain Biodiversity Hotspots with reference to examples from India.

Q.3 Answer the following.

- a) Explain Ecological succession with reference to Hydrosere.
- b) Explain in detail Natural factors affecting ecosystem.

08**08****Q.4 Answer the following.**

- a) What are Exotic and Invasive species? Explain impact of Invasive species on Ecosystem.
- b) Define diversity indices and Explain Shannon Diversity Index.

08**08****Q.5 Answer the following.**

- a) Explain Captive Breeding of Endangered species with example from India.
- b) Describe in detail Renewable and Non-Renewable resources with suitable examples.

08**08****Q.6 Answer the following.**

- a) Explain in detail: Wildlife (Protection) Act, 1972.
- b) Describe in detail Tradition Agricultural Practices.

08**08****Q.7 Answer the following.**

- a) Define: Habitat and Niche. Explain in detail Fundamental and Realized niche with suitable examples.
- b) Explain in detail anthropogenic factors affecting ecosystem.

08**08**

Seat No.	
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B) Write True or False.**06**

- 1) The energy flow in an ecosystem is unidirectional.
- 2) Ecotone is the transition between two biological communities.
- 3) Dissolved oxygen is used by plant for photosynthesis.
- 4) The number of individuals belonging to same species live in area is called as Population.
- 5) Melatonin hormone related to sleep and awake circadian cycle.
- 6) The inherited behavior is called Learning.

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

- a) Give a concise account on biotic component of any ecosystem.
- b) Give an account on pyramid of biomass of pond ecosystem.
- c) What is niche? Give the characteristic feature of Habitat.
- d) Define the term behavior? Give an account on innate behavior.

Q.3 Answer the following.

- a) What is ecological succession? Give an account on various types of ecological succession? **10**
- b) Define the term Edges of ecology? Describe the characteristics features of ecotone. **06**

Q.4 Answer the following.

- a) Define the population? Give an account on population growth curve. **10**
- b) What is ecological community? Mention all the important characteristics of community. **06**

Q.5 Answer the following.

- a) Give a detail account on structure and function of forest ecosystem. **10**
- b) Write a note on oxygen cycle in an atmosphere. **06**

Q.6 Answer the following.

- a) What are different types of animal association? Describe in detail inter-specific association among the organism. **10**
- b) What is echolocation? Describe the term orientation with suitable example. **06**

Q.7 Answer the following.

- a) Define the term biodiversity? Give an account on different biodiversity hotspots of India. **10**
- b) Define biological rhythm? Give an account on various types of biological rhythm. **06**

Seat No.	
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Set **P**

**M.A. (Rural Development) (Semester - III) (CBCS) Examination:
March/April-2024
Human Development (MA04308)**

Day & Date: Wednesday, 22-05-2024
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 Multiple choice questions:**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) 2035
- 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) Amartya Sen
c) Martha Nussbaum d) None of these
- 16) According to David Clark _____ is another attempt of capability Approach.
a) Jobs b) Housing
c) Education d) All of these

Q.2 Write short answers. (any 4 out of 6)

16

- What are the criteria for selecting capabilities?
- What is the meaning of human capital formation?
- What is the meaning of environment security?
- What is the meaning of Human capital?
- What is the meaning of quality of life?
- What is the meaning of Human poverty index?

Q.3 Answer the following question. (any 2 out of 4)

16

- What is the meaning and importance of Health Security?
- Explains the physical quality of life index
- What are the components of quality of life?
- National Rural Health Mission is important how?

Q.4 Answer the following question. (any 1 out of 2)

16

- Explain the Gender Empowerment Measure
- Elaborate Marshall Utility of a Commodity approach

Q.5 Answer the following question

16

Distinction between Human Resource Development and Human Development.

- Page 1 of 5

- 9) टेराकोटाचे भांडे लाल रंगाचे असल्यास, ते ——— भट्टीत टाकले जाईल असे मानले जाते.

अ) बंद ब) उघडे
क) अर्ध—बंद ड) अंशतः बंद

10) महाराष्ट्रात दगडी वर्तुळाचे उत्खनन ——— येथे झाले.

अ) नेवासा ब) इनामगाव
क) वाकाव ड) माहुरझरी

11) ——— हे महिषासूरमर्दिनीचे वाहन आहे.

अ) बैल (नंदी) ब) हत्ती (गज)
क) महिषा (रेडा) ड) सिंह

12) उत्खननात मिळालेल्या प्राण्यांच्या हाडांचा अभ्यास पुरातत्वशास्त्राच्या ——— शाखेत केला जातो.

अ) मानवंशशास्त्र ब) पुरातत्व—प्राणीशास्त्र
क) वांशिक पुरातत्व ड) जीवाश्म शास्त्र

13) सारनाथ ———साठी प्रसिद्ध आहे.

अ) व्यावसायिक केंद्र
ब) जातीय सलोखा
क) धमेक स्तूपा आणि पहिले प्रवचन
ड) शिक्षण केंद्र

14) ——— ही भारतातील सर्वात प्राचीन लिपी आहे.

अ) ब्राह्मी ब) खारोष्ठी
क) तामिळ ड) देवनागरी

15) ——— लेखन साहित्य प्राचीन भारतीय लोक वापरत नव्हते.

अ) ताडपत्र ब) कापूस
क) कागद ड) बॉल पेन

16) ‘पुरातत्वीय स्थळे’ शोधण्यासाठी खालीलपैकी कोणती पद्धत प्रामुख्याने वापरली जाते.

अ) प्रयोगात्मक पद्धत ब) सूक्ष्म पद्धत
क) सर्वेक्षण पद्धत ड) वरीलपैकी कोणतेही नाही

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

16

- अ) आयात उत्खनन
 ब) उत्सेध (उभे) उत्खनन
 क) हवाई छायाचित्रण
 ड) कालमापन पद्धती
 इ) अजिंठा लेणी
 ई) दगडी शिल्प

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

- अ) प्रागैतिहासिक कालखंडाचे महत्त्व सांगा.
- ब) मूर्तीशास्त्राबद्दल थोडक्यात माहिती लिहा.
- क) पुरातत्वशास्त्र आणि नैसर्गिक विज्ञान याबद्दल विस्तृत लिहा.
- ड) पुरातत्वशास्त्रातील सामाजिक शास्त्राच्या भूमिकेचे परीक्षण करा.

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

कार्ले लेणीच्या विशेष संदर्भासह लेणी स्थापत्य कलेचे वर्णन करा.

किंवा

सिंधू संस्कृतीच्या वैशिष्ट्यांची चर्चा करा.

प्र.5 पुरातत्वशास्त्र उत्खननाच्या पद्धतीचे वर्णन करा.

M.A. (A.I.H.C & A.) (Semester - III) (CBCS) Examination: March/April-2024
Archaeology (MA19308)

Max. Marks: 80

Q.1 Select Appropriate Word.

16

- Page 4 of 5

- 11) _____ is the vehicle of Mahishasurmardini.
 - a) Bull
 - b) Elephant
 - c) Mahisha
 - d) Lion (Simha)
- 12) Excavated animal bones are studied in _____ branch of archaeology.
 - a) Anthropology
 - b) Archaeo-zoology
 - c) Ethno archaeology
 - d) Palaeontology
- 13) Samath is famous for _____.
 - a) Commercial centre
 - b) Communal harmony
 - c) Dhamek stupa & first sermon
 - d) Centre of education
- 14) _____ is the oldest script in India.
 - a) Brahmi
 - b) Kharoshti
 - c) Tamil
 - d) Devanagari
- 15) _____ writing material not used by ancient Indian people.
 - a) Tad patra
 - b) Cotton
 - c) Paper
 - d) Ball pen
- 16) Which of the following method is primarily used to 'Find the Archaeological sites'?
 - a) Experimental Method
 - b) Micro Method
 - c) Survey Method
 - d) None of the above

Q.2 Answer the following Questions. (Any Four)

16

- a) Horizontal excavation
- b) Vertical excavation
- c) Arial Photography
- d) Dating methods
- e) Ajanta caves
- f) Stone sculpture

Q.3 Answer the following Questions. (Any Two)

16

- State the importance of prehistoric period.
- Write in brief information about iconography.
- Elaborate, Archaeology & Natural Sciences.
- Examine the role of Social Sciences in Archaeology.

Q.4 Answer the following Questions. (Any One)

16

Describe the rock cut architecture with special reference to Karle caves.

OR

Discuss the features of Indus Valley Civilization.

Q.5 Describe the methods of Archaeological Excavation.

16

M.A. (Prakrit) (Semester - III) (CBCS) Examination: March/April-2024
Aa. Kundkundaand his Literature (MA16309)

Max. Marks: 80

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

16

- 1) आचार्य कुंदकुंदानी ——— प्राकृत मधून लिहली आहे.
अ) दशभक्ति ब) आरती
क) पूजा ड) थुदि
- 2) ——— ग्रंथानुसार विक्रमाच्या मृत्यूनंतर 136 वर्षांनी श्वेतपट संघ उत्पन्न झाला.
अ) प्रवचनसार ब) नियमसार
क) दर्शनसार ड) समयसार
- 3) पाच अस्तिकाय आणि काल यांचे वर्णन ——— ग्रंथात आले.
अ) रयणसार ब) पञ्चास्तिकाय
क) समयसार ड) नियमसार
- 4) ज्ञान आणि ज्ञेय यांची मीमांसा करणारा ‘प्रवचनसार’ हा ग्रंथ ——— शैलीमध्ये रचलेला अद्वितीय ग्रंथ आहे.
अ) पांचाली ब) वैदर्भी
क) दार्शनीक ड) स्थापत्य
- 5) ‘पाहुड’ हा शब्द प्राकृत आहे त्याचे संस्कृत रूपांतर ——— होते.
अ) पिंडद ब) प्रमेय
क) प्रयोग ड) प्राभृत्
- 6) शिलालेखामध्ये कुंदकुदांचे प्राचीन नाव ‘कोण्डकुंदे’ आले त्याचा कानडी मध्ये अर्थ ——— प्रदेश असा होतो.
अ) पर्वत ब) पहाडी
क) कहाडी ड) यापैकी नाही
- 7) नंदिसंध्याच्या पट्टावलीमध्ये आचार्य कुंदकुदांचे गुरू ——— होते असा उल्लेख आला आहे.
अ) जिनसेन ब) वीरसेन
क) अमृतचंद्र ड) जिनचन्द्र
- 8) मिथ्यादृष्टीस व्यवहारिक धर्मक्रिया करून सुद्धा ——— उपयोग प्रकट होत नाही.
अ) शुभोपयोग ब) सुखोपयोग
क) शुद्ध्योपयोग ड) वीतरागभावरोपयोग

- 9) शुद्धाच्या ध्यानाने ---- ची अवस्था प्रकट होते.
 अ) अशुद्ध ब) शुभ
 क) शुद्ध ड) यापैकी नाही
- 10) आचार्य जयसेन यांच्या अनुसार 'प्रवचनसार' ग्रंथात गाथा आहेत.
 अ) 275 ब) 311
 क) 136 ड) 100
- 11) 'सत्द्रव्यलक्षणम्' आणि उत्पाद व्यय-धौव्य-युक्त-सत् ही सूत्रे वस्तुस्वरूपाच्या ---- स्वरूपाचा उद्घोष करतात.
 अ) मनुष्याचा ब) नरकाचा
 क) देवादिंचा ड) स्वातंत्र्याचा
- 12) 'प्रवचनसार' ग्रंथानुसार ---- उपयोग मुक्तिला कारण आहे.
 अ) शुद्धोपयोग ब) शुभोपयोग
 क) धनोपयोग ड) जीवनोपयोग
- 13) 'प्रवचनसार' ग्रंथाच्या अंतीम पाच गाभामध्ये शास्त्राध्यनाचे फळ साररूपाने सांगितले त्यास ---- म्हणतात.
 अ) पंचरत्न ब) रत्नमय
 क) प्राभृतमय ड) नीलरत्न
- 14) शुद्ध आत्म्याचे विवेचन 415 गाथामधून सांगणारा आ. कुंदकुंदांचा ---- हा अध्यात्मीक ग्रंथराज आहे.
 अ) प्रवचनसार ब) समयसार
 क) नियमसार ड) रयणसार
- 15) प्रवचनसार ग्रंथावर जयसेनांनी ---- नावाची टीका लिहली.
 अ) प्रदीपीका ब) तत्त्वप्रदीपीका
 क) आत्मख्याती ड) तात्पर्यवृत्ती
- 16) कुंदकुंदाचार्यानंतर ---- वर्षांनी अमृतचंद्राचार्य झाले.
 अ) 10 ब) 100
 क) 1000 ड) 1100

प्र.2 टीपा लिहा. (कोणत्याही चार)

16

- अ) वट्टेकरविरचित 'मूलचार' ग्रंथाविषयी वर्णन करा?
 ब) आचार्य कुंदकुंदरचित दशभक्ति संबंधी माहिती द्या.
 क) 'समयसार' या ग्रंथासंबंधी थोडक्यात माहिती द्या?
 ड) प्रवचनसाराच्या आधारे 'केवलज्ञानाची महिमा' सांगा.
 इ) कुंदकुंदरचित 'नियमसार' ग्रंथाची माहिती द्या.
 ई) आचार्य कुंदकुंद यांच्या पाच नावासंबंधी चर्चा करा?

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

- अ) 'प्रवचनसार' या ग्रंथातील दुसरा महाअधिकाराचा सारवृत्तांत लिहा?
- ब) मंगल म्हणजे काय? मंगलाचरण का करतात? कारणे लिहा?
- क) आचार्य कुंदकुंदांच्या ग्रंथमयी संबंधी चर्चा करा?
- ड) इंद्रिय ज्ञान व अतिंद्रिय ज्ञान यातील फरक 'प्रवचनसार' आधारे लिहा?

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

- आचार्य कुंदकुंद आत्म्याला ज्ञानप्रमाण न मानल्याने कोणते दोष सांगतात?
- अथवा
- आचार्य कुंदकुंदांचा जीवनपरिचय सांगून त्यांच्या साहित्याची चर्चा करा?

प्र.5 खालील प्रश्नाचे थोडक्यात उत्तर लिहा.

- 'पाहुड म्हणजे काय'? आचार्य कुंदकुंदांच्या पाहुडांची सविस्तर चर्चा करा?

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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 दिलेल्या पर्यायापैकी अचूक व योग्य पर्याय निवडून वाक्य पुन्हा लिहा.

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- 1) तत्त्वज्ञानात कोणत्या प्रश्नांची चिकित्सा केली जाते?
अ) मूलभूत
ब) सामान्य
क) वस्तुनिष्ठ
ड) व्यावाहारिक
- 2) प्रज्ञेला कशाचा आधार आवश्यक असतो?
अ) बुद्धीचा
ब) शीलाचा
क) दृष्टीचा
ड) मैत्रीचा
- 3) 'प्रतियोगिता' या शब्दाचा पालि शब्द कोणता?
अ) पटिच्चसमुत्पादो
ब) पटिच्चसमुत्पाद
क) पटिच्चसमुत्पादं
ड) पटिच्चसमुत्पादा
- 4) तिसरे आर्यसत्य कोणते आहे?
अ) दुःख
ब) सुख
क) दुःखसमुदय
ड) दुःखनिरोध
- 5) धम्माचे किती गुण आहेत.
अ) सहा
ब) सात
क) आठ
ड) नऊ
- 6) काय विकसित झाल्याने 'मी' पणा गळून पडतो?
अ) प्रज्ञा
ब) शील
क) पारमी
ड) ध्यान
- 7) संयोजने एकूण किती आहेत?
अ) पाच
ब) सहा
क) नऊ
ड) दहा
- 8) 'मी' पणा नाही, 'माझे' नाही किंवा माझा आत्मा नाही याचा पालि साहित्यात
— असे म्हटले आहे.
अ) निस्वार्थ
ब) निष्काम
क) भक्तीभाव
ड) अनन्त

- 9) पहिले तीन संयोजने नष्ट झाल्यावर मनुष्यास कोणत्या फलाची प्राप्ती होते?
 अ) सोतापत्ती ब) सकदागामी
 क) अनागामी ड) अरहत
- 10) 'पटिग्गहणं' चा अर्थ काय होतो?
 अ) प्रतिग्रह ब) परिग्रह करणे
 क) प्रतिगमन ड) प्रतीलाभा
- 11) तीन लक्षणातील दुसरे लक्षण कोणते?
 अ) दुःख ब) अनत्त
 क) नित्य ड) अनित्य
- 12) 'भगवा' हा शब्द कोणत्या भाषेतील आहे?
 अ) मराठी ब) हिंदी
 क) पालि ड) संस्कृत
- 13) 'पंचउपादानक्खंद' याचा अर्थ काय होतो?
 अ) पाच स्कंद ब) शरीर
 क) पाच घटक ड) पंचमहाभूत
- 14) दुःखसमुदयं या शब्दाचा अर्थ काय होतो?
 अ) दुःखसमुह ब) दुःखउदय
 क) दुःखसम ड) दुःखाचेकारण
- 15) इति पि सो ——— अरहं सम्मा सम्बुद्धो।
 अ) बुद्धो ब) भगवा
 क) सिद्धतो ड) गोतम
- 16) 'सम्मा वायामो' या शब्दाचा अर्थ काय होतो?
 अ) सम्यक व्यायाम ब) सम्यक प्रयत्न
 क) सम्यक जीविका ड) सम्यक आयाम

प्र.2 टीपा लिहा. (कोणतेही चार)

- अ) वेदना
 ब) संस्कार
 क) तृष्णा
 ड) दुःख निरोध
 इ) सम्मा दिट्ठी
 ई) करुणा

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

- अ) प्रज्ञा म्हणजे काय सांगून प्रज्ञेचे प्रकार सांगा.
- ब) खालील पालि गाथेचा मराठी अर्थ सांगा.
 "ये च बुद्धा अतिता च, ये च बुद्धा अनागता,
 पच्चुपन्ना च ये बुद्धा अहं वन्दामि सब्बदा ।
 "सुखो बुद्धानं उप्पादो,"
- क) संघगुण थोडक्यात सांगा.
- ड) मुदिता म्हणजे काय? थोडक्यात स्पष्ट करा.

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

चार आर्यसत्याची परिभाषा स्पष्ट करा.

किंवा

दहा पारमिता स्पष्ट करा.

प्र.5 ब्रह्मविहार संकल्पना स्पष्ट करा.

Seat No.	
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Max. Marks: 80

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- 1) कारकाणि ——— ।
अ) पञ्च ब) त्रीणि
क) अष्ट ड) षट्
- 2) कर्त्याची ——— विभक्ती होते.
अ) चतुर्थी ब) पंचमी
क) प्रथमा ड) षष्ठी
- 3) कर्माची ——— विभक्ती होते.
अ) द्वितीया ब) चतुर्थी
क) पंचमी ड) षष्ठी
- 4) ‘याचकाय वस्त्रं ददाति’ हे वाक्य ——— कारकाचे उदाहरण आहे.
अ) कर्ता ब) कर्म
क) सम्प्रदान ड) अपादान
- 5) अपादान कारकाची ——— विभक्ती होते.
अ) षष्ठी ब) सप्तमी
क) संबोधन ड) पंचमी
- 6) ‘स्थाल्यां ओदनं पचति’ हे वाक्य ——— कारकाचे उदाहरण आहे.
अ) कर्ता ब) अपादान
क) अधिकरण ड) करण
- 7) “धावतो अश्वात् पतति” हे ——— कारकाचे उदाहरण आहे.
अ) संबंध ब) अपादान
क) कर्म ड) करण
- 8) वाक्यात कर्म नसणाऱ्या वाक्यप्रयोगाला ——— प्रयोग म्हणतात.
अ) सकर्मक ब) भावे
क) कर्मणि ड) क्रियायुक्त
- 9) ‘रामेण फलं खाद्यते’ हे ——— प्रयोगाचे वाक्य आहे.
अ) शब्दसमूह ब) कर्तरी
क) कर्मणि ड) सर्व

- 10) 'रामः पुस्तकं पठति' या वाक्यात ---- प्रयोग आहे.
 अ) कर्तरी ब) वाक्य
 क) भावे ड) कोणतेही नाही
- 11) 'गणेशाय मोदकं रोचते' हे वाक्य ---- कारकाचे उदाहरण आहे.
 अ) सम्प्रदान ब) अपादान
 क) अधिकरण ड) करण
- 12) 'रामः पठति' या वाक्यात 'राम' हा ---- आहे.
 अ) कर्ता ब) कर्म
 क) करण ड) क्रियापद
- 13) 'साधनासाठी' ---- हे कारक वापरतात.
 अ) कर्ता ब) करण
 क) सम्प्रदान ड) संबंध
- 14) पूर्वपद आणि उत्तरपद गौण ---- या समासामध्ये असतात.
 अ) तत्पुरुष ब) बहुव्रीहिसमास
 क) अव्ययीभावसमास ड) केवल
- 15) धातूंचे एकूण ---- गण आहेत.
 अ) 5 ब) 20
 क) 10 ड) 22
- 16) स्वतः विषयी बोलताना वाक्यामध्ये क्रियापदी धातूचे ---- पुरुष उपयोजिले जाते.
 अ) उत्तम ब) प्रथम
 क) द्वितीय ड) चतुर्थ

प्र.2 टिप्पणी लिखत। केवलं 4

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- 1) संस्कृत भाषा
- 2) कर्ता कारक
- 3) कर्म कारक
- 4) करण कारक
- 5) सम्प्रदाय कारक
- 6) पूर्वपद

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) कारकव्यवस्था
- 2) समासव्यवस्था

प्र.5 संस्कृतभाषायाः मानवजीवने महत्त्वं लिखत।

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Set P

M.A. (Urdu) (Semester - III) (CBCS) Examination: March/April-2024
Hindustan Mein Cinema (MA08308)

Day & Date: Wednesday, 22-05-2024
 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.

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

(1) پہلی ڈاکیومنٹری فلم بنانے کا اعزاز کسے حاصل ہوا؟

- (A) مہاراشٹر۔ (B) مدھیہ پردیش۔
 (C) امریکہ۔ (D) لندن۔

(2) بابائے فلم کے نام سے کسے یاد کیا جاتا ہے؟

- (A) وی شاننارام۔ (B) دادا صاحب پھالکے۔
 (C) واڈکیر۔ (D) ایل وی پرشاد۔

(3) ہندوستان کی پہلی متحرک فلم بنانے کا شرف کسے حاصل ہوا؟

- (A) دادا صاحب تورنے۔ (B) دادا صاحب پھالکے۔
 (C) واڈکیر۔ (D) دلپ کمار۔

(4) فلمی دنیا کی پہلی خاتون موسیقی کار کون کہلائی؟

- (A) ذینت امان۔ (B) نرگس کی والدہ۔
 (C) نور جہاں۔ (D) مدھوبالا۔

(5) ملکہ ترنم کے ساتھ ملکہ موسیقی کسے کہا جاتا ہے؟

- (A) آشا منگیشکر۔ (B) لتا منگیشکر۔
 (C) سوندرھی چوہان۔ (D) اکا یاننیک۔

(6) مراٹھی میں بول بٹ نامی پہلی بولتی فلم کس نے بنائی؟

- (A) ایل وی پرشاد۔ (B) وی شاننارام۔
 (C) واڈکیر۔ (D) دادا صاحب تورنے۔

7) کس اداکارہ کو گلیمر گرل کے خطاب سے نوازا گیا؟

- (A) ثریا۔
(B) نرگس۔
(C) شری دیوی۔
(D) جیا پردہ۔

8) دوسری بولتی فلم کا اعزاز کسے حاصل ہوا؟

- (A) شیریں فرہاد۔
(B) چھانسی کی رانی۔
(C) عالم آرا۔
(D) نور جہاں۔

9) کس گیت کار کو ہندوستانی فلم کا سب سے بڑا ایوارڈ دادا صاحب پھالکے سے نوازا گیا؟

- (A) ساحر لدھیانوی۔
(B) جاوید اختر۔
(C) مجروح سلطان پوری۔
(D) محمد رفیع صاحب۔

10) پہلی بار کس اخبار نے فلم کا اشتہار شائع کیا تھا؟

- (A) کیسری۔
(B) انڈین ایکسپریس۔
(C) ٹائمز آف انڈیا۔
(D) انقلاب۔

11) کس گیت کار ہدایت کار نے عربی صرف و نحو سے متعلق کتاب لکھی تھی؟

- (A) امین سہانی۔
(B) کمال امر و ہوی۔
(C) پورن سنگھ۔
(D) ساحر لدھیانوی۔

12) کون سی فلم بیک وقت ہندی اور انگریزی دونوں زبانوں میں بنی تھی؟

- (A) مدرانڈیا۔
(B) کرما۔
(C) زنجیر۔
(D) آوارہ۔

13) فلم سینسر بورڈ کی چیئر پرسن بننے والی پہلی خاتون کون تھیں؟

- (A) ہیممالینی۔
(B) شردی دیو۔
(C) نوتن۔
(D) آشا پارکھ۔

14) کہانی کے بعد فلم کی جان کیا ہوتا ہے؟

- (A) پلاٹ۔
(B) کردار۔
(C) مکالمے۔
(D) منظر نگاری۔

15) "تلخیاں" کس کا پہلا مجموعہ کلام ہے؟

- (A) ساحر لدھیانوی۔
(B) گلزار۔
(C) جاوید اختر۔
(D) شکیل بدایونی۔
- 16) موراگورارنگ لے لے۔ موہے شام رنگ دے دے۔ کس کا گیت ہے۔
(A) گلزار۔
(B) جاں نثار اختر۔
(C) ساحر لدھیانوی۔
(D) مجروح سلطانپوری۔

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

- 1) نغمہ نگار گلزار صاحب کے فلمی سفر کے متعلق اظہار خیال کیجیے۔
- 2) مجروح سلطانپوری نے فلموں کو کامیاب بنانے کے لئے کون سی کوششیں کیں۔ مختصر بیان کیجیے۔
- 3) ہندوستان میں سنیما کا آغاز کب اور کیسے ہوا تحریر کیجیے۔
- 4) فلموں میں تنقید کے پیمانے کس طرح استعمال کئے جاتے ہیں بتائیے۔
- 5) سنیما کے ابتدائی مراحل کون کون سے ہیں بتائیے۔
- 6) متکلم فلموں کا سفر کس طرح شروع ہوا مختصر بیان کیجیے۔

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

- 1) ہندی فلموں میں ہندوستانی تہذیب کے اثرات کس طرح وقوع پزیر ہوتے ہیں؟ بیان کیجیے۔
- 2) اردو کا ہندی فلموں میں اہم رول بیان کیجیے۔
- 3) ہندوستانی فلموں میں موضوعات کی اہمیت پر روشنی ڈالیے۔

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

- 1) ادب اور فلموں کا رشتہ پر تفصیلی نوٹ لکھیے۔
- 2) جاوید اختر صاحب کے حالات زندگی تفصیل سے تحریر کیجیے۔

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سوال نمبر 5. ہندوستانی فلموں کے ارتقائی سفر پر تفصیل سے روشنی ڈالیے۔

Seat No.	
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M.A. (Semester - III) (CBCS) Examination: March/April-2024

KANNADA

Kannada Language (MA10309)

Day & Date: Wednesday, 22-05-2024

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.

ಪ್ರ.1 ಈ ಕೆಳಗಿನ ವಸ್ತುನಿಷ್ಠ ಪ್ರಶ್ನೆಗಳಿಗೆ ಆಯ್ದ ಉತ್ತರ ಬರೆಯಿರಿ.

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- 1) ಈತ ಕನ್ನಡದ ಭಾಷಾ ವಿಜ್ಞಾನಿ
 - 1) ಬರಗೂರು ರಾಮಚಂದ್ರ
 - 2) ಸಿದ್ಧಲಿಂಗಯ್ಯ
 - 3) ಚಿನ್ನವೀರ ಕಣವಿ
 - 4) ಸಂಗಮೇಶ ಸವದತ್ತಿಮಠ
- 2) ಭಾರತದ ಅತ್ಯಂತ ಪ್ರಾಚೀನ ಭಾಷೆ
 - 1) ಕನ್ನಡ
 - 2) ತಮಿಳು
 - 3) ಸಂಸ್ಕೃತ
 - 4) ಪಾಲಿ
- 3) ಈರುಳ್ಳಿ, ಹರಾಜು, ಜೇಬು ಇವು ಯಾವ ಪ್ರಭೇದಗಳಿಗೆ ಸೇರುತ್ತವೆ.
 - 1) ಕಲಬುರ್ಗಿ ಕನ್ನಡ
 - 2) ಧಾರವಾಡ ಕನ್ನಡ
 - 3) ಮೈಸೂರು ಕನ್ನಡ
 - 4) ಮಂಗಳೂರು ಕನ್ನಡ
- 4) ಯಾದೃಚ್ಛಿಕ ಮೌಖಿಕ ಧ್ವನಿ ಸಂಕೇತಗಳು ವ್ಯವಸ್ಥೆಯಿಂದ ಕೂಡಿ ಸಮಾಜದ ಸಮೂಹ ಸಹಕಾರಕ್ಕೆ ಕಾರಣವಾಗುವುದೇ ಭಾಷೆ'
 - 1) ಪೋಲೋ
 - 2) ಎನ್ರಿಚ್
 - 3) ಹೆಂಡ್ರಿ ಸ್ಟೀಟ್
 - 4) ಬ್ಲಾಕ್ ಮತ್ತು ಟೈಗರ್
- 5) ಆನಿ, ಕೇರಿ ಎಂಬ ಪದಗಳು ಈ ಭಾಷಾ ಪ್ರಭೇದಕ್ಕೆ ಸೇರಿವೆ
 - 1) ಕೊಡಗು
 - 2) ಮೈಸೂರು
 - 3) ಕರಾವಳಿ
 - 4) ಧಾರವಾಡ
- 6) ಆಧುನಿಕ ವರ್ಣನಾತ್ಮಕ ಭಾಷಾವಿಜ್ಞಾನ ಕೃತಿಯ ಲೇಖಕರು
 - 1) ಹೆಚ್.ಎಮ್.ಮಹೇಶ್ವರಯ್ಯ
 - 2) ಸಂಗಮೇಶ ಸವದತ್ತಿಮಠ
 - 3) ರಾಜೇಶ್ವರಿ ಮಹೇಶ್ವರಯ್ಯ
 - 4) ವಿ.ಜಿ.ಪೂಜಾರ
- 7) ಶ್ರಮ ಪರಿಹಾರವಾದ ಪಂಡಿಸಿದವನು
 - 1) ಲೀಬ್ವೀಚ್
 - 2) ನೋರಿ
 - 3) ಸಸೂರ್
 - 4) ಸಫೀರ್
- 8) ಕನ್ನಡದ ಮೊಟ್ಟ ಮೊದಲನೇ ಉಪಲಬ್ಧ ಗ್ರಂಥ
 - 1) ಕವಿರಾಜಮಾರ್ಗ
 - 2) ಪಂಪಭಾರತ
 - 3) ಗದಾಯುದ್ಧ
 - 4) ವಡ್ಡಾರಾಧನೆ
- 9) ಪ್ರಾಚೀನ ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ 'ಅಮ್ಮ' ಪದದ ಅರ್ಥ
 - 1) ತಾಯಿಯ ತಾಯಿ
 - 2) ಅಪ್ಪ
 - 3) ತಂದೆಯ ತಾಯಿ
 - 4) ಚಿಕ್ಕಮ್ಮ

- 10) ಕರುನಾಡರ್ ಪದವಿರುವ ತಮಿಳು ಕೃತಿ
 1) ಗಾಥಾಸಪ್ತಸತಿ 2) ಶಿಲಪ್ಪದಿಕಾರಂ
 3) ಭೃಹತ್‌ಕಥಾ 4) ಶಬ್ದವಿಹಾರ
- 11) 'ಬೌ ಬೌ ಥಿಯರಿ' ಎಂದರೆ ಯಾವುದು?
 1) ಶ್ರಮಪರಿಹಾರವಾದ 2) ಅನುಕರಣವಾದ
 3) ಅನುರಣನವಾದ 4) ಡಿಂಗ್ ಡಾಂಗ್
- 12) 'ವೆಟ್ಟುದುಳ್' ಇದು ಯಾವ ಕಾಲದಘಟ್ಟದ ಕನ್ನಡ ಪದವಾಗಿದೆ.
 1) ಪೂರ್ವದ ಹಳಗನ್ನಡ 2) ಹಳಗನ್ನಡ
 3) ಹೊಸಗನ್ನಡ 4) ನಡುಗನ್ನಡ
- 13) ಡಾ. ರಾಜೇಶ್ವರಿ ಮಹೇಶ್ವರಯ್ಯ ಓರ್ವ
 1) ಇಂಜಿನೀಯರ್ 2) ಖ್ಯಾತ ಮನೋವಿಜ್ಞಾನಿ
 3) ಭಾಷಾ ವಿಜ್ಞಾನಿ 4) ಸುಪ್ರಸಿದ್ಧ ವೈದ್ಯ
- 14 ಬಡಗು ಭಾಷೆ ಯಾವ ಭಾಷೆಯ ಉಪಭಾಷೆಯಾಗಿದೆ.
 1) ಮಲಯಾಳಂ 2) ತೆಲುಗು
 3) ತಮಿಳು 4) ಕನ್ನಡ
- 15 ಮಹಾಭಾರತದ - ಪರ್ವದಲ್ಲಿ 'ಕರ್ಣಾಟಕಾ' ಪದದ ಉಲ್ಲೇಖವಿದೆ.
 1) ಸೌಪ್ತಿಕ 2) ಗದಾ
 3) ಭೀಷ್ಮ 4) ಉದ್ಯೋಗ
- 16 ಸಾಮಾಜಿಕ ಸಹಕಾರವನ್ನು ಉಂಟು ಮಾಡುವ ಮಾಧ್ಯಮ
 1) ಸಂಸ್ಕೃತಿ 2) ಅಧಿಕಾರ
 3) ಧರ್ಮ 4) ಭಾಷೆ

ಪ್ರ.2 ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ (ಬೇಕಾದ ನಾಲ್ಕಕ್ಕೆ)

16

- 1) ಬ್ಲಾಕ್ ಮತ್ತು ಟೈಗರ್
- 2) ಕನ್ನಡ ಭಾಷೆಯ ಅಸಾಧಾರಣ ಲಕ್ಷಣಗಳು
- 3) ಭಾಷಾ ಉಗಮದ ಬಗ್ಗೆ ವ್ಯಕ್ತವಾದ ವಾದಗಳನ್ನು ಹೆಸರಿಸಿರಿ.
- 4) ಹಾಲರಾಜ ಬರೆದ ಕೃತಿ ಯಾವುದು? ಅದು ಒಳಗೊಂಡಿರುವ ಕನ್ನಡ ಪದಗಳಾವುವು?
- 5) ಕನ್ನಡ ಭಾಷೆಯ ಅವಸ್ಥೆಗಳು ಯಾವುವು?
- 6) ಶ್ರಮಪರಿಹಾರವಾದ

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

16

- 1) ಭಾಷೆಯ ಲಕ್ಷಣಗಳು
- 2) ಮೈಸೂರು ಕನ್ನಡ
- 3) ಕೆ. ಕುಶಾಲಪ್ಪಗೌಡ
- 4) ಅನುಕರಣವಾದ

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

16

- 1) ಭಾಷೆಯ ಮಹತ್ವ ಕುರಿತು ಬರೆಯಿರಿ.
- 2) ಭಾಷೆಯ ಉಗಮ ಕುರಿತು ವಿವಿಧ ಸಿದ್ಧಾಂತಗಳನ್ನು ಸ್ಪಷ್ಟಪಡಿಸಿರಿ.

ಪ್ರ.5 ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸೋದಾಹರಣದಿಂದ ಉತ್ತರಿಸಿರಿ.

16

ಕನ್ನಡ ಭಾಷೆಯ ಪ್ರಾಚೀನತೆ ಕುರಿತು ಆಧಾರ ಸಹಿತ ನಿರೂಪಿಸಿರಿ.

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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.

16

- 1) The state having the highest literacy rate in India.
a) Kerala
b) Tamil Nadu
c) Bihar
d) Rajasthan
- 2) Which scheme was started in 1993 to create self-employment opportunities for educated unemployed youth in rural areas and small towns?
a) Prime Minister Rozgar Yojana
b) National Rural Employment Guarantee Act.
c) Rural Employment Generation Programme
d) Swarnajayanti Gram Swarozgar Yojana.
- 3) The state having lowest literacy rate in India.
a) Bihar
b) Odisha
c) Rajasthan
d) U. P.
- 4) Which state has the highest HDI?
a) Punjab
b) Kerala
c) Gujarat
d) Madhya Pradesh
- 5) What is the literacy rate of India on the basis of census 2011?
a) 74.1%
b) 66%
c) 92%
d) 82%
- 6) Which state has the highest per capita income in India?
a) Punjab
b) Bihar
c) Odisha
d) Goa
- 7) The Multidimensional Poverty Index has been developed by _____.
a) The UNDP
b) Oxford HDI
c) The UNO
d) Morris D Morris
- 8) Who secured the top rank in The Human Development Report 2018?
a) Sweden
b) Norway
c) Switzerland
d) Austria
- 9) Who secured the lowest rank in The Human Development Report 2018?
a) Afghanistan
b) Congo
c) Niger
d) Kenya
- 10) What is the rank of India in the Human Development Index 2018?
a) 142nd
b) 136th
c) 140th
d) 130th

- 11) When was the Gender Inequality Index (GII) introduced?
a) 2010
b) 2011
c) 1999
d) 2005
- 12) Which of the following index is not released by the UNDP?
a) Human Development Index
b) Multidimensional Poverty Index
c) Gender Inequality Index
d) Environmental Quality Index
- 13) Which of the following is not one of the factors related to Human Development Index?
a) Longevity
b) Literacy
c) Decent standard of living
d) Increase in Govt. Jobs
- 14) Who was the originator of the Human Development Report?
a) Amartya Sen
b) Jan Tinberger
c) Mahboob-ul-Haq
d) Dr. Manmohan Singh
- 15) Human development concern with _____.
a) Quantitative Development
b) Qualitative development
c) Both (a) and (b)
d) None of these
- 16) Human development is _____.
a) Always negative
b) Always positive
c) Both
d) None of the above

Q.2 Write Short Answers. (Any 4 Out of 6)

16

- What is the meaning of Human Development?
- What is the meaning of Economic Security?
- What is the significance of Human Resource?
- What is the meaning of Political Security?
- What is the meaning of Human Poverty Index?
- Why Human Development Index is important?

Q.3 Answer the following Questions. (Any 2 Out of 4)

16

- Explain the Methods of computing HDI.
- What is the social determinants of Human Capital?
- Which are the protective factors of Personal Security?
- What are the reasons for decline Food Grains?

Q.4 Answer the following Questions. (Any 1 Out of 2)

16

Discuss the other attempts of capability approach in detail.

OR

Explain Amartya sen's capability approach.

Q.5 Answer the following Questions.

16

Discuss the social determinants of human development in detail.

Seat No.	
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M.A. (Semester - III) (CBCS) Examination: March/April-2024
ECONOMICS (CAMPUS)
Economics of Transport (MA13309)

Day & Date: Wednesday, 22-05-2024
 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) The objective of transportation is _____.
 a) Safe economical and efficient transport of goods and passenger
 b) Economical transport of passengers
 c) Economical transport of Goods
 d) To generate the revenue
- 2) The most flexible types of transportation is _____.
 a) Railway Transportation b) Road transportation
 c) Pipeline transportation d) Airway transportation
- 3) The low initial investment require in transportation system is _____.
 a) Airport transportation b) Railway transportation
 c) Road transportation d) Water transportation
- 4) Which is the position of India in World related to road length?
 a) 1st b) 2nd
 c) 3rd d) 4th
- 5) Who is taken current highway development works in India?
 a) Govt of India b) NHAI
 c) State government d) NHDP
- 6) Which factors are influencing the cost of transportation?
 a) Supply b) Demand
 c) Both supply and demand d) Cost of Investment
- 7) Which of the following was the forst India's steam Engine?
 a) Sethu Samundram b) Gandhi
 c) Vayudoot d) Deshbandhu
- 8) The Shipping Corporation of India Ltd was established in _____.
 a) 1951 b) 1961
 c) 1971 d) 1981
- 9) _____ Is least developed in rail routes.
 a) Uttaranchal b) Chhattisgard
 c) Jharkhand d) Manipur
- 10) Which types of vehicles do not cause air pollution?
 a) Car b) Bike
 c) Cycles d) All of these

- 11)** Bus, car and Train are the means of _____.
a) Land transport b) Air transport
c) Water transport d) All of these
- 12)** The features of air transportation is _____.
a) Speed b) Security
c) Navigation d) All the above
- 13)** The characteristics of Transportation is _____.
a) Mobility b) Accessibility
c) Technological advancement d) All the above
- 14)** _____ Refers to modes of transport that are available to the general public.
a) Private transportation b) Public transportation
c) Cooperative transport d) All the above
- 15)** Freight Transportation refers to _____.
a) Transportation of goods b) Transportation of cargoes
c) Transportation of Passenger d) Only (A) and (B)
- 16)** The linking regions and promoting regional integration is called as _____.
a) Economic development
b) Regional Integration
c) Social Cohesion
d) Emergency response and disaster

Q.2 Write short answer. (Any Four)

16

- Define the Transportation Economics.
- What is Public transportation?
- What is civil aviation?
- What is railway budget?
- What is MSRTC?
- What is urban transportation?

Q.3 Write Short Answer/Short notes (Any Two)

16

- What are the mode of transportation?
- What are the functions of transportation?
- What are the problems of water transportation?
- What are the nature of Air transportation?

Q.4 Write The Detail Answer (Any One)

16

- What is road transportation? Explain the benefits of road transportation?
- What is water transportation? Explain the nature and scope of water transportation?

Q.5 Write the Detail Answer

16

What is NHAI? Explain the role of NHAI in road development.

Seat No.	
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- प्र.4** खालीलपैकी प्रश्नांची उत्तरे लिहा. (कोणताही एक) **16**
आंतरराष्ट्रीय व्यापारावरील जकात आणि कोट्याच्या परिणामांची चर्चा करा.
किंवा
“व्यापार हे आर्थिक विकासाचे इंजिन म्हणून” स्पष्ट करा.
- प्र.5** व्यापाराच्या अटी निर्धारित करणाऱ्या घटकांची चर्चा करा. **16**

Seat No.	
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Set **P**

M.A. (Economics) (Semester - III) (CBCS) Examination: March/April-2024
International Trade and Finance (MA24306)

Day & Date: Wednesday, 22-05-2024
 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) International trade is also known as _____ trade.
 - a) Local
 - b) Regional
 - c) Foreign
 - d) None of the above
- 2) International trade between the two countries is known as _____ trade.
 - a) Bilateral
 - b) Multilateral
 - c) Inter-regional
 - d) None of the above
- 3) International trade between many countries is known as _____ trade.
 - a) Bilateral
 - b) Multilateral
 - c) Inter-regional
 - d) None of these
- 4) Foreign exchange rate is a prerequisite for _____ trade.
 - a) Internal trade
 - b) National trade
 - c) State trade
 - d) International trade
- 5) Dumping is the technique used in _____ trade.
 - a) Internal
 - b) National
 - c) State
 - d) International
- 6) _____ is the important component of international trade.
 - a) Import
 - b) Export
 - c) Terms of trade
 - d) All the above
- 7) Regional trading is an example of _____ trade.
 - a) Internal
 - b) International
 - c) Foreign
 - d) None of the above
- 8) State trading is an example of _____ trade.
 - a) Internal
 - b) International
 - c) Foreign
 - d) None of the above
- 9) District trading is an example of _____ trade.
 - a) Internal
 - b) International
 - c) Foreign
 - d) None of the above
- 10) Local trading is an example of _____ trade.
 - a) Internal
 - b) International
 - c) Foreign
 - d) None of the above
- 11) Bilateral trading is an example of _____ trade.
 - a) Internal
 - b) Regional
 - c) Foreign
 - d) None of the above
- 12) Multinational trading is an example of _____ trade.
 - a) Internal
 - b) Regional
 - c) Foreign
 - d) None of the above

- 13) The concept of balance of payment is related with ____ trade.
 - a) Internal
 - b) Regional
 - c) Foreign
 - d) None of the above
- 14) The concept of exchange rate is related with ____ trade.
 - a) Internal
 - b) Regional
 - c) Foreign
 - d) None of the above
- 15) India has adopted globalization in _____ year.
 - a) 1981
 - b) 1986
 - c) 1991
 - d) None of the above
- 16) Globalization implies ____ trade.
 - a) Free
 - b) Protected
 - c) Restricted
 - d) None of the above

Q.2 Answer in brief. (Any Four)

16

- Explain the balance of payment.
- Give any four determining factors of gain from trade.
- Define terms of trade.
- What is intra-industry trade?
- Define globalization.
- Explain the opportunity cost.

Q.3 Write short notes. (Any Two)

16

- Effects of growth on trade.
- Absolute advantage theory of international trade.
- Gains from international trade.
- Trade made imperfectly competitive market.

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

16

Discuss the effects of tariffs and quotas on terms of trade.

OR

Explain “Trade as an engine of economic development”.

Q.5 Discuss the factors which determine the terms of trade.

16

Set | P

- 10) मुदत ठेवीची कमाल मुदत ---- आहे.
अ) 5 वर्षे ब) 7 वर्षे
क) 8 वर्षे ड) 10 वर्षे
- 11) ATM ---- साठी वापरता येईल.
अ) रोख पैसे काढणे ब) खाते चौकशी
क) खात्याचे विवरण ड) वरील सर्व
- 12) इंटरनेट बँकिंगमुळे ----.
अ) इंटरनेटद्वारे खात्याचे संचालन करता येते.
ब) एटीएमद्वारे खाते उघडता येते.
क) दोन्ही अ आणि ब
ड) वरीलपैकी काहीही नाही
- 13) शैक्षणिक कर्ज ----.
अ) ट्यूशन फी आणि शैक्षणिक खर्च भागविते
ब) कोर्स पूर्ण झाल्यानंतर परतफेड करण्यायोग्य आहेत.
क) भारतात आणि परदेशात अभ्यासासाठी मंजूर
ड) वरील सर्व
- 14) ---- मुळे व्यापारी बँकेच्या आर्थिक स्थितीचे आकलन होते.
अ) व्यापार पत्रक ब) ताळेबंद पत्रक
क) पगार पत्रक ड) वरील सर्व
- 15) बँका ज्या विविध प्रकारच्या ठेवी स्वीकारतात त्या सर्व ठेवींचा समोवश ----
विभागात होतो.
अ) बँकेची मालमत्ता ब) बँकेचे दायित्व
क) अ आणि ब ड) यापैकी नाही
- 16) विशिष्ट वर्षात बँकेचे दायित्व व मालमत्ता याबाबत बँकेच्या व्यवहारांचा मांडलेला तपशील म्हणजे ---- होय.
अ) बँकेचा ताळेबंद ब) बँक धोरण
क) बँक मालमत्ता ड) यापैकी नाही

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

16

- अ) भारतातील वित्तीय संरचना स्पष्ट करा.
- ब) बँकांच्या मालमत्तेतील घटकांचे वर्णन करा.
- क) बँक व ग्राहक यांच्यातील विशेष परस्पर संबंध स्पष्ट करा.
- ड) KYC ची वैशिष्ट्ये सांगा.
- इ) शून्य शिल्लक खात्याची वैशिष्ट्ये स्पष्ट करा.
- ई) व्यापार बँकेची कार्ये स्पष्ट करा.

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

16

- अ) शून्य शिल्लक खात्यांची वैशिष्ट्ये स्पष्ट करा.
ब) बँकेचे विविध अधिकार स्पष्ट करा.
क) हरित बँकेचे महत्त्व स्पष्ट करा.
ड) तारणाच्या पद्धती स्पष्ट करा.

- प्र.4 खालील प्रश्नाचे तपशीलवार उत्तर द्या. (कोणताही एक) 16
अ) ए.टी.एम कार्डची गुण-वैशिष्ट्ये स्पष्ट करा.
ब) बँकेत ग्राहकाचे खाते उघडण्याची कार्यपद्धती स्पष्ट करा.
- प्र.5 खालील प्रश्नाचे तपशीलवार उत्तर द्या. 16
इंटरनेट बँकिंगची चर्चा करा.

Seat No.	
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Set **P**

M.A. (Economics) (Semester - III) (CBCS) Examination: March/April-2024
Advanced Banking (MA24307)

Day & Date: Wednesday, 22-05-2024
 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) E-Banking Represents _____.
 a) Electronic Banking. b) Eco-Banking.
 c) Electrical Banking. d) None of these.
- 2) RTGS Represents _____.
 a) Right Transaction by Group Services.
 b) Real Time Gross Settlement.
 c) Real Time Group Settlement.
 d) None of the above
- 3) _____ is a very Immediate Fund Transfer.
 a) NEFT. b) RTGS.
 c) Both A) & B). d) None of these.
- 4) For Mobile and Internet Banking Password should be _____.
 a) Very Strong b) Very Simple
 c) Very Convenient and Short d) None of These
- 5) Bank Does Not Provide Loans for _____.
 a) Crop Loans b) Education Loans
 c) Home Loans d) Drinking & Gambling
- 6) KYC Means _____.
 a) Know Your Customer b) Know Your Character
 c) Both of Above d) None of Above
- 7) NRI Means _____.
 a) Rural Individuals b) Rural Immigrants
 c) Non-Resident Indian d) All of Above
- 8) Which type of Deposits Earns Higher Interest Rate?
 a) Current Account b) Savings Account
 c) Fixed Deposits d) None of Above
- 9) TDS Means _____.
 a) Time Deposit Scheme b) Total Deposit Scheme
 c) Tax Deducted at Source d) None of Above
- 10) Maximum Tenure of Fixed Deposit is _____.
 a) 5 Years b) 7 Years
 c) 8 Years d) 10 Years
- 11) ATM can be used for _____.
 a) Cash Withdrawal b) Account Enquiry
 c) Statement of Account d) None of these

- 12) Internet Banking refers to _____.
 - a) Operation of account through internet
 - b) Opening of account through ATM
 - c) Both (a) & (b)
 - d) None of these
- 13) Education Loans _____.
 - a) Cover tuition fee & expenses
 - b) Are repayable after completion of course
 - c) Granted for studies in India & abroad
 - d) All of Above
- 14) _____ assesses the financial position of the Merchant Bank.
 - a) Trade Sheet
 - b) Balance Sheet
 - c) Salary Sheet
 - d) All of the above
- 15) All the different types of deposits accepted by the banks are included in the _____ section.
 - a) Bank Assets
 - b) Bank Liabilities
 - c) Both A and B
 - d) None of These
- 16) The details of the bank's transactions regarding the liabilities and assets of the bank in a particular year are _____.
 - a) Bank Balance Sheet
 - b) Bank Policy
 - c) Bank Assets
 - d) None of These

Q.2 Answer in short. (Any Four) **16**

- Explain the financial structure of India.
- Describe the components of banks' assets.
- Explain the special mutual relationship between the bank and the customer.
- State the features of KYC.
- Explain the features of zero balance accounts.
- Explain the functions of commercial banks.

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

- Explain the features of zero balance accounts.
- Explain the various rights of the bank.
- Explain the importance of Green Bank.
- Explain the modes of Charging Security.

Q.4 Answer the following question in detail. (Any 1 out of 2). **16**

- a) Explain the Merits and Features of ATM Card.
- b) Explain the procedure for opening a customer account in a bank.

Q.5 Answer the following question in detail. **16**

Discuss the internet banking.

Seat No.	
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Set P

M.A. (Hindi) (Semester - III) (CBCS) Examination: March/April-2024
Sahitya Mimansa (MA15308)

Day & Date: Wednesday, 22-05-2024

Max. Marks: 80

Time: 11:00 AM To 02:00 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 से सही विकल्प चुनकर वाक्य फिर से लिखिए। 16

- 1) छायावाद की समय सीमा ---- है।
 अ) 1918-1936 ब) 1900-1918
 क) 1936-1943 ड) 1943-1953
- 2) निराला की काव्या कृतियाँ ---- है।
 अ) कुकुरमुत्ता ब) परिमल
 क) अनामिका ड) उक्त सभी
- 3) "अबे, सून बे, गुलाब,
 भूल मत जो पाई खुशूबू, रंगोआब,
 खून चूसा खाद का तूने अशिष्ट,
 डाल पर इतराता है केपीटलिस्ट!" यह ---- का मंतव्य है।
 अ) कुकुरमुत्त ब) गुलाब
 क) माली ड) पूँजीपति
- 4) अपने सूरत के नमूने कुकुरमुत्ता ---- मंदिरों में बताता है।
 अ) रामेश्वर ब) मीनाक्षी
 क) भुवनेश्वर ड) उक्त सभी
- 5) विनोद भारद्वाज का जन्म ---- शहर में हुआ है।
 अ) मुंबई ब) इलाहाबाद
 क) लखनऊ ड) बनारस
- 6) प्रताप नारायण रस्तोगी ने ---- जगह से कमर्शियल आर्ट का डिप्लोमा किया था।
 अ) लखनऊ ब) इलाहाबाद
 क) बनारस ड) मुंबई
- 7) सन् ---- में मशहूर पेंटर फ्रांसिस न्यूटन सूजा दिल्ली में ठहरे थे।
 अ) 1960 ब) 1950
 क) 1983 ड) 1999

- 8) भारतीय कला की दुनिया के गरिमा, ग्लैमर गरीबी और अश्लीलता की चित्रण ——— उपन्यास में आया है।
 अ) गोदान
 क) सेप्पुकु
 ब) मैला आंचल
 ड) दीवार में खिड़की रहती है
- 9) 'झोपड़ी से राष्ट्रपति भवन तक' जीवनी ——— वर्ष प्रकाशित हुई है।
 अ) 2000
 क) 2015
 ब) 2010
 ड) 2017
- 10) 'आईए, खुद अपना विमान बनाएँ' इस विषय पर अब्दुल कलाम ने ——— भाषा में लेख लिखकर प्रथम स्थान प्राप्त किया था।
 अ) हिंदी
 क) तमिल
 ब) अंग्रेजी
 ड) उर्दू
- 11) डॉ. ए. पी. जे. अब्दुल कलाम जी ने ——— मिसाइलों का निर्माण किया है।
 अ) पृथ्वी
 क) त्रिशूल
 ब) आकाश
 ड) उक्त सभी
- 12) अब्दुल कलाम को सन् 1981 में गणतंत्र दिन के अवसर पर ——— पुरस्कार से सम्मानित किया है।
 अ) भारतरत्न
 क) पद्मश्री
 ब) पद्मभूषण
 ड) ज्ञानपीठ
- 13) नाटककार सुमित्रा महाजन ——— वीं लोकसभा अध्यक्ष रह चुकी है।
 अ) 14
 क) 16
 ब) 15
 ड) 17
- 14) अनंत फंदी यह पात्र ——— के रूप में नाटक में आया है।
 अ) कवि
 क) लोकगायक
 ब) गीतकार
 ड) उक्त सभी
- 15) "अहिल्या, पत्नी-धर्म के लिए सती हो जाना एक सर्वधारण नियम माना जाता है। लेकिन तुम इसको अपवाद हो। तुम्हारा कर्तव्य, तुम्हारा गांभीर्य, तुम्हारी आकलन शक्ति, यह सात्त्विक तेज, यह सब तुम्हारा असामान्य होना दर्शाता है।" यह संवाद ——— का है।
 अ) मल्हारराव
 क) मंजुला
 ब) हरकुंवर
 ड) अनंत फंदी
- 16) ——— यह नाटक अहिल्याबाई के मातृत्व के श्रेष्ठ गुणों का परिचायक है।
 अ) होरी
 क) चंद्रगुप्त
 ब) मातोश्री
 ड) सकुबाई

- प्र.2 निम्नलिखित में से किन्हीं चार प्रश्नों के उत्तर लिखिए।** **16**
- अ) कुकुरमुत्ता कविता की प्रतीक योजना।
 - ब) लेखक विनोद भारद्वाज जीवन पर प्रकाश डालिए।
 - क) नंदनलाल भाटिया के चरित्र को विवेचित कीजिए।
 - ड) 'झोपड़ी से राष्ट्रपति भवन तक' जीवनी किसकी है?
 - इ) मातोश्री नाटक का पात्र 'उदाबाई' का परिचय दीजिए।
 - ई) सुमित्रा महाजन का परिचय दीजिए।
- प्र.3 निम्नलिखित प्रश्नों में किन्हीं दो प्रश्नों के उत्तर लिखिए।** **16**
- अ) कुकुरमुत्ता कविता के भाषा-शैली पर प्रकाश डालिए।
 - ब) मातोश्री नाटक की रंगमंचीयता का विवेचन कीजिए।
 - क) सेप्पुकु उपन्यास का नायक प्रताप के चरित्र को विवेचित कीजिए।
 - ड) जीवनी के तत्वों के आधार पर 'झोपड़ी से राष्ट्रपति भवन तक' जीवनी का विवेचन कीजिए।
- प्र.4 निम्नलिखित प्रश्नों में से किसी एक प्रश्न का उत्तर लिखिए।** **16**
- अ) मार्क्सवाद के आधार पर कुकुरमुत्ता कविता की आलोचना कीजिए।
 - ब) 'झोपड़ी से राष्ट्रपति भवन तक' जीवनी डॉ. ए. पी. जे. अब्दुल कलाम संघर्ष की अभिव्यक्ति है, विवेचित कीजिए।
- प्र.5 कला दुनिया के यथार्थ को 'सेप्पुकु' उपन्यास के माध्यम से विवेचित कीजिए।** **16**

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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 पूर्ण कीजिए। 16

- 1) दंगल फिल्म का मुख्य अभिनेता ——— है।
अ) परेश रावल ब) अमीर खान
क) ईशान अवस्थी ड) सलमान खान
- 2) ओ माय गॉड में अक्षय कुमार ने ——— देवता का किरदार निभाया है।
अ) राम ब) गजानन
क) कर्ण ड) कृष्ण
- 3) भारतीय सिनेमा की शुरुआत ——— को हुई।
अ) 1950 ब) 1960
क) 1813 ड) 1913
- 4) फिल्म सबसे महत्वपूर्ण तत्व ——— होता है।
अ) भाषा ब) कलाकार
क) गीत ड) अभिनय
- 5) हिंदी फिल्म जगत में सबसे श्रेष्ठ पुरस्कार ——— है।
अ) फिल्म फेयर ब) दादा कोंडके
क) दादासाहेब फालके ड) इनमें से नहीं
- 6) तारे जमीन पर फिल्म ——— जीवन पर आधारित है।
अ) ईशान ब) भुवन
क) बबिता ड) शमिता
- 7) हिंदी की पहली बोलती फिल्म का नाम ——— है।
अ) राजा हरिश्चंद्र ब) आलम आरा
क) सायन आरा ड) प्रभु रामचंद्र
- 8) दंगल फिल्म ——— के जीवन से प्रेरित होकर बनाई गई है।
अ) विजय सिंह फोगाट ब) महावीर सिंह फोगाट
क) गीता और बबिता ड) इनमें से नहीं

- 9) ओ माय गॉड फिल्म ---- को प्रदर्शित हुई।
अ) 2001
क) 2016
ब) 2012
ड) 2000
- 10) ओ माय गॉड फिल्म ---- विषय पर आधारित है।
अ) धर्मान्धता
क) शिक्षा
ब) राजनीति
ड) संस्कृति
- 11) ईशान को ---- नामक बिमारी है।
अ) *Diarrhoea*
क) *Pneumonia*
ब) *Malaria*
ड) *Dyslexia*
- 12) चित्रलेखा फिल्म ---- रचना पर आधारित है।
अ) चित्रा
क) चित्ररेखा
ब) चित्रलेखा
ड) चित्रायानी
- 13) मदर इण्डिया ---- की प्रसिद्ध फिल्म है।
अ) देवानंद
क) सुनील दत्त
ब) अमिताभ बच्चन
ड) दिलीपकुमार
- 14) हिंदी सिनेमा जगत को ---- कहा जाता है।
अ) हॉलीवुड
क) टोलीवूड
ब) बॉलीवुड
ड) कोइवुड
- 15) हिंदी सिनेमा उद्योग मुख्यतः ---- शहर में बसा है।
अ) मुंबई
क) चेन्नई
ब) दिल्ली
ड) हैद्राबाद
- 16) कांजीलाल की दूकान ---- के कारण गीर जाती है।
अ) भूकंप
क) जेसीपी
ब) बारिश
ड) सरकार

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

16

- अ) कांझीलाल का संक्षिप्त परिचय दीजिए।
- ब) दंगल फिल्म के पात्रों के नाम लिखिए।
- क) हिंदी फिल्मों के दिए जाने वाले पुरस्कारों के नाम लिखिए।
- ड) निर्देशक के रूप में अमीर खान का संक्षिप्त परिचय दीजिए।
- इ) फिल्मों में गीतों का महत्व लिखिए।
- फ) तारे जमीन पर फिल्म के पात्रों के नाम लिखिए।

- प्र.3** निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर संक्षेप में लिखिए। **16**
- अ) ईशान की चारित्रिक विशेषताएँ लिखिए।
 - ब) फिल्म निर्मिती प्रक्रिया का परिचय दीजिए।
 - क) वर्तमान समय में हिंदी फिल्म की स्थिति को स्पष्ट कीजिए।
 - ड) तारे जमीन पर फिल्म की निर्मिती प्रक्रिया को लिखिए।
- प्र.4** निम्नलिखित प्रश्नों में से किसी एक प्रश्न का उत्तर लिखिए। **16**
- ओ माय गॉड फिल्म का सामाजिक सन्देश लिखिए।
- अथवा**
- हिंदी फिल्म के उद्भव और विकास को स्पष्ट कीजिए।
- प्र.5** दंगल फिल्म का उद्देश्य लिखिए। **16**

Max. Marks: 80

Page 1 of 3

- 10)** What are some key research skills that a 21st century student should possess?
- a) Memorization of facts
 - b) Ability to follow instructions without questioning
 - c) Critical thinking, information literacy, data analysis, and digital literacy
 - d) Handwriting skills
- 11)** How can 21st century students use technology to enhance their research and information literacy skills?
- a) By avoiding using search engines and online databases
 - b) By relying solely on information from social media and personal blogs
 - c) By only using physical books and printed materials from the library
 - d) By accessing online resources, databases, academic journals, and using tools like search engines, citation management software, and online collaboration platforms.
- 12)** Students today use the internet for academic and personal reasons. A vast amount of information exists online, all of which may not be from credible sources. Which 21st century skill will students need to identify signal from noise?
- a) Collaboration
 - b) Creativity
 - c) Critical thinking
 - d) Communication
- 13)** What are some examples of technology tools that 21st century teachers can use in their teaching?
- a) Typewriters
 - b) Interactive whiteboards, educational apps, video conferencing, online learning platforms
 - c) Chalk and blackboard
 - d) Slide projectors
- 14)** What are the key characteristics of a 21st-century teacher adopting project-based teaching?
- a) Being strict in classroom
 - b) Working in isolation from other teachers
 - c) Having passive role in classroom
 - d) Being facilitator, collaborator, and guide for students.
- 15)** Technology literacy is ____.
- a) Understanding facts, figures and data.
 - b) Understanding the methods and outlets in which information is published
 - c) Understanding the machines that make the information age possible
 - d) None of these
- 16)** How does technology integration in teaching help in catering to different learning styles of students?
- a) It limits students to only one learning style
 - b) It has no impact on catering to different learning styles
 - c) It makes learning experiences less engaging for students
 - d) It provides personalized learning experiences through various digital tools and resources.

- Q.2 Answer the following (Any 4)** **16**
- a) What is scientific literacy?
 - b) Write a short note on reasoning.
 - c) Explain the term - Global Awareness.
 - d) Write in short about multicultural literacy
 - e) What is an environmental literacy?
 - f) Explain conservation literacy in brief.
- Q.3 What are the characteristics of 21st century teacher?** **16**
- Q.4 Attempt any one of the following** **16**
- a) Discuss the characteristics of 21st century student.
 - b) How to teach 21st century skills?
- Q.5 What are the characteristics of 21st century literature?** **16**

Seat No.	
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Set **P**

M.A. (English) (Sem - III) (CBCS) Examination: March/April-2024
Introduction to Film Studies (MA06309)

Day & Date: Wednesday, 22-05-2024
 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) Which of the following statement is correctly define the word 'Cinema'?
 - a) It includes digital video, broadcast content, streaming media.
 - b) It is a catch-all for any time a series of still images run together to produce the illusion of movement, whether in a multi-plex theatre or the 5-inch screen of a smart phone.
 - c) It is recording of movement, seems as good a place as any to begin an exploration of the moving image.
 - d) All of the above
- 2) A _____ a machine that allowed a single viewer to peer into a viewfinder and crank through the images.
 - a) Cinematographe
 - b) Kinetoscope
 - c) Kaleidoscope
 - d) All of the above
- 3) Which among the following statement is correctly define the concept of Documentary Film?
 - a) It is an experimental, abstract, or highly independent film that is often the forerunner of a new artistic genre or art form.
 - b) Documentary texts are supposedly those which aim to document reality, attempting veracity in their depiction of people, places and events.
 - c) A film genre in which the protagonist is thrust into a series of events that typically involve violence and physical feats.
 - d) All the above
- 4) Who is the author of *Guru Dutt: An Unfinished Story*?
 - a) Vaheeda Rehman
 - b) Nazir Ahemad Bagban
 - c) Yasser Usman
 - d) Satyajit Ray
- 5) _____ is used to heighten the emotion and drama of a scene.
 - a) Background
 - b) Music
 - c) Colour
 - d) Light
- 6) Which of the following statement is true about Dhundiraj Govind Phalke?
 - a) Dhundiraj Govindraj Phalke's RAJA HARISCHANDRA released on May 3, 1913.
 - b) He is acclaimed as the father of the Indian cinema.
 - c) He laid the foundation for the future of the Indian film industry and because he trained several young film makers in his studio in Nasik.
 - d) All of the above
- 7) Who is count as soul responsible to make all the expenses in film?
 - a) Producer
 - b) Director
 - c) Distributer
 - d) Art Director

- 8) What is the contribution of Satyajit Ray to Indian Film?
 - a) He was founder of R.K. Films.
 - b) He brought first camera to India from England.
 - c) He brought Indian cinema to world attention.
 - d) All of the above
- 9) _____ is a film genre that seeks to elicit fear or disgust in its audience for entertainment purposes.
 - a) Documentary
 - b) Musical drama
 - c) Horror
 - d) Mythological
- 10) The movie _____ was *Raj Kapoor's* first film as producer and director.
 - a) Awara
 - b) Jagte Raho
 - c) Barsat
 - d) Aag
- 11) Who among the following actor is played the role of angry young man in the movie 'Zanjeer'?
 - a) Dharmendra
 - b) Dev Anand
 - c) Amitabh Bachchan
 - d) Jitendra
- 12) _____ is part of the creative post-production process of filmmaking.
 - a) Film editing
 - b) Film Making
 - c) Art Direction
 - d) Script writing
- 13) The key elements that make up sound in a film are _____.
 - a) Location sound
 - b) Musical score/sound track
 - c) Dialogue
 - d) All of the above
- 14) _____ refers to an experimental, abstract, or highly independent film that is often the forerunner of a new artistic genre or art form.
 - a) Documentry
 - b) Horror film
 - c) Non- realistic
 - d) Avant-garde
- 15) In the _____ stage of film making the raw elements for the film are recorded during the film shoot.
 - a) Production
 - b) Pre-production
 - c) Development
 - d) Post-production
- 16) Which of the following film is mythological film?
 - a) Ram Lila
 - b) Awara
 - c) Satyavan Savitri
 - d) Jewel Thief

Q.2 Answer any four of the following questions in brief.

16

- a) Comment on role of digital technology in film making.
- b) Write a brief history of Cinema at global level?
- c) Define the concept of film in brief.
- d) Explain cinema is a medium of social reform.
- e) Elaborate the concept of semiotics of film.
- f) Explain the basic components of film language.

Q.3 Answer any two of the following.

16

- a) Define the concept of Angry Young Man with proper reference.
- b) Comment on contribution of Satyajit Ray to Indian Cinema.
- c) Write a note on influence of talkies on Indian film industry.
- d) Comment on new waves in Indian cinema.

Q.4 Answer the following questions in detail. (Any 1 out of 2)

16

a) Explain the concept of horror film with proper examples.

OR

b) Write a note on major film genres with proper example.

Q.5 Answer the following questions in detail.

16

Comment on phases of film production.

Seat No.	
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Max. Marks: 80

16

- Page 1 of 3

- 9) 'Folklore' या इंग्रजीतील शब्दासाठी मराठीत कोणती संज्ञा वापरली जाते?
 अ) लोकसाहित्य ब) लोकगीत
 क) लोकधर्म ड) लोकाश्रय
- 10) 'लोकसाहित्याचा अभ्यास म्हणजे संस्कृतीच्या अभिसरणाचा अभ्यास' अशी लोकसाहित्याची व्याख्या कोणी केली आहे?
 अ) प्रभाकर मांडे ब) दुर्गा भागवत
 क) सरोजिनी बाबर ड) शाम परमार
- 11) लोकसाहित्याच्या प्राणप्रतिष्ठेचे कार्य कोणी केले?
 अ) रां. चि. ढेरे ब) ना. गो. नांदापूरकर
 क) वि. का. राजवाडे ड) चिं. ग. कर्वे
- 12) लोकसाहित्यातून कोणत्या गोष्टीचा अविष्कार होतो?
 अ) लोकरुढी ब) लोकन्याय
 क) लोकधर्म ड) लोकसंस्कृती
- 13) मानवी जीवनाच्या प्राचीनत्वाचे अवशेष मोठ्या प्रमाणात लोकसाहित्याच्या कोणत्या प्रकारात आढळतात?
 अ) लोकधारा ब) लोककथा
 क) लोकशाही ड) लोकमत
- 14) लोकनाट्याच्या कोणत्या प्रकारात विविध प्रकारची सोंगे नाचविली जातात?
 अ) लळीत ब) दंडार
 क) तमाशा ड) कीर्तन
- 15) लोकजीवन, लोकमानस आणि लोकसंस्कृतीचे दर्शन कशातून घडते?
 अ) लोकपाल ब) लोकसत्ता
 क) लोकगीत ड) लोकप्रेम
- 16) 'रुजुवात' या ग्रंथाचे लेखक कोण आहेत?
 अ) अविनाश बिनीवाले ब) अशोक केळकर
 क) महेंद्र कदम ड) अनिल गवळी

प्र.2 थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) भाषेची कार्ये लिहा?
 ब) 'वऱ्हाडी' बोलीचे स्वरूप लिहा?
 क) लोकसाहित्याच्या कोणत्याही चार व्याख्या लिहा?
 ड) 'डांगी' बोलीचे विशेष लिहा?
 इ) लोकगीतांचे महत्व विषद करा.
 ई) बोलींचे महत्व विषद करा.

- प्र.3 खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन)** **16**
- अ) सामाजिक स्तरानुसार भाषेत कोणती वैविध्ये येतात ते स्पष्ट करा.
- ब) 'अहिराणी' बोलीचे स्वरूप आणि विशेष लिहा?
- क) 'लोक' आणि 'साहित्य' या संकल्पना स्पष्ट करा.
- ड) 'लोककथा' संकलनात कोणती काळजी घ्यावी ते लिहा?
-
- प्र.4 खालील प्रश्नांची सविस्तर उत्तरे लिहा. (कोणतेही एक)** **16**
- अ) 'लांग' आणि 'परोल' या संकल्पना स्पष्ट करा.
- ब) प्रमाणभाषा आणि बोलीभाषा यांतील वेगळेपण स्पष्ट करा.
-
- प्र.5 खालील प्रश्नाचे सविस्तर उत्तर लिहा.** **16**
- लोकसाहित्याची व्याप्ती सांगून लोकनाट्याचे स्वरूप स्पष्ट करा.

Seat No.	
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Max. Marks: 80

16

- Page 1 of 3

- 9) प्रसार माध्यमांना उत्पन्नाचा मुख्य स्त्रोत कोणत्या मार्गे उपलब्ध होतो?
 अ) जाहिरात ब) बातमी
 क) संपादकीय ड) स्तंभलेखन
- 10) पत्रकारितेतील सर्वात विश्वासाह घटक म्हणून कोणत्या लेखन प्रकाराकडे पाहिले जाते.
 अ) बातमी ब) जाहिरात
 क) मुलाखत ड) स्तंभलेखन
- 11) नभोवाणी वरील बातमीपत्र किती मिनिटाचे असते?
 अ) 10 ते 15 ब) 15 ते 20
 क) 20 ते 25 ड) 25 ते 30
- 12) 'ट्वीटर या समाज माध्यमाची स्थापना' ——— यांनी केली आहे.
 अ) ग्रॅहम बेल ब) मार्क झुकरबर्ग
 क) जॉर्ज सिगेल ड) मार्कोनी
- 13) दूरदर्शन हे ——— माध्यम आहे.
 अ) श्राव्य ब) दृक्श्राव्य
 क) दृक् ड) चलचित्र
- 14) दूरदर्शनचे ब्रीदवाक्य काय आहे.
 अ) बहुजन हिताय बहुजन सुखाय ब) सत्यम शिवम सुंदरम्
 क) पत्र नव्हे मित्र ड) सदरक्षणाय खलनिग्रहणाय
- 15) संहिता लेखनाची भाषा कशा प्रकारची असावी?
 अ) प्रवाही ब) क्लिष्ट
 क) बोजड ड) संदिग्ध
- 16) प्रसारमाध्यमे आणि प्रयोगकला हे पुस्तक कोणी लिहिले आहे?
 अ) रमा गोळवलकर अ) आनंद पाटील
 क) महेंद्र कदम क) विश्राम ढोले

प्र.2 खालीलपैकी कोणत्याही चार प्रश्नांची थोडक्यात उत्तरे लिहा.

16

- अ) वृत्तपत्रातील बातम्यांची निवड कोणत्या पद्धतीने केली जाते ते लिहा.
 ब) नभोनाट्याचे स्वरूप थोडक्यात स्पष्ट करा.
 क) मुद्रित माध्यमे कोण कोणती आहेत?
 ड) फेसबुक या समाज माध्यमाचे स्वरूप स्पष्ट करा.
 इ) महात्मा फुले यांनी सामाजिक परिवर्तनाची पायाभरणी वृत्तपत्राच्या माध्यमातून कशा प्रकारे केली?
 ई) दूरदर्शवरील 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 महत्त्वाचे कसे आहे ते लिहा.
 ड) आकाशवाणी वरील बातम्यांची निवड कोणत्या पद्धतीने केली जाते?

प्र.4 दीर्घोत्तरी प्रश्न. (कोणताही एक)**16**

आजच्या युगातील समाज माध्यमातून वापरण्यात येणाऱ्या भाषेचे स्वरूप व वैशिष्ट्ये लिहा.

किंवा

नियतकालिकातून प्रसिद्ध होणाऱ्या प्रकट मुलाखतीची वैशिष्ट्ये सविस्तर लिहा.

प्र.5 दीर्घोत्तरी प्रश्न.**16**

आधुनिक प्रसारमाध्यमे आणि तरुण पिढी या विषयावर सविस्तर विवेचन करा.

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

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

16

- 1) ——— ही जगातील पहिली आंतरशासकीय संस्था होती.
अ) संयुक्त राष्ट्र
ब) राष्ट्र संघ
क) युरोपियन युनियन
ड) आसियान
- 2) ब्रेक्झिट ही संकल्पना ——— या संघटनेशी संबंधित आहे.
अ) युरोपियन युनियन
ब) आसियान
क) सार्क
ड) संयुक्त राष्ट्र
- 3) सार्क या संघटनेची स्थापना ——— या वर्षी करण्यात आली.
अ) 1980
ब) 1982
क) 1984
ड) 1985
- 4) सार्क या संघटनेचे मुख्यालय ——— या ठिकाणी आहे.
अ) जकार्ता
ब) काठमांडू
क) न्यूयॉर्क
ड) लंडन
- 5) सार्क या संघटनेचा ——— सदस्य आहे.
अ) अमेरिका
ब) जर्मनी
क) पाकिस्तान
ड) इराण
- 6) सार्क संघटनेचा उद्देश ——— लोकांचे कल्याण आणि जीवनमान सुधारण्यासाठी प्रोत्साहन देणे.
अ) दक्षिण आशियातील
ब) दक्षिण आफ्रिकेतील
क) दक्षिण अमेरिकेतील
ड) युरोपातील
- 7) युनायटेड नेशन्स (UN) ही ——— मध्ये स्थापन झालेली आंतरराष्ट्रीय संस्था आहे.
अ) 1943
ब) 1945
क) 1946
ड) 1947
- 8) संयुक्त राष्ट्र संघटनेच्या सुरक्षा परिषदेत ——— हा स्थायी सदस्य आहे.
अ) 9
ब) 8
क) 6
ड) 5
- 9) संयुक्त राष्ट्र संघटनेच्या सुरक्षा परिषदेत ——— हा स्थायी सदस्य देश आहे.
अ) जपान
ब) भारत
क) चीन
ड) दक्षिण कोरिया

- 10) आंतरराष्ट्रीय न्यायालयाचे मुख्यालय ——— या ठिकाणी आहे.
 अ) टोकियो ब) शांघाय
 क) हेग ड) न्यूयॉर्क

11) युनायटेड नेशन्स डेव्हलपमेंट प्रोग्राम (UNDP) हे ——— जागतिक विकास कार्यक्रम आहे.
 अ) संयुक्त राष्ट्रांचा ब) आंतरराष्ट्रीय न्यायालयाचा
 क) सार्कचा ड) आसियानचा

12) आसियान या संघटनेचे सचिवालय ——— या ठिकाणी आहे.
 अ) बाली ब) माले
 क) जकार्ता ड) काठमांडू

13) आसियान या संघटनेचा ——— हा सदस्य देश आहे.
 अ) म्यानमार ब) नेपाळ
 क) बांगलादेश ड) श्रीलंका

14) आसियान या संघटनेत ——— सदस्य देश आहेत.
 अ) 8 ब) 10
 क) 12 ड) 14

15) युरोपियन युनियनचा ——— या देशाने सदस्यत्व सोडले आहे.
 अ) फ्रान्स ब) जर्मनी
 क) इंग्लंड ड) हंगेरी

16) युरोपियन युनियन मध्ये ——— इतके सदस्य आहेत.
 अ) 25 ब) 27
 क) 29 ड) 26

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

16

- अ) आंतरराष्ट्रीय संघटना म्हणजे काय?
- ब) आंतरराष्ट्रीय संघटनेचे स्वरूप स्पष्ट करा?
- क) आंतरराष्ट्रीय संघटनेचे महत्व सांगा?
- ड) संयुक्त राष्ट्र संघटनेची सुरक्षा परिषदेतील नकाराधिकार (Veto Power) म्हणजे काय?
- इ) वॉर्सा (WARSA Treaty) करारा विषयी माहिती लिहा?
- ई) संयुक्त राष्ट्र संघटनेची रचना सांगा?

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

16

- अ) सार्क संघटनेची उद्दिष्टे लिहा?
 ब) आसियान संघटना टीप लिहा?
 क) संयुक्त राष्ट्र संघटनेची उद्दिष्टे लिहा?
 ड) युरोपियन यूनियन महासंघाची माहिती लिहा.

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

16

अ) राष्ट्र संघाच्या अपयशाची कारणे कोणती?

किंवा

ब) सार्क संघटना आणि तिचे महत्त्व स्पष्ट करा?

प्र.5 खालील प्रश्नाचे सविस्तर उत्तर लिहा.

16

संयुक्त राष्ट्र संघटनेच्या सुरक्षा परिषदेचे अधिकार आणि कार्य कोणती?

Seat No.	
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**M.A. (Political Science) (Semester - III) (CBCS) Examination:
March/April-2024
International Organizations (MA02306)**

Day & Date: Wednesday, 22-05-2024
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 Multiple Choice Questions.

16

- 1) _____ It was the first intergovernmental organization in the world.
 - a) United Nations
 - b) League of Nations
 - c) European Union
 - d) ASEAN
- 2) The concept of Brexit is related to the association of _____.
 - a) European Union
 - b) ASEAN
 - c) SAARC
 - d) United Nations
- 3) SAARC organization was established in the year _____.
 - a) 1980
 - b) 1982
 - c) 1984
 - d) 1985
- 4) The headquarters of SAARC organization is located at _____.
 - a) Jakarta
 - b) Kathmandu
 - c) New York
 - d) London
- 5) _____ is a member of SAARC.
 - a) America
 - b) Germany
 - c) Pakistan
 - d) Iran
- 6) Objective of SAARC organization _____ To promote welfare and improvement of standard of living of the people.
 - a) South Asia
 - b) South Africa
 - c) South America
 - d) Europe
- 7) The United Nations (UN) is an international organization established in _____.
 - a) 1943
 - b) 1945
 - c) 1946
 - d) 1947
- 8) The United Nations Security Council has permanent members _____.
 - a) 9
 - b) 8
 - c) 6
 - d) 5
- 9) _____ is a permanent member of the United Nations Security Council.
 - a) Japan
 - b) India
 - c) China
 - d) South Korea
- 10) The headquarters of the International Court of Justice is located at _____.
 - a) Tokyo
 - b) Shanghai
 - c) Hague
 - d) New York

- 11) The United Nations Development program (UNDP) is a _____ global development programme.
 - a) United Nations
 - b) International Court of Justice
 - c) SAARC
 - d) ASEAN
- 12) The Secretariat of the Association of ASEAN is located in _____.
 - a) Bali
 - b) Male
 - c) Jakarta
 - d) Kathmandu
- 13) _____ is a member country of ASEAN.
 - a) Myanmar
 - b) Nepal
 - c) Bangladesh
 - d) Sri Lanka
- 14) ASEAN is _____ members of country.
 - a) 8
 - b) 10
 - c) 12
 - d) 14
- 15) _____ is country has left the European Union.
 - a) France
 - b) Germany
 - c) England
 - d) Hungary
- 16) There are _____ members in the European Union.
 - a) 25
 - b) 27
 - c) 29
 - d) 26

Q.2 Write Short Answers. (Any Four)

16

- 1) What is an International Organization?
- 2) Explain the nature of International Organization?
- 3) Tell the importance of International Organization?
- 4) What is the veto power of the United Nations Security Council?
- 5) Write information about WARSA Treaty?
- 6) Tell the structure of United Nations Organization?

Q.3 Answer the following Question. (Any Two)

16

- 1) Write the objectives of SAARC Organization?
- 2) ASEAN Organization: Note?
- 3) Write the objectives of United Nations Organization?
- 4) Write the details or information of the European Union?

Q.4 Answer the following Questions in Detail. (Any One)

16

- 1) What are the reasons for the failure of the League of Nations?

OR

- 2) Explain SAARC organization and its importance?**

Q.5 Write a detailed Answer to the following Question.

16

What are the powers and functions of the United Nations Security Council?

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

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

16

- 1) ल्युथर गुलीक यांनी संघटनेचे ——— सिद्धांत मांडले आहेत.
अ) 05 ब) 08
क) 10 ड) 04
- 2) कार्यात्मक फोरमनची संकल्पना ——— यांनी मांडली.
अ) एल्टन मेयो ब) लिडॉल उर्विक
क) हेन्‍री फेयॉल ड) फ्रेडरिक टेलर
- 3) ——— सार्वजनिक सेवामध्ये कार्यक्षमता, पारदर्शकता आणि प्रतिसाद वाढविण्यासाठी सिद्धांत लागू करतात.
अ) शासन ब) प्रशासन
क) कार्यकारी मंडळ ड) यापैकी नाही
- 4) हेन्‍री फेयॉलने व्यवस्थापनेचे ——— घटक सांगितले आहेत.
अ) 14 ब) 06
क) 03 ड) 05
- 5) फ्रेड रिंग्ज या राजकीय शास्त्रज्ञाने सार्वजनिक प्रशासनाच्या क्षेत्रात ——— दृष्टिकोन विकसित केला.
अ) कार्यात्मक ब) संस्थात्मक
क) पर्यावरणीय ड) वर्णनात्मक
- 6) लोकप्रशासनातील संघटन शास्त्राचे शिल्पकार म्हणून ——— या विचारवंतास ओळखले जाते.
अ) वुड्रो विल्सन ब) चेस्टर बर्नार्ड
क) ल्युथर गुलीक ड) लिडॉल उर्विक
- 7) द्विभाजन सिद्धांत ——— यांनी मांडला.
अ) फ्रेड रिंग्ज ब) हेन्‍री फेयॉल
क) वुड्रो विल्सन ड) पीटर ड्रकर
- 8) 'द प्रिन्सिपल ऑफ सायंटिफीक मॅनेजमेंट' हे पुस्तक ——— यांनी लिहिले.
अ) ल्युथर गुलीक ब) फ्रेडरिक टेलर
क) हेन्‍री फेयॉल ड) लिडॉल उर्विक

- 9) तुलनात्मक सार्वजनिक प्रशासनेचे प्रणेते म्हणून ——— ओळखले जातात.
अ) हेन्री फेयॉल ब) वुड्रो विल्सन
क) फ्रेडरिक रिंग्ज ड) यापैकी नाही

10) सिद्धांत निर्मितीचे मूलभूत घटक ——— हे आहेत.
अ) संकल्पना, चल, विधाने स्वरूप
ब) संकल्पना—निरिक्षण—गृहीतके—प्रयोग
क) संकल्पना—निरिक्षण—घटना—घटक
ड) संकल्पना—अनुमान—कल्पना—स्पष्टीकरण

11) खालीलपैकी कोणते शास्त्रीय व्यवस्थापनाचे तंत्र नाही.
अ) काल अध्ययन ब) सुचना पत्र
क) विकेंद्रात्मक दर ड) कार्यनिष्ठा

12) ल्युथर गुलीक यांचा जन्म 5 मे 1892 मध्ये ——— देशात झाला.
अ) फ्रान्स ब) अमेरिका
क) जपान ड) चीन

13) ——— हे संघटनेच्या यांत्रिकी दृष्टिकोनाचे पुरस्कर्ते आहेत.
अ) फ्रेडरिक रिंग्ज ब) अब्राहम मास्लो
क) लिंडाल उर्विक ड) यापैकी नाही

14) 'प्रिजमेंटीक सत्ता मॉडेल' संकल्पना ——— यांनी प्रतिपादन केली.
अ) हेन्री फेयॉल ब) एष्टन मेयो
क) फ्रेडरिक टेलर ड) फ्रेडरिक रिंग्ज

15) 4 P_s सिद्धांत म्हणजे ———.
अ) उद्देश—प्रकार—जनता—ठिकाण
ब) उद्देश—प्रकार—व्यक्ति—प्रयोजन
क) उद्देश—प्रक्रिया—व्यक्ति—ठिकाण
ड) उद्देश—प्रक्रिया—व्याक्तिमत्व—प्रदेश

16) टेलरच्या शास्त्रीय व्यवस्थापन सिद्धांताचा मुख उद्देश ——— वाढविणे हा होता.
अ) उत्पन्न व कार्यक्षमता ब) उत्पादकता व कार्यक्षमता
क) कार्यवृद्धी व मोजमाप ड) वैधानिकता व अनुभवता

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

16

- अ) प्रशासकीय सिद्धांताचे महत्त्व स्पष्ट करा.
- ब) शास्त्रीय व्यवस्थापन संकल्पना स्पष्ट करा.
- क) POCCC सिद्धांताचे स्वरूप लिहा.
- ड) सुधारलेल्या समाजाची प्रमुख वैशिष्ट्ये सांगा.
- इ) कार्याचे विभाजन हे तत्त्व विषद करा.
- ई) प्रदत्तीकरण कशाला म्हटले जाते.

- प्र.3** खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही दोन) **16**
- अ) राजकारण प्रशासन द्विभाजन सिद्धांत
ब) पर्यावरण सिद्धांत
क) उद्दिष्टांचा सिद्धांत
ड) कार्यात्मक फोरमशीप
- प्र.4** खालील प्रश्नांची सविस्तर उत्तरे लिहा. (कोणतेही एक) **16**
- टेलरच्या शास्त्रीय व्यवस्थापन सिद्धांताची तत्त्वे स्पष्ट करा.
किंवा
लुथर गुलीक यांचे संघटन विषयक दहा सिद्धांत विषद करा.
- प्र.5** हेन्री फेयॉलच्या 14 व्यवस्थापन तत्त्वांची सविस्तर चर्चा करा. **16**

Seat No.	
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Day & Date: Wednesday, 22-05-2024
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.

16

- 1) Luther Gulick has Proposed _____ theories of organization.
a) 05 b) 08
c) 10 d) 04
- 2) The concept functional Forman was introduced by _____.
a) Elton Mayo b) Lidandle Urvik
c) Henry Feyol d) Frederick Taylor
- 3) _____ apply the theory to enhance efficiency, transparency and responsiveness in Public Services.
a) Government b) Administrations
c) Executive d) None of these
- 4) _____ elements of Henry Feyol management are stated.
a) 14 b) 06
c) 03 d) 05
- 5) Fredrick Rings, a Political Scientist, developed a _____ approach in the field of Public Administration.
a) Functional b) Organizational
c) Environment d) Descriptive
- 6) The thinker _____ is known as the architect of organization science in Public administration.
a) Woodrow wilson b) Chester Barhard
c) Luther Gulick d) Lidandle Urvik
- 7) Bifurcation theory was proposed by _____.
a) Fredrick Rings b) Henry Feyol
c) Woodrow Wilson d) Peter Drucker
- 8) The book the Principles of Science Management was written by _____.
a) Luther Gulick b) Fredrick Taylor
c) Henry Feyol d) Urvik
- 9) _____ is recognized as a pioneer of comparative Public Administration.
a) Henry Feyol b) Woodrow Wilson
c) Fredrick Rings d) None of these
- 10) _____ are the basic component of theory building.
a) Concept-Variable-Sentence-Nature
b) Concept-Observation-Hypothesis-Experiment
c) Concept-Observation-Event-Elements
d) Concept-Logic-Imagination-Explanation

- 11)** Which of the following is not a technique of classical Management?
a) Time Study b) Notice letter
c) Centripetal rate d) Work ethic
- 12)** Luther Gulick was born on May 5, 1892 in _____.
a) France b) America
c) Japan d) China
- 13)** _____ is an advocate of Mechanistic approach to Organization.
a) Fredrick Rings b) Abraham Maslow
c) Urvik d) None of these
- 14)** The 'Prismatic Power Model' concept was propounded by _____.
a) Henry Feyol b) Elton Mayo
c) Fredrick Taylor d) Fredrick Rings
- 15)** 4 Ps theory is _____.
a) Purpose-Type-Public-Place
b) Purpose-Type-Person-Reason
c) Purpose-Process-Person-Place
d) Purpose-Process-Personality-Region
- 16)** The main objective of Taylor's classical management theory was to _____.
a) Income and Efficiency
b) Productivity and Efficiency
c) Performance and Measurement
d) Legitimacy and Experience

Q.2 Write Short Answer to the following Questions. (Any Four) 16

- Explain the importance of Administration Theory?
- Explain the concept of Classical Management?
- Write the nature of POCCC theory.
- State the Salient features of an improved Society.
- Explain the principle of Division of work.
- Why is it called Provision.

Q.3 Write Short Answer to the following Questions. (Any Two) **16**

- Dichotomy theory of Political Administration.
- Ecological Theory.
- Theory of Objectives.
- Functional Foremanship.

Q.4 Write detailed Answer to the following Questions. (Any One) 16

Explain the Principles of Taylors classical Management Theory?

OR

Explain Luther Gulick's 10 Organizational Theories.

Q.5 Discuss in detail Henry Fayol's 14 Principles of Management? **16**

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

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

16

- 1) ——— हा शेवटचा गव्हर्नर जनरल होता.
अ) वॉरेन हेस्टिंग्स ब) लॉर्ड कॅनिंग
क) लॉर्ड मेयो ड) लॉर्ड कर्झन
- 2) व्हाईसरॉय ——— च्या काळात दुसरे इंग्रज-अफगाण युद्ध झाले.
अ) लॉर्ड लिटन ब) लॉर्ड अँक्टन्
क) लॉर्ड रिपन ड) लॉर्ड डफरीन
- 3) 1858 नंतर भारताचा पहिला व्हाईसरॉय ——— हा बनला.
अ) लॉर्ड डलहौसी ब) लॉर्ड कॅनिंग
क) लॉर्ड मेकॉले ड) लॉर्ड डफरीन
- 4) भारतातील 'स्थानिक स्वराज्य संस्थेचे जनक' म्हणून ——— हे ओळखले जातात.
अ) लॉर्ड मेयो ब) लॉर्ड डफरीन
क) लॉर्ड कॅनिंग ड) लॉर्ड रिपन
- 5) ब्रिटिशांच्या आर्थिक शोषणाची मांडणी करणारा 'आर्थिक निस्सारण सिद्धांत'
———— यांनी मांडला.
अ) महात्मा गांधी ब) लोकमान्य टिळक
क) दादाभाई नौरोजी ड) ना. गोखले
- 6) भारतातील पहिली कापड गिरणी ——— येथे सुरू झाली.
अ) कलकत्ता ब) मुंबई
क) पुणे ड) मद्रास
- 7) ऑल इंडिया ट्रेड युनियन काँग्रेसची स्थापना ——— साली झाली.
अ) 1920 ब) 1930
क) 1940 ड) 1950
- 8) ——— यांनी भारतीय शिक्षणाचे माध्यम इंग्रजी असावे असे सुचवले.
अ) लॉर्ड मेकॉले ब) विल्यम हंटर
क) चार्लस वूड ड) लॉर्ड कर्झन

- 9) विधवा पुनर्विवाहाचा कायदा ---- च्या काळात आला.
 अ) लॉर्ड डलहौसी ब) लॉर्ड कर्झन
 क) लॉर्ड कॅनिंग ड) लॉर्ड मेयो
- 10) ब्राम्हो समाजाची स्थापना ---- यांनी केली.
 अ) राजा राममोहन रॉय ब) महात्मा फुले
 क) स्वामी दयानंद सरस्वती ड) स्वामी विवेकानंद
- 11) डॉ. आत्माराम पांडुरंग यांनी ---- ची स्थापना केली.
 अ) परमहंस सभा ब) प्रार्थना समाज
 क) आर्य समाज ड) सत्यशोधक समाज
- 12) ---- साली भारतीय राष्ट्रीय काँग्रेसची स्थापना झाली.
 अ) 1880 ब) 1885
 क) 1890 ड) 1895
- 13) ---- साली बंगालची फाळणी करण्यात आली.
 अ) 1905 ब) 1910
 क) 1915 ड) 1920
- 14) 'डिप्रेड क्लास मिशन' ची स्थापना ---- यांनी केली.
 अ) महात्मा फुले ब) राजा राममोहन रॉय
 क) स्वामी दयानंद सरस्वती ड) महर्षी विठ्ठल रामजी शिंदे
- 15) ---- येथीज काँग्रेसच्या अधिवेशनात जहाल व मवाळ गटात फूट पडली.
 अ) मुंबई ब) कलकत्ता
 क) बनारस ड) सुरत
- 16) लोकमान्य टिळक यांनी ---- हे वृत्तपत्र चालू केले होते.
 अ) काळ ब) केसरी
 क) संवाद कौमुदी ड) दर्पण

प्र.2 थोडक्यात उत्तरे लिहा. (कोणतेही चार)

16

- अ) राणीच्या जाहीरनाम्याची ठळक वैशिष्ट्ये लिहा.
 ब) ब्राम्हो समाजाच्या कार्याची थोडक्यात माहिती सांगा.
 क) भारतीय राष्ट्रीय काँग्रेसच्या पहिल्या अधिवेशनाची थोडक्यात माहिती सांगा.
 ड) महात्मा फुलेंच्या अस्पृश्यता निवारण कार्याविषयी थोडक्यात माहिती लिहा.
 इ) मवाळवाद्यांच्या कार्यपद्धतीविषयी थोडक्यात माहिती सांगा.
 ई) भारतीय शेतीचे व्यापारीकरण होण्याची कारणे सांगा.

प्र.3 टीपा लिहा. (कोणत्याही दोन)

- अ) 1858 नंतरचे ब्रिटिशांचे लष्करी धोरण
- ब) ब्रिटिशकालीन कापड उद्योग
- क) ब्रिटिश कालखंडातील स्त्रीजीवनातील सुधारणा
- ड) ब्रिटिशांच्या शिक्षणविषयक सुधारणा

प्र.4 दीर्घोत्तरी प्रश्न. (कोणतेही एक)

- अ) महात्मा फुले यांच्या समाजसुधारणा कार्याचा आढावा घ्या.
किंवा
- ब) भारतीय राष्ट्रीय काँग्रेसच्या स्थापनेची कारणे सांगा.

प्र.5 दीर्घोत्तरी प्रश्न. (एकच प्रश्न)

लोकमान्य टिळक यांचे जीवन व कार्याविषयी विस्तृत माहिती लिहा.

Seat No.	
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Set **P**

M.A. (History) (Sem - III) (CBCS) Examination: March/April-2024
History of India (1858 A. D. - 1964 A. D.) (MA01306)

Day & Date: Wednesday, 22-05-2024
 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) _____ was the last Governor General.
 - a) Warren Hasting
 - b) Lord Canning
 - c) Lord Mayo
 - d) Lord Curzon
- 2) The Second Anglo-Afghan War took place during the time of Viceroy _____.
 - a) Lord Lytton
 - b) Lord Acton
 - c) Lord Ripon
 - d) Lord Dufferin
- 3) After 1858 the first Viceroy of India became _____.
 - a) Lord Dalhousie
 - b) Lord Canning
 - c) Lord Macaulay
 - d) Lord Dufferin
- 4) He is known as the 'Father of Local Self-Government' in India.
 - a) Lord Mayo
 - b) Lord Dufferin
 - c) Lord Canning
 - d) Lord Ripon
- 5) The 'Economic Drain Theory' which lays out the economic exploitation of the British by _____.
 - a) Mahatma Gandhi
 - b) Lokmanya Tilak
 - c) Dadabhai Naoroji
 - d) Na. Gokhale
- 6) India's first textile mill started at _____.
 - a) Calcutta
 - b) Mumbai
 - c) Pune
 - d) Madras
- 7) All India Trade Union Congress was founded in _____.
 - a) 1920
 - b) 1930
 - c) 1940
 - d) 1950
- 8) _____ suggested that the medium of Indian education should be English.
 - a) Lord Macaulay
 - b) William Hunter
 - c) Charles Wood
 - d) Lord Curzon
- 9) Widow Remarriage Act came during the period of _____.
 - a) Lord Dalhousie
 - b) Lord Curzon
 - c) Lord Canning
 - d) Lord Mayo
- 10) Brahmo Samaj was founded by _____.
 - a) Raja Rammohan Roy
 - b) Mahatma Phule
 - c) Swami Dayanand Saraswati
 - d) Swami Vivekananda
- 11) Dr. Atmaram Pandurang founded _____.
 - a) Paramahansa Sabha
 - b) Prayer Samaj
 - c) Arya Samaj
 - d) Satyashodhak Samaj

- 12) _____ Indian National Congress was established in.
a) 1880 b) 1885
c) 1890 d) 1895
- 13) Bengal was partitioned in the year _____.
a) 1905 b) 1910
c) 1915 d) 1920
- 14) 'Depressed Class Mission' was founded by _____.
a) Mahatma Phule b) Raja Rammohan Rai
c) Swami Dayanand Saraswati d) Maharshi Vitthal Ramji Shinde
- 15) Split between the Extremist and Moderates took place in _____ Congress session.
a) Mumbai b) Calcutta
c) Banaras d) Surat
- 16) Lokmanya Tilak started _____ newspaper.
a) Kaal b) Kesari
c) Samvad Kaumudi d) Darpan

Q.2 Write Short Answers. (Any Four)

16

- Write the salient features of Queen's Proclamation.
- Briefly explain the working of Brahmo Samaj.
- Briefly describe the first session of the Indian National Congress.
- Write brief information about Mahatma Phule's untouchability work.
- Give brief information about the working method of Moderates.
- State the reasons for commercialization of Indian agriculture.

Q.3 Write Notes. (Any Two)

16

- a) British military policy after 1858
- b) British textile industry
- c) Improvements in women's life during the British period
- d) British educational reforms

Q.4 Broad Answers Questions. (Any One)

16

- a) Review the social reform work of Mahatma Phule.

OR

- b) State the reasons for the formation of Indian National Congress.

Q.5 Answer the following Question. (Broad)

16

Write in detail about Life and work of Lokmany Tilak.

Seat No.	
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- 9) ऋग्वेदांमध्ये 'लोक' या शब्दासाठी — शब्द प्रयुक्त केला.
 अ) परिलोकम् ब) देहिलोकम्
 क) लोककल्याण ड) जनकलोकम्
- 10) लौकिक गीते यांमध्ये — या गीतप्रकारांचा समावेश होतो.
 अ) लावणी, पोवाडा ब) निसर्गगीते
 क) धार्मिकगीते ड) नृत्यगीते
- 11) लोकसंगीताची निर्मिती — कडून मानली जाते.
 अ) शहरांकडून ब) निसर्गाकडून
 क) पक्षाकडून ड) माणसाकडून
- 12) लोकांनी लोकांसाठी लोकांच्या मनोरंजनासाठी तयार केलेल्या गीत प्रकारास — असे म्हणतात.
 अ) धृपद गीत ब) धमार गीत
 क) लोकगीत ड) ओवीगीत
- 13) लोकसंगीतात — बाबींचा समावेश होतो.
 अ) लोकगीत ब) लोकवादय
 क) लोकनृत्य ड) यांपैकी सर्व
- 14) भारतीय लोकसंगीत हे — मुळे सुरक्षित आहे.
 अ) आचरणामुळे ब) व्यंजनामुळे
 क) स्वरसंवाद ड) शहरांमुळे
- 15) खालीलपैकी — हा शब्द लोकसंगीतासाठी वापरला जातो.
 अ) Fork ब) Folk
 क) Fok ड) Flok
- 16) लोकसंगीतात मुख्यतः — बाबींचा समावेश असतो.
 अ) भाव, लय, भाषा ब) भाव, तान, स्वर
 क) गायन, वादन ड) यांपैकी नाही

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

16

- अ) पोवाडा
 ब) लोकसंगीत
 क) श्रमगीत
 ड) लावणी
 इ) भारूड
 ई) ओवीगीते

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

16

- अ) निसर्गगीते आणि स्त्रीगीते याबद्दल माहिती लिहा.
 ब) धार्मिक गीते म्हणजे काय? ते सांगून त्यावर चर्चात्मक टिप्पणी तयार करा.
 क) गोंधळ या प्रकाराविषयी थोडक्यात माहिती लिहा.
 ड) जागरण गोंधळातील दिवट्या नावाच्या पात्राची कामगिरी स्पष्ट करा.

प्र.4 खालील प्रश्नांची उत्तरे लिहा. (कोणताही एक)
लोकसंगीताची वैशिष्ट्ये सांगा.

16

किंवा

‘लोकसंगीताचे भविष्य’ यावर तुमचे मत स्पष्ट करा.

प्र.5 खालील प्रश्नाचे उत्तर लिहा.

16

शास्त्रीय संगीताचा पाया लोकसंगीतावर उभारलेला आहे. हे वाक्य सविस्तरपणे स्पष्ट करा.

Seat No.	
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Day & Date: Wednesday, 22-05-2024
Time: 11:00 AM To 02:00 PM

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

16

- १) चित्रपटगीतांसाठी जास्तीकरून ——— हे ताल वापरतात.
अ) झपताल, तेवरा ब) दादरा, केरवा
क) आदीताल, झंप ड) यापैकी नाही
- २) तबला हे वादय ——— या वादयातून निर्माण झाले.
अ) ढोलकी ब) नगारा
क) पखवाज ड) यापैकी नाही
- ३) ——— ह्या वादयामध्ये तारांचा वापर केला जातो.
अ) हर्मोनियम ब) ढोल
क) नाल ड) सितार
- ४) खालीलपैकी हे वादय पाश्चात्य वादय आहे.
अ) टाळ ब) सतार
क) गिटार ड) नगारा
- ५) ——— हा ठेका भजनासाठी वापरला जातो.
अ) गंधर्व ठेका ब) भजनी ठेका
क) केरवा ठेका ड) यापैकी नाही
- ६) सरस्वती देवीच्या हातातील वादय ——— आहे.
अ) सतार ब) तुनतुने
क) विणा ड) तानपूरा
- ७) गानकोकीळा ही पदवी ——— या गायिकेस आहे.
अ) श्रेया घोषाल ब) सुलोचना चव्हाण
क) मोगुबाई कुर्डीकर ड) लता मंगेशकर
- ८) दादरा हा ताल ——— या प्रकारांसाठी वापरतात.
अ) चित्रपट गीतांसाठी ब) आरतीसाठी
क) अ व ब दोन्ही ड) यापैकी नाही
- ९) उ. झाकीर हुसेन हे ——— वादक आहेत.
अ) तबला ब) सतार
क) सरोद ड) यापैकी नाही

- 10) ——— हया वादयाचा वापर गोंधळ या लोकगीत प्रकारासाठी होतो.
 अ) तुनतुने ब) मोरचंग
 क) संबळ ड) तबला

11) ज्या वादयांमध्ये तारांचा वापर केला जातो अशा वादयांना ——— वादये असे म्हणतात.
 अ) घनवादय ब) अवनदध वादय
 क) तंतुवादय ड) यापैकी नाही

12) पंजाब प्रांतातील भांगडा या प्रकारासाठी ——— हे वादय वापरतात.
 अ) धनगरी ढोल ब) पंजाबी ढोल
 क) आसामी ढोल ड) यापैकी नाही

13) लावणी या लोकनृत्यांसाठी वापरले जाणारे तंतुवादय ——— हे होय.
 अ) सतार ब) एकतारी
 क) तुनतुने ड) यापैकी नाही

14) तबल्याचे खोड हे ——— पासून बनवले जाते.
 अ) लाकडापासून ब) धातुपासून
 क) फायबरपासून ड) मातीपासून

15) ए. आर. रेहमान यांना ऑस्कर अवॉर्ड ——— या साली मिळाला.
 अ) 2007 ब) 2010
 क) 2009 ड) 2008

16) ही वस्तु तबल्याच्या रचनेत वापरली जात नाही.
 अ) वादी ब) गठढे
 क) खोड ड) तार

प्र.2 टिपा लिहा (कोणतेही चार)

16

- अ) तबला या वादयाची उपयोगीता
ब) महाराष्ट्रातील लावणीनृत्य
क) ताल दादरा
ड) तबलावादनातील दिल्ली घराणे
इ) संगीत दिग्दर्शकाची भूमिका
ई) ताल केरवा

प्र.3 खालील प्रश्नांची उत्तरे लिहा. (कोणतेही चार)

16

- अ) चित्रपटातील संगीताची आवश्यकता लिहा.
ब) चित्रपट संगीत व शास्त्रीय संगीत यांतील फरक
क) सुगम संगीत याविषयी माहिती लिहा.
ड) लोकसंगीताचा चित्रपटातील वापर
इ) तबलावादनातील बनारस घराणे
ई) बाज म्हणजे काय व प्रकार लिहा.

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

16

अ) तबला वादयाचे सचित्र वर्णन करा.

ब) ढोलकी या वादयाचे सचित्र वर्णन करा.

प्र.5 खालील प्रश्नाचे उत्तर लिहा.

16

उ. झाकीर हुसेन यांचे तबलावादनातील योगदान लिहा.

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Max. Marks: 80

16

- Page 1 of 3

- 10) मालती माधव हे ——— यांचे नाटक आहे.
 अ) कालिदास
 क) शुद्रक
 ब) भवभूती
 ड) विशाखदत्त
 - 11) शुद्रकाचे ——— हे महत्वाचे नाटक आहे.
 अ) रमा माधव
 क) मृच्छकटीक
 ब) अग्निप्रवेश
 ड) तो मी नव्हेच
 - 12) विक्रम आणि उर्वशीची कथा ——— नाटकात आहे.
 अ) विक्रमोर्वशीय
 क) गोष्ट तुझी माझी
 ब) गोष्ट स्वर्गाची
 ड) स्वर्गातल्या गोष्टी
 - 13) उरुभंग हे ——— नाटक आहे.
 अ) भासाचे
 क) विशाखदत्ताचे
 ब) कालिदासाचे
 ड) तेंडुलकरांचे
 - 14) भास हे त्यांच्या ——— ओळखले जातात.
 अ) कथेसाठी
 क) आधुनिकतेसाठी
 ब) प्रयत्नासाठी
 ड) औद्योगिकरणासाठी
 - 15) विशाखदत्ताचे ——— हे नाटक महत्वाचे आहे.
 अ) छोटा राक्षस
 क) मुद्रा राक्षस
 ब) मोठा राक्षस
 ड) कपटी राक्षस
 - 16) संस्कृत रंगभूमी ——— म्हणून ओळखली जाते.
 अ) तांत्रिक
 क) यांत्रिक
 ब) संस्कृत
 ड) प्राचीन

प्र.2 टीपा लिहा. (कोणतेही चार)

16

- अ) शुद्रक
ब) कालीदास
क) उत्तररामचरीत
ड) दूतघटोत्कच
इ) स्वप्नवासवदत्ता
ई) भवभूती

प्र.3 कोणत्याही दोन प्रश्नांची उत्तरे द्या.

16

- अ) भरत प्रणीत नाट्यगृहांची रचना मांडा.
ब) वृत्ती म्हणजे काय हे सांगून त्यांचे प्रकार कोणते ते लिहा.
क) कालीदासांची नाट्यसृष्टी यावर सविस्तर लिहा.
ड) मुच्छकटीकम बदल माहिती लिहा.

प्र.4 पुढीलपैकी एका प्रश्नाचे दीर्घ उत्तर लिहा.

16

संस्कृत रंगभूमीच्या सुवर्णकाळाचे वर्णन करा.

किंवा

भारतीय पारंपारीक रंगभूमीच्या ज्हासाची कारणे सांगा.

प्र.5 संस्कृत नाट्य परंपरेचा सविस्तर आढावा घ्या.

16

Seat No.	
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- 9) संहितेमध्ये व्हीएफएक्स म्हणजे ---- होय.
 अ) एक्सव्हीम 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) महाराष्ट्र चित्रपट कंपनीची स्थापना ---- मध्ये झाली.
 अ) 1925 ब) 1930
 क) 1918 ड) यापैकी नाही
- 12) शॉट ही संज्ञा ---- मध्ये वापरतात.
 अ) व्हॉईस रेकॉर्डिंग ब) व्हॉईस एडिटिंग
 क) चित्रीकरण ड) डबिंग
- 13) विशाल भारद्वाज हे ---- नाहीत.
 अ) दिग्दर्शक ब) पटकथा लेखक
 क) संगीतकार ड) यापैकी नाही
- 14) ---- सेन्सॉरशिपचा सामना करणारा पहिला भारतीय चित्रपट आहे.
 अ) राजा हरिश्चंद्र ब) सैरंध्री
 क) सावकारी पाश ड) यापैकी नाही
- 15) श्री. पुंडलिक चित्रपटाचे दिग्दर्शक ---- हे आहेत.
 अ) दादासाहेब फाळके ब) दादासाहेब तोरणे
 क) दादा कोंडके ड) यापैकी नाही
- 16) ---- हे चित्रपट निर्मितीचा भाग नाही.
 अ) कथानक ब) दृक संवाद
 क) पात्रे ड) यापैकी नाही

प्र.2 खालीलपैकी चार प्रश्नांची थोडक्यात उत्तरे लिहा.

16

- अ) दादा कोंडके यांची चित्रपट निर्मिती शैली' यावरती संक्षिप्त टीप लिहा.
 ब) समांतर चित्रपट याविषयी लिहा.
 क) 'सिनेमात रंगांचा वापर' या विषयावर लिहा.
 ड) सामाजिक विकासासाठी चित्रपटाचे महत्त्व यावरती चर्चा करा.
 इ) प्रभात चित्रपट कंपनी यावरती संक्षिप्त टीप लिहा.
 ई) 'बाल चित्र समिती' या विषयावरती लिहा.

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

16

- अ) चित्रपटांमध्ये दिग्दर्शकाचे महत्त्व लिहा.
 ब) चित्रपट म्हणजे काय?
 क) जब्बार पटेल यांचे सविस्तर जीवनचरित्र लिहा.
 ड) मीरा नायर यांच्या चित्रपटांची वैशिष्ट्ये कोणती आहेत.

- प्र.4** खालील प्रश्नांची उत्तरे लिहा. (कोणताही एक) **16**
‘चित्रपटांचा इतिहास’ या विषयावर लेख लिहा.
किंवा
चित्रपटातील विविध घटकांवर चर्चा करा.
- प्र.5** चित्रपट म्हणजे काय? चित्रपट समीक्षेचे विविध घटक स्पष्ट करा. **16**

Seat No.	
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Set P

**M.A. (Mass Communication) (Semester - III) (CBCS) Examination:
March/April-2024
Film Studies (MA23309)**

Day & Date: Wednesday, 22-05-2024
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 function of film.
 - a) Entertain
 - b) Educate
 - c) Inform
 - d) All of these
- 2) National Film Archive based in _____.
 - a) Pune
 - b) Mumbai
 - c) Hyderabad
 - d) Delhi
- 3) Lumiere brothers gave birth to the Cinematography in _____ year.
 - a) 1895
 - b) 1870
 - c) 1850
 - d) None of these
- 4) In 1937, the film _____ won the Best Film Award at the Venice Film Festival.
 - a) Sant Tukaram
 - b) Sant Janabai
 - c) Sant Dnyaneshwar
 - d) None of these
- 5) _____ is known as the father of Indian cinema.
 - a) Balram Nayadu
 - b) Satyajit Ray
 - c) Bhalaji Pendharkar
 - d) None of these
- 6) _____ is the first released movie of Nagraj Manjule.
 - a) Fandry
 - b) Sairat
 - c) Vihir
 - d) None of these
- 7) Pather Panchali cinema is in _____ language.
 - a) Bengali
 - b) Tamil
 - c) Odia
 - d) None of these
- 8) Analysis and evaluation of films means _____.
 - a) Film Criticism
 - b) Film Review
 - c) Both a) and b)
 - 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) Maharashtra film company founded in _____.
 - a) 1925
 - b) 1930
 - c) 1918
 - d) None of these

- 12) Shot term used in _____.
 - a) Voice Recording
 - b) Voice Editing
 - c) Shooting
 - d) Dubbing
- 13) Vishal Bhardwaj is not _____.
 - a) Director
 - b) Screen Writer
 - c) Music Composer
 - d) None of these
- 14) _____ is first Indian movie that undergo censorship.
 - a) Raja Harishchandra
 - b) Sairandhri
 - c) Savakari Pash
 - d) None of these
- 15) _____ is director of Shree Pundalik Movie.
 - a) Dadasaheb Falake
 - b) Dadasaheb Torane
 - c) Dada Kondake
 - d) None of these
- 16) _____ is part of film production phase.
 - a) Plot
 - b) Visual Communication
 - c) Characters
 - d) None of these

Q.2 Answer the following questions. (Any Four)

16

- Write short note on 'Dada Kondake's Film Making Style'.
- Write about Parallel Cinema.
- Write on topic 'Use of Colours in Cinema'.
- Discuss on the importance of film for societal development.
- Write short note on 'Prabhat Film Company'.
- Write on the topic 'Children's Film Society'.

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

16

- Write down importance director in film making.
- What is the cinema?
- Write a detailed biography of Jabbar Patel.
- What are the characteristics of Mira Nayar's cinema?

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

16

Write an article on the 'History of Films'.

OR

Discuss on the elements of film.

Q.5 What are the types of films? Explain the contents of film review.

16

Seat No.	
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Set **P**

M.Com. (Semester - III) (CBCS) Examination: March/April-2024
Entrepreneurship Development (4063-13)

Day & Date: Wednesday, 22-05-2024
 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 undertaken to initiate, maintain or organize a profit oriented business unit.

a) Entrepreneurship	b) Management
c) Organization	d) Co-operative
- 2) Innovation theory was given by _____.

a) Joseph Schumpeter	b) McClelland
c) Knight	d) John Smith
- 3) EDII's mission is to become a catalyst in facilitating first generation entrepreneurs and _____ growth.

a) Industrial	b) SME's
c) Organizational	d) Commercial
- 4) MIDC Act gave birth to MIDC in the year _____.

a) 1961	b) 1960
c) 1963	d) 1962
- 5) _____ refers to a company in the first stages of operation.

a) Stand up	b) Start up
c) Make in India	d) Shining India.
- 6) _____ is the institution that assists entrepreneurs in developing their business and solving problems associated with it.

a) Incubation Centre	b) Make in India
c) Stand up India	d) Start up
- 7) The Formation of MUDRA Bank was announced in _____.

a) Tarun Yojana	b) Shishu Yojana
c) PMMY	d) Kishor Yojana
- 8) _____ brings leadership & direction to projects.

a) HRM	b) Project Management
c) Manufacturing	d) Entrepreneurship Development
- 9) _____ have played a crucial role in the development of manufacturing & export sector of China, Srilanka, Thailand.

a) SME	b) MSME
c) Micro industry	d) Small industry
- 10) _____ is one who always searches for change, responds to it.

a) Manager	b) Director
c) Entrepreneur	d) Employee

B) True Or False.**06**

- 1) Dynamic process is one of the characteristics of entrepreneurship.
- 2) The Uncertainty Bearing Theory is given by McClelland.
- 3) DIC is a central sector scheme.
- 4) SIDBI is a training institute for common people who always dream to become an entrepreneur.
- 5) Standup India scheme aims at promoting entrepreneurship among women & SC/ST.
- 6) MSME's work for the welfare of workers.

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

- a) Give the features of MSME.
- b) What are the functions of SIDBI?
- c) Explain the role of DIC in promoting small scale Enterprise.
- d) Discuss objectives of Entrepreneurship development.

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

- a) Who is an entrepreneur? Give the characteristics of an entrepreneur.
- b) Concept & Importance of Stand up India.

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

- a) Explain in detail the concept of MSME.
- OR**
- b) Explain the concept of Project Management.

Q.5 Attempt any one of the following.**16**

Explain in detail Entrepreneurship Theories.

OR

Explain in detail the concept of MIDC and DIC.

Seat No.	
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Set **P**

M.C.A (Semester - III) (CBCS) Examination: March/April-2024
Fundamental of Web Designing (MSC18310)

Day & Date: Wednesday, 22-05-2024
 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) _____ is a set of rules or procedures, called protocols, that enables computers to exchange information over the Web.
 - a) HyperText Transfer Protocol (HTTP)
 - b) HyperText Transfer Practise (HTTP)
 - c) HigherText Transfer Process (HTTP)
 - d) HyperTech Transfer Program (HTTP)
- 2) The _____ tag delimits the heading of the HTML document.
 - a) <tail>
 - b) <hod>
 - c) <head>
 - d) <body>
- 3) The paragraph tag _____ is used to delimit entire paragraphs of text.
 - a) <para>
 - b) <p>
 - c) <paragraph>
 - d) <graph>
- 4) There are _____ predefined levels of headings.
 - a) Seven
 - b) Five
 - c) Six
 - d) Three
- 5) Use _____ tag for Bold the text.
 - a)
 - b) <c>
 - c) <d>
 - d) <o>
- 6) The table definition itself is defined and delimited by _____ tags.
 - a) <toss>
 - b) <tent>
 - c) <table>
 - d) <top>
- 7) HTML _____ provides a method to use standard GUI elements to display and collect data.
 - a) Firms
 - b) Folder
 - c) Fonts
 - d) Forms
- 8) Use _____, users can easily create and share online forms and surveys, and analyze responses in real-time.
 - a) Google Sheets
 - b) Google Slides
 - c) Google Forms
 - d) Google Docs
- 9) Using _____, Create and collaborate on online spreadsheets in real-time and from any device.
 - a) Google Excel
 - b) Google Microsoft
 - c) Google Access
 - d) Google Sheets

- 10) Using _____, users can store, share, and collaborate on files and folders from your mobile device, tablet, or computer.
- a) Google Analytics
 - b) Google AI
 - c) Google Drive
 - d) Google Data

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

- 1) WWW stands for World Wooden Web.
- 2) HTML stands for HyperText Markup Language.
- 3) There are lots of tags and they are all in pairs; there are Head tags and tail tags.
- 4) The text inside the angled brackets explains the purpose of the tag.
- 5) Whole document is contained between opening < page > and closing < /page > tags.
- 6) Google Sites is a structured wiki and web page creation tool included as part of the free, web-based Google Docs Editors suite offered by Google.

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

- a) What is the Internet?
- b) What do you mean by Website?
- c) What is <body> tag?
- d) Describe Google Search?

Q.3 Answer the following.

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

Q.4 Answer the following.

- a) Explain heading tag in HTML with suitable example? **08**
- b) Discuss in detail working with Hyperlinks in HTML? **08**

Q.5 Answer the following.

- a) State and explain in detail five golden rules of the website design? **08**
- b) Define HTML. Explain in detail the basic structure of a HTML Document? **08**

Q.6 Answer the following.

- a) Discuss the Table tags for creating tables in HTML with suitable example? **08**
- b) State and explain font tag for formatting font styles such as font name, color, size? **08**

Q.7 Answer the following.

- a) State and explain the application of Google for teaching, learning and research? **08**
- b) Discuss various types of Websites with suitable examples? **08**

Seat No.	
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- 8) मराठे आणि इंग्रज यांच्यातील आष्टीची शेवटची लढाई ---- या साली होवून मराठेशाहीचा शेवट झाला.
 अ) 1813 ब) 1818
 क) 1816 ड) 1815
- 9) ---- साली सोलापूर ला रेल्वे सुरू झाली.
 अ) 1860 ब) 1871
 क) 1872 ड) 1873
- 10) सोलापूर शहराबरोबरच ---- या शहरात कापडगिरण्या सुरू झाल्या.
 अ) पंढरपूर ब) माळशिरस
 क) बार्शी ड) मोहोळ
- 11) सोलापूर चा पहिला हुतात्मा म्हणून ---- यांना ओळखले जाते.
 अ) शंकर शिवदारे ब) कुर्बान हुसेन
 क) जगन्नाथ शिंदे ड) मल्लप्पा धनशेट्टी
- 12) ---- या गिरणी कामगार युनियनने स्थापनेपासूनच सोलापूरच्या गिरणी कामगारांच्या प्रश्नावर सतत काम केले.
 अ) कामगार युनियन ब) लाल बावटा युनियन
 क) सोलापूर कामगार युनियन ड) यापैकी नाही
- 13) 20 व्या शतकात कापड उद्योगाच्या भरभराटीवरून सोलापूर चा उल्लेख ---- हा केला जात होता.
 अ) गिरणगाव ब) सोन्नलगी
 क) संदलपूर ड) यापैकी नाही
- 14) सोलापूर शहरात ---- यांची महासमाधी आहे.
 अ) मल्लिकार्जून ब) सिद्धरामेश्वर
 क) शेठ माणिकचंद ड) यापैकी नाही
- 15) वारकरी संप्रदायातील प्रसिद्ध पंढरपूर हे शहर ---- या नदीकिनारी वसले आहे.
 अ) नीरा ब) चंद्रभागा
 क) सीना ड) माण
- 16) सोलापूर च्या चार हुतात्म्यांना कधी फाशी देण्यात आली?
 अ) 12 जाने 1931 ब) 12 जाने 1932
 क) 12 जाने 1933 ड) 12 जाने 1934

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

16

- अ) सोलापूर मधील पेशवेकाळात स्थापन झालेल्या पेठांचे वर्णन करा.
 ब) सोलापूर आणि औरंगजेब संबंध
 क) सोलापूर चा कापड व्यवसाय
 ड) सोलापूर जिल्ह्यातील पिके व पाणीपुरवठा
 इ) सविनय कायदेभंग चळवळ आणि सोलापूर
 ई) मार्शल लॉ

- प्र.3 खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही दोन) 16**
- अ) सोलापूर जिल्ह्यातील भक्ती संप्रदायाचे समाजात असलेले महत्त्व स्पष्ट करा.
 ब) सिद्धेश्वर महाराज आणि त्यांच्या कार्याचे वर्णन करा.
 क) अक्कलकोट येथील शस्त्र संग्रहालयाची माहिती सांगा.
 ड) सोलापूर गिरणी कामगार चळवळी विषयी थोडक्यात सांगा.
- प्र.4 खालील प्रश्नाचे उत्तर लिहा. (कोणताही एक) 16**
- सोलापूरचा मार्शल लॉ आणि असहकार चळवळ यांचे स्वातंत्र्य चळवळीतील योगदानाविषयी माहिती लिहा.
- किंवा**
- सोलापूर जिल्ह्यातील निवडक गढी व वाडे याविषयी वर्णन करा.
- प्र.5 खालील प्रश्नाचे उत्तर लिहा. 16**
- सोलापूरच्या प्राचीन आणि मध्ययुगीन इतिहासाचे सविस्तर वर्णन करा.

M.A. (Semester - III) (CBCS) Examination: March/April-2024
HISTORY (CAMPUS)
History of Solapur (MAH221309)

Max. Marks: 80

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

16

- 1) At Siddhapur in Solapur District Archeological remains of _____ period have been found.
a) Shilahar
b) Satavahana
c) Maurya
d) None of these
- 2) Excavations at Mudvi in 2003 proved that the _____ dynasty ruled Solapur district.
a) Yadav
b) Pallava
c) Satavahana
d) Chalukya
- 3) The researcher deduces a _____ culture from the soil and archaeological remains.
a) Period
b) Social situation
c) a and b
d) None of these
- 4) _____ place in Solapur district is known as Dakshin Kashi.
a) Akkalkot
b) Tuljapur
c) Pandharpur
d) Aran
- 5) Solapur district was identified _____ grainary.
a) Wheat
b) Millet
c) Jawar
d) Gram
- 6) Solapur city is made up of total _____ villages.
a) Eleven
b) Twelve
c) Thirteen
d) Sixteen
- 7) Bhuikot Fort of Solapur was built during the _____ period.
a) Adil Shah
b) Hemad Panth
c) Nizamshah
d) Hassangangu Bahamani
- 8) Last Battle of Ashti between Marathas and British in _____.
a) 1813 A.D.
b) 1818 A.D.
c) 1816 A.D.
d) 1815 A.D.
- 9) The railway to Solapur was started in _____.
a) 1860 A.D.
b) 1871 A.D.
c) 1872 A.D.
d) 1873 A.D.
- 10) Along with Solapur city -Textile mills in _____ city started.
a) Pandharpur
b) Malshiras
c) Barshi
d) Mohol

- 11) _____ Known as the first martyr of Solapur.
 a) Shankar Shivdare b) Qurban Hussain
 c) Mallappa Dhanshetti d) Jagannath Shinde
- 12) _____ mill workers union worked continuously on the issue of mill workers of Solapur since its inception.
 a) Labor Unions b) Lal Bawata Union
 c) Solapur Labor Union d) None of these
- 13) Solapur was mentioned as a _____ in 20th century due to flourishing of textile industry.
 a) Girangaon b) Sonnlagi
 c) Sandalpur d) None of these
- 14) _____ mausoleum is in Solapur city.
 a) Mallikarjun b) Siddharameshwar
 c) Sheth Manikchand d) None of these
- 15) The town of Pandharpur, famous for Varkari sect, is situated on the banks of _____ river.
 a) Neera b) Chandrabhaga
 c) Seena d) Maan
- 16) The four martyrs of Solapur were hanged in _____ year.
 a) 12 Jan 1931 b) 12 Jan 1932
 c) 12 Jan 1933 d) 12 Jan 1934

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

- a) Describe the Peths established during the Peshwa period in Solapur.
 b) Solapur and Aurangzeb relationship.
 c) Textile business of Solapur.
 d) Crops and water supply in Solapur district.
 e) Civil Disobedience Movement and Solapur.
 f) Marshal law

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

- a) Explain the importance of Bhakti sect in Solapur district in the society.
 b) Describe Siddheshwar Maharaj and his work.
 c) Give information about Arms Museum at Akkalkot.
 d) Explain in brief about Solapur mill workers movement.

Q.4 Answer the following Question in Detail. (Any One)**16**

Write information about Marshal law of Solapur and contribution of non-cooperation movement in freedom movement.

OR

Describe the selected Gadhi and Wade of Solapur district.

Q.5 Answer the following Question in Detail.**16**

Describe the ancient and medieval history of Solapur in detail.

Seat No.	
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Psychology in Everyday Life (MAAP01308)

Max. Marks: 80

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

16

- 1) औपचारिक शाखा म्हणून मानसशास्त्र कोणत्या शतकात सुरू झाले?
अ) 18 वे शतक ब) 21 वे शतक
क) 20 वे शतक ड) 19 वे शतक
- 2) मानसशास्त्राच्या उत्पत्तीचे प्राथमिक लक्ष काय आहे?
अ) मेंदूच्या शरीरशास्त्राचा अभ्यास करणे
ब) वर्तन आणि मानसिक प्रक्रिया समजून घेणे
क) मेंदूतील रासायनिक अभिक्रियांचे विश्लेषण करणे
ड) सामाजिक परस्परसंवादाची तपासणी करणे
- 3) शारीरिक आरोग्य आणि आजारावर परिणाम करणारे मानशास्त्रीय घटक समजून घेण्याशी संबंधित मानसशास्त्राची कोणती शाखा आहे.
अ) क्लिनिकल मानसशास्त्र ब) आरोग्य मानसशास्त्र
क) फॉरेन्सिक मानसशास्त्र ड) विकासात्मक मानसशास्त्र
- 4) स्व-व्यवस्थापन तंत्रांचे प्राथमिक उद्दिष्ट काय आहे?
अ) इतरांना कार्यक्षमतेने व्यवस्थापित करणे
ब) सर्व ताण टाळणे
क) स्वतःचे प्रभावीपणे व्यवस्थापन करणे
ड) विलंब
- 5) कोणत्या प्रकारचा ताण अनेकदा "चांगला" तणाव मानला जातो तो कार्यप्रदर्शनास प्रेरित आणि वाढवू शकतो?
अ) युस्ट्रेस ब) दीर्घकालीन ताण
क) तीव्र ताण ड) त्रास
- 6) शरीरातील मुख्य तणाव संप्रेरक कोणता आहे, जो तणावाच्या प्रतिसादात सोडला जातो?
अ) डोपामाइन ब) सेरोटोनिन
क) एंडोर्फिन ड) कोर्टिसोल

- 7) तणाव व्यवस्थापनाचे प्राथमिक उद्दिष्ट काय आहे?
 अ) एखाद्याच्या जीवनातील तणावाचे सर्व स्त्रोत काढून टाकणे
 ब) तणावाचा सामना करण्यासाठी आणि कमी करण्यासाठी धोरणे विकसित करणे
 क) तणाव आणि त्याचे परिणाम दुर्लक्षित करण्यास प्रोत्साहित करणे
 ड) लवचिकता निर्माण करण्यासाठी अधिक ताण वाढवणे
- 8) रागाशी संबंधित शारीरिक प्रतिक्रिया कोणती आहे?
 अ) हृदय गती आणि रक्तदाब कमी होणे
 ब) शांत आणि शांत भावना
 क) हृदय गती वाढणे आणि एड्रेनालाईन सोडणे
 ड) बोधनिक कार्यात वृद्धी
- 9) खालीलपैकी कोणता राग व्यक्त करण्याचा आणि नियंत्रित करण्याचा निरोगी मार्ग नाही?
 अ) ते दाबणे आणि समस्येकडे लक्ष न देणे
 ब) तुमचा विश्वास असलेल्या एखाद्या व्यक्तीशी रागाच्या स्त्रोताबद्दल बोलणे
 क) तणाव मुक्त करण्यासाठी शारीरिक हालचालींमध्ये गुंतणे
 ड) विश्रांती तंत्राचा सराव करणे
- 10) राग व्यवस्थापन तंत्राचे प्राथमिक उद्दिष्ट काय आहे?
 अ) एखाद्याच्या भावनिक संचातून राग पूर्णपणे काढून टाकणे
 ब) संघर्ष टाळण्यासाठी राग दाबणे आणि लपवणे
 क) निरोगी आणि रचनात्मक पद्धतीने राग ओळखणे, समजून घेणे आणि नियंत्रित करणे
 ड) काही वेळा चूक झाल्यास आक्रमकपणे राग व्यक्त करणे
- 11) खालीलपैकी कोणते व्यसनाचे सामान्य वैशिष्ट्य आहे?
 अ) उत्तेजनार्थ पदार्थ किंवा वर्तनाचा अधूनमधून आणि नियंत्रित वापर
 ब) तीव्र ईच्छा किंवा व्यसन सोडल्याचा लक्षणांचा पूर्ण अभाव
 क) नियंत्रण गमावणे आणि नकारात्मक परिणाम असूनही सतत वापर
 ड) कधीही सोडण्याची मजबूत क्षमता
- 12) व्यसनाच्या विकासामध्ये योगदान देणारा एक सामान्य घटक कोणता आहे?
 अ) मजबूत इच्छाशक्ती आणि आत्म-नियंत्रण
 ब) व्यसनाधीन पदार्थ किंवा वर्तणुकीशी संपर्काचा अभाव
 क) अनुवांशिक, पर्यावरणीय आणि मानसिक घटक
 ड) समयस्कांचा दबाव
- 13) ——— मानसशास्त्राचे क्षेत्र अंतर्गत मानसिक प्रक्रियांचा अभ्यास करते, जसे की समस्या सोडवणे, स्मरणशक्ती, शिकणे आणि भाषा.
 अ) चिकित्सक मानसशास्त्र ब) आरोग्य मानसशास्त्र
 क) बोधनिक मानसशास्त्र ड) विकासात्मक मानसशास्त्र

- 14)** तुमचे वर्तन, विचार आणि भावनांचे उत्पादनक्षम मार्गाने नियमन करण्याची क्षमता ———.
- अ) स्व—व्यवस्थापन ब) स्व—प्रेरणा
क) आत्म—जागरूकता ड) आत्म—आत्मविश्वास
- 15)** ——— हा रागाचा प्रकार नाही.
- अ) निष्क्रिय राग ब) भीतीवर आधारित राग
क) अस्थिर राग ड) अभ्यासाचा राग
- 16)** मद्यपानामध्ये ——— हे सामान्य लक्षण आहे.
- अ) दारूची लालसा ब) दारूची भीती
क) दारू टाळणे ड) अधूनमधून दारू पिणे

प्र.2 थोडक्यात उत्तर लिहा. (कोणतेही चार)

16

- अ) मानसशास्त्राची उत्पत्ती स्पष्ट करा.
ब) मानसशास्त्राचा मानवतावादी दृष्टिकोन स्पष्ट करा.
क) मानसशास्त्राच्या कोणत्याही दोन शाखा स्पष्ट करा.
ड) स्वतःचे व्यवस्थापन का महत्त्वाचे आहे ते स्पष्ट करा.
ई) तणाव काय आहे आणि त्याची सामान्य लक्षणे स्पष्ट करा.
फ) रागाची व्याख्या करा आणि रागाचे परिणाम स्पष्ट करा.

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

16

- अ) तणावाचे प्रकार स्पष्ट करा.
- ब) तणावाचे स्रोत स्पष्ट करा.
- क) WHO चे ताण व्यवस्थापन कौशल्य स्पष्ट करा.
- ड) राग म्हणजे काय? रागाचे प्रकार स्पष्ट करा.

प्र.4 खालील प्रश्नांची विस्तृत उत्तर लिहा. (कोणतेही एक)

16

- अ) तणाव व्यवस्थापनाचे मानसशास्त्रीय तंत्र स्पष्ट करा.
ब) राग व्यवस्थापनाचे तंत्र स्पष्ट करा.

प्र.5 खालील प्रश्नाचे विस्तृत उत्तर लिहा.

16

- अ) मद्यपान व्यसनाधीनता म्हणजे काय? मद्यपानाची कारणे आणि उपचार स्पष्ट करा.

Seat No.	
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Set P

**M.A. (Applied Psychology) (Semester - III) (CBCS) Examination:
March/April-2024**

Psychology in Everyday Life (MAAP01308)

Day & Date: Wednesday, 22-05-2024
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 Multiple Choice Questions.

16

- 1) In which century did psychology as a formal discipline begin?
 - a) 18th century
 - b) 21st century
 - c) 20th century
 - d) 19th century
- 2) What is the primary focus of psychology's origin?
 - a) Studying the brain's anatomy
 - b) Understanding behavior and mental processes
 - c) Analyzing chemical reactions in the brain
 - d) Investigating social interactions
- 3) What branch of psychology is concerned with understanding the psychological factors that influence physical health and illness?
 - a) Clinical psychology
 - b) Health psychology
 - c) Forensic psychology
 - d) Developmental psychology
- 4) What is the primary goal of self-management techniques?
 - a) Managing others efficiently
 - b) Avoiding all stress
 - c) Managing oneself effectively
 - d) Procrastination
- 5) Which type of stress is often considered "good" stress that can motivate and enhance performance?
 - a) Eustress
 - b) Chronic stress
 - c) Acute stress
 - d) Distress
- 6) What is the body's main stress hormone, released in response to stressors?
 - a) Dopamine
 - b) Serotonin
 - c) Endorphin
 - d) Cortisol
- 7) What is the primary goal of stress management?
 - a) To eliminate all sources of stress in one's life
 - b) To develop strategies to cope with and reduce the impact of stress
 - c) To encourage ignoring stress and its effects
 - d) To promote more stress to build resilience
- 8) What are the physiological responses associated with anger?
 - a) Decreased heart rate and blood pressure
 - b) Calm and peaceful feelings
 - c) Increased heart rate and adrenaline release
 - d) Enhanced cognitive function

- 9) Which of the following is NOT a healthy way to express and manage anger?
- a) Suppressing it and not addressing the issue
 - b) Talking about the source of anger with someone you trust
 - c) Engaging in physical activity to release tension
 - d) Practicing relaxation techniques
- 10) What is the primary goal of anger management techniques?
- a) To eliminate anger entirely from one's emotional repertoire.
 - b) To suppress and hide anger to avoid conflicts.
 - c) To recognize, understand, and control anger in a healthy and constructive manner.
 - d) To express anger aggressively at some time if a mistake is made.
- 11) Which of the following is a common characteristic of addiction?
- a) Occasional and controlled use of a substance or behavior
 - b) A complete lack of cravings or withdrawal symptoms
 - c) Loss of control and continued use despite negative consequences
 - d) A strong ability to quit at any time
- 12) What is one common factor contributing to the development of addiction?
- a) Strong willpower and self-control
 - b) A lack of exposure to addictive substances or behaviors
 - c) Genetic, environmental, and psychological factors
 - d) Peer pressure
- 13) field of psychology study the internal mental processes, such as problem solving, memory, learning, and language.
- a) Clinical Psychology
 - b) Health Psychology
 - c) Cognitive psychology
 - d) Developmental Psychology
- 14) _____ ability to regulate your behaviors, thoughts, and emotions in a productive way.
- a) Self-Management
 - b) Self-Motivation
 - c) Self-Awareness
 - d) Self-Confidence
- 15) _____ is not a type of Anger
- a) Passive Anger
 - b) Fear based Anger
 - c) Volatile Anger
 - d) Anger of Study
- 16) In Alcoholism _____ is common symptom.
- a) Craving of Alcohol
 - b) Fear of Alcohol
 - c) Avoidance of alcohol
 - d) Occasionally drinking alcohol

Q.2 Write short answer. (Any 4 out of 6)**16**

- a) Explain the origin of Psychology.
- b) Explain Humanistic approach of Psychology.
- c) Explain any two branches of Psychology.
- d) Explain why self- Management is important.
- e) Explain what is stress and its general signs.
- f) Define anger and explain the effects of anger.

Q.3 Answer the following question. (Any 2 out of 4)**16**

- a) Explain the types of stress.
- b) Explain the sources of Stress.
- c) Explain stress management skills by WHO.
- d) What is anger? Explain the types of anger.

- Q.4 Broad Descriptive Question (Any 1) 16**
- a) Explain the psychological techniques of stress Management.
 - b) Explain the techniques of anger management.

- Q.5 Answer the following questions in detail. 16**
- What is Alcoholism? Explain the causes and treatments of Alcoholism.

Seat No.	
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Set **P**

M.B.A. (Semester - III) (CBCS) Examination: March/April-2024
Entrepreneurship Development (4063-13)

Day & Date: Wednesday, 22-05-2024
 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 Multiple Choice Questions.**16**

- 1) Which of the following is alternatively called corporate venturing?
 - a) Intrapreneurship
 - b) Entrepreneurship
 - c) Act of stating a new venture
 - d) Offering new products by an existing company
- 2) According to Schumpeter, what is the key driver of entrepreneurship?
 - a) Profit motive
 - b) Market demand
 - c) Innovation
 - d) Resource availability
- 3) What distinguishes innovation from invention and creativity?
 - a) Scale of impact
 - b) Commercialization
 - c) Originality
 - d) Technical complexity
- 4) 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.
- 5) What does NSIC (National Small Industries Corporation) contribute to Entrepreneurship Development?
 - a) Agricultural research
 - b) Financial support for small industries
 - c) Promoting large-scale corporations
 - d) Environmental sustainability
- 6) Creativity is _____ process.
 - a) Imaginative.
 - b) Productive
 - c) Romanticism
 - d) Knowledge
- 7) Social attitude is one of the important problems of a _____ Entrepreneur.
 - a) Drone
 - b) Adoptive
 - c) Fabian
 - d) Women
- 8) What distinguishes an Entrepreneur from a Manager?
 - a) Risk-taking
 - b) Decision-making
 - c) Planning
 - d) Leadership
- 9) What is the primary focus of Rural Entrepreneurship?
 - a) Maximizing profits
 - b) Technological advancements
 - c) Economic development in rural areas
 - d) Urbanization

- 10) What theory is associated with McClelland in the context of entrepreneurship?
a) Innovation Theory b) X-Efficiency Theory
c) Theory of High Achievement d) Theory of Profit
- 11) What is the role of District Industrial Centers (DIC) in Entrepreneurship Development?
a) Providing agricultural support
b) Offering financial support and guidance
c) Promoting social entrepreneurship
d) Fostering international trade
- 12) The _____ theory of entrepreneurship is based on the degree of inefficiency of use resources and considers Market Imperfections as opportunities for entrepreneurial activities.
a) Innovation b) High Achievement
c) X-Efficiency d) Profit
- 13) According to Everette Hagen, 'withdrawal of status respect' leads to following behavioural patterns except one _____.
a) Retreatist b) Ritualist
c) Reformist d) Rationlization
- 14) Which of these is not a category of external forces that affects a business?
a) Political force b) Technological forces
c) Economic forces d) Socio-economic forces
- 15) The term "Entrepreneur" has been derived from the word "entreprendre" which means _____.
a) To give b) To undertake
c) To choose d) To decide
- 16) What is the purpose of Feasibility Reports in entrepreneurship?
a) Predicting market trends
b) Assessing the viability of a business idea
c) Regulatory compliance
d) Employee engagement

Q.2 Answer the following (Short Answers / Short Problem) 16
a) The Process of Creating a New Entrepreneurial Venture.
b) Innovation Theory by Schumpeter.

Q.3 Answer the following (Short Answers/ Short Problem) 16
a) Define and explain the concept of Women Entrepreneurs and challenges faced by them.
b) Concept of Innovation and its types.

Q.4 Identify and explain external influences on Entrepreneurship Development. 16

OR

Explain the concept of entrepreneur and List entrepreneurial traits and competencies.

Q.5 Case Study:
Retail entrepreneurship development in India: A case study of big bazaar

The Indian retail industry has strong linkages with the economic growth and development of the economy. India is one of the largest emerging markets. It is one of the largest economies in the world in terms of purchasing power. Retailing in India is at an emerging stage of its evolution. Organized retailing has become more popular in big cities in India and most of the metropolitan cities and other big cities are flooded by modern organized retail stores. Many semi-rural areas have also witnessed entry of such organized retail outlets. Indian retail industry is currently estimated at US\$ 490 billion. India's retail market is expected to touch a whopping Rs 47 trillion (US\$ 782.23 billion) by 2016-17, expanding at a compounded annual growth rate (CAGR) of 15 percent, according to a study by a leading industrial body. The total organized retail supply in 2013 stood at approximately 4.7 million square feet (sq. ft), witnessing a strong year-on-year (y-o-y) growth of about 78 percent over the total mass supply of 2.5 million sq. ft in 2012. The foreign direct investment (FDI) inflows in single-brand retail trading during the period April 2000-January 2014 stood at US\$ 98.66 million. Retailing as a whole contributes almost 14- 15% of India's GDP and employs almost 8% of India's employable population.

Big Bazaar is credited with bringing organized mega retailing to India. The project was conceived as a uniquely Indian hypermarket in a format that combined the look, touch and feel of Indian bazaars with the comfort, convenience and quality that modern retailing brings. Launched in August 2001, Big Bazaar has now become the iconic destination of modern retailing for all sections of Indian consumers. There are more than hundred Big Bazaar stores in big cities as well as smaller towns like Sangli, Durgapur, Panipat, Palakkad, Ambala, Meerut, Kolhapur and Haldia. Attracting over 100 million customers every year, it has democratized shopping in India and become synonymous with great promotions that offer quality products at affordable prices. This typical Big Bazaar store offers over 1,60,000 products across categories like apparel, general.

Questions:

- 1) What are the entrepreneurial opportunities you can find in retail sector in India?
- 2) How organized retailing has become more popular in big cities in India?
- 3) How Big Bazaar retail store would retain its business in today's competitive world among retail firms?