

Seat
No.

M.Sc. (Semester - I) (New) (NEP CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE

Introduction to Environment and Ecology (2328101)

Day & Date: Friday, 05-01-2024

Max. Marks: 60

Time: 03:00 PM To 05:30 PM

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

Q.1 A) Choose correct alternative.**08**

- 1) _____ is the cause for loss of biodiversity.
 - a) climate change
 - b) global warming
 - c) ozone depletion
 - d) All of the above
- 2) Which of the following organisms are used as components of biofertilizers:
 - a) Blue Green Algae only
 - b) Coliform bacteria and mushrooms
 - c) N-fixing bacteria only
 - d) Blue Green Algae and N fixing bacteria
- 3) "Environmental day" is celebrated each year on _____.
 - a) 23 March
 - b) 5 June
 - c) 5 January
 - d) 23 July
- 4) Which of the following organization work for biodiversity conservation _____.
 - a) WWF
 - b) IUCN
 - c) Green Peace
 - d) All of these
- 5) Following national park is specially developed for birds-_____.
 - a) Keoladeo National Park
 - b) Sanjay Gandhi National Park
 - c) Kanha National Park
 - d) Corbett National Park
- 6) Sunder Lal Bahuguna is associated with _____.
 - a) Silent Valley Movement
 - b) Chipko Movement
 - c) Appiko Movement
 - d) Baliyapal Movement
- 7) Valley of flowers is situated in _____.
 - a) Hawaii
 - b) Virunga Mountain
 - c) Himalaya
 - d) Alps
- 8) Green revolution is associated with _____.
 - a) Sericulture
 - b) Silviculture
 - c) fish culture
 - d) Agriculture

B) Fill in the blanks.**04**

- 1) _____ is the state animal of Maharashtra.
- 2) Mangroves are found in _____.
- 3) A process whereby water bodies receive excess nutrients that stimulate excessive plant growth is called as _____.
- 4) UNFCCC stands for _____.

- Q.2 Answer the following questions. (Any Six) 12**
- a) World Environmental Day
 - b) Define Environmental Education.
 - c) Concept of Hunting and Gathering.
 - d) Define NGOs
 - e) Define energy pyramid.
 - f) What is Difference between gaseous cycle and sedimentary cycle?
 - g) What is Ecotone?
 - h) Define Succession
- Q.3 Answer the following questions. (Any Three) 12**
- a) What is carrying capacity? What is the effect of growing population on earth?
 - b) Role of media in environmental protection.
 - c) Discuss about the importance of Environmental Education.
 - d) Describe various application of environmental Science.
- Q.4 Answer the following questions. (Any Two) 12**
- a) Types of Ecological pyramid and its characteristics.
 - b) Desert biome with its floral and faunal components.
 - c) Explain the Succession: causes, types and general process.
- Q.5 Answer the following questions. (Any Two) 12**
- a) Explain the characteristics of population ecology with suitable example.
 - b) Write in brief about human impact on environment and its consequences.
 - c) Explain in brief Food chain, Food web and Tropic level of Ecosystem.

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M.Sc. (Semester - I) (New) (NEP CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE

Environmental Chemistry & Instrumentation techniques (2328102)

Day & Date: Sunday, 07-01-2024

Max. Marks: 60

Time: 03:00 PM To 05:30 PM

- Instructions:** 1) All question are compulsory
 2) Figure to right indicate full marks.

Q.1 A) Choose correct alternatives (MCQ)

08

- 1) _____ is described as the number of gram or mole equivalents of solute present in 1 lit of solution.
 - a) Molarity
 - b) Normality
 - c) 1 Mole
 - d) Mole fraction
- 2) Depletion of the ozone layer is caused due to _____.
 - a) Ferrocene
 - b) Fullerenes
 - c) Freons
 - d) Polyhalogens
- 3) Find the incorrect statement _____.
 - a) BOD value of clean water is less than 5 ppm.
 - b) Drinking water pH should be between 5.5-9.5.
 - c) Carbon, sulphur and nitrogen oxides are the most widespread air pollutants.
 - d) Dissolved oxygen concentration below 5 ppm is ideal for the growth of fish.
- 4) Find the secondary pollutant among these _____.
 - a) PAN
 - b) N₂O
 - c) SO₂
 - d) CO₂
- 5) Beer's law states that the intensity of light decreases with respect to _____.
 - a) Concentration
 - b) Distance
 - c) Composition
 - d) Volume
- 6) In Flame emission photometers, the measurement of _____ is used for qualitative analysis.
 - a) Colour
 - b) Intensity
 - c) Velocity
 - d) Frequency
- 7) Which of the following is used to prevent germination of fungal spores?
 - a) Fungicides
 - b) Insecticides
 - c) Nematicides
 - d) Acaricides
- 8) Which of the oxide of nitrogen is not a common pollutant?
 - a) N₂O₅
 - b) N₂O
 - c) NO
 - d) NO₂

- B) Fill in the blanks.** **04**
- 1) Mole fraction is defined as the _____ of a solution divided by the total number of moles of all of the components in the solution.
 - 2) A colloid is a mixture and its components can be separated by the technique known as _____.
 - 3) The role of an indicator in a reaction is to detect the _____ of the titration.
 - 4) The primary objective of titration is to find the _____ of an unknown acid or base.

- Q.2 Answer the following (Any six)** **12**
- a) Discuss the monitoring techniques and methodology for water.
 - b) Discuss role and importance of analytical techniques in analysis of environmental samples.
 - c) Discuss the saturated and unsaturated hydrocarbons.
 - d) Briefly discuss chemistry of environmental segment.
 - e) Explain the chemical properties of soil.
 - f) Write on energy and forms of energy.
 - g) Explain Valancy and Molecular weight.
 - h) Discuss the soap and detergent.

- Q.3 Answer the following (Any three)** **12**
- a) Write informative note on Gibbs Energy.
 - b) Discuss Atmospheric chemistry with chemical composition of air.
 - c) Explain diagrammatically nutrient pathways.
 - d) Briefly discuss the Thermo-chemical and Photochemical reactions in the atmosphere.

- Q.4 Answer the following (Any two)** **12**
- a) Discuss the role and importance of Analytical Techniques in analysis of environmental samples.
 - b) Diagrammatically explain Flamespectrophotometry and Fluorimetry.
 - c) Discuss the Atomic Absorption Spectrophotometer with IR Spectrophotometer.

- Q.5 Answer the following (Any two)** **12**
- a) Discuss various monitoring methods for water analysis.
 - b) What is Chromatographic Techniques? Discuss Thin layer GC and Gas Liquid Chromatography.
 - c) Discuss X-ray Florescence and X-ray diffraction.

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**M.Sc. (Semester - I) (New) (NEP CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE**

Current Environmental Issues and Problems of India (2328107)

Day & Date: Tuesday, 09-01-2024
Time: 03:00 PM To 05:30 PM

Max. Marks: 60

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

Q.1 A) Choose correct alternative. (MCQ) 08

- 1) Carbon dioxide is primarily called a greenhouse gas because.
 - a) Traps heat
 - b) Traps light
 - c) Traps warm currents
 - d) Release Wave
- 2) Which of the following facts is incorrect?
 - a) Global warming is the rise in the average temperature of the earth's climate system
 - b) Eutrophication is observed in water bodies
 - c) The greenhouse effect is a natural phenomenon
 - d) Ozone is harmless to breathe
- 3) The main contributors of acid rain are _____.
 - a) sulphur oxides and carbon oxides
 - b) nitrogen oxides and sulphur oxides
 - c) carbon dioxide and carbon monoxide
 - d) nitrogen oxides and carbon oxides
- 4) How are electronic items dangerous?
 - a) They degrade over time, releasing cancer-causing chemicals into the air
 - b) Lead and mercury in components can cause metabolic changes in users
 - c) They leach toxic metals in landfills and into ground water
 - d) They create electromagnetic fields that interfere with animal reproduction
- 5) Which of the following pollutants are responsible for the cause of SMOG?
 - a) From incinerators
 - b) Emissions from vehicles
 - c) Both incinerators and emissions from vehicles
 - d) None of the above
- 6) In which year was the Ganga Action Plan Action plan launched?
 - a) 1965
 - b) 1975
 - c) 1985
 - d) 1995
- 7) Who were the greatest participant in Chipko movement?
 - a) Village elders
 - b) Village women
 - c) Village youth
 - d) Village children

- 8) CSR stands for _____.
- Corporation Social Responsibility
 - Corporate Social Responsibility
 - Corporate Social Resonance
 - Cooperation Social Responsibility

B) Fill in the blanks OR write true/false.**04**

- Coal is a _____ energy resource.
- _____ is considered a bioweapon?
- Underground water is safest and not polluted.
 - True
 - False
- Chipko movements was carried out by people against degradation of forests to safeguard environment.
 - Ture
 - false

Q.2 Answer the following. (Any six)**12**

- What is the main problem of desertification?
- Why to study eco-terrorism?
- How does sustainable development impact our society?
- What are the main problems of drought?
- What is the purpose of interlinking rivers?
- What is the cause of Tehri dam conflict?
- What is sustainability?
- What are the three domains of CSR?

Q.3 Answer the following. (Any Three)**12**

- What is climate change? Is it different from global warming?
- Explain role of IUCN in conserving biodiversity.
- Write note on Citizen Participation in Environmental Decisions.
- Discuss how conservation of Biodiversity and Forests for Survival of human.

Q.4 Answer the following. (Any Two)**12**

- What is E-waste? What are major problems with e-waste? Explain in detail.
- Write detail note on Chipko Movement.
- Why conservation of Water is important in ecosystem? Explain in detail.

Q.5 Answer the following. (Any Two)**12**

- Explain Greenhouse Effect and Energy Crisis.
- Write detail note on Silent Valley Movement.
- Describe Life Cycle Assessment Studies for Organizations.

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M.Sc. (Semester - I) (New) (NEP CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Biodiversity and Conservation (2328108)

Day & Date: Tuesday, 09-01-2024
 Time: 03:00 PM To 05:30 PM

Max. Marks: 60

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

- Q.1 A) Choose correct alternative. (MCQ) 08**
- 1) Biogeographic zones in India are divided into _____ biotic provinces.
 - a) Ten
 - b) Twenty-Five
 - c) Twelve
 - d) Twenty
 - 2) A taxon with restricted geographical distribution is termed as _____.
 - a) Rare
 - b) Vulnerable
 - c) Dominant
 - d) Endemic
 - 3) A _____ species is a plant or animal that plays a unique and crucial role in the way an ecosystem function.
 - a) Keystone
 - b) Perfumes
 - c) Endemic
 - d) Extinct
 - 4) A _____ is a biogeographic region with a significant reservoir of biodiversity that is under threat from humans.
 - a) Wildlife Sanctuary
 - b) Wildlife Corridor
 - c) Wildlife Habitat
 - d) Biodiversity Hotspot
 - 5) _____ is the natural environment in which an organism lives, or the physical environment that surrounds a species.
 - a) Biome
 - b) Ecosystem
 - c) Habitat
 - d) National Park
 - 6) Mega diversity regions in India include Himalaya and _____.
 - a) Gangetic Plains
 - b) Eastern Ghats
 - c) Deccan Peninsula
 - d) Western Ghats
 - 7) The Wildlife (Protection) Act was enacted by the Parliament of India on _____ for the protection of wildlife in the country.
 - a) September 09, 1972
 - b) September 09, 1973
 - c) September 11, 1972
 - d) September 10, 1973
 - 8) Project _____ was launched in India in 2005 for conservation.
 - a) Rhino
 - b) Mangroves
 - c) Tiger
 - d) Elephant

- B) Write True / False -** **04**
- 1) Biogeography is the study of the distribution of species and ecosystems in geographic space and through geological time.
 - 2) According to Myers et al. (2000) there are 30 biodiversity hotspots in the world.
 - 3) Allelopathy is a biological phenomenon by which an organism produces one or more biochemicals that influence the growth, survival and reproduction of other organisms.
 - 4) Coral reefs are the examples of fresh water ecosystem.

- Q.2 Answer the following. (Any six)** **12**
- a) Describe Biopiracy.
 - b) Explain Bioprospecting.
 - c) Define keystone species.
 - d) Write about Project Turtles.
 - e) Explain diversity-stability relationship.
 - f) Describe Gamma diversity.
 - g) Write about Impact of exotic species.
 - h) What is mean by REDD.

- Q.3 Answer the following. (Any three)** **12**
- a) Write a note on RAMSAR sites in India.
 - b) Describe various traditional biodiversity conservation practices in India.
 - c) Explain Diversity trends of different ecosystem.
 - d) Enlist all Global Environmental changes & explain it.

- Q.4 Answer the following. (Any two)** **12**
- a) Define biodiversity, its types and measuring of biodiversity.
 - b) Describe Mega diversity regions of India.
 - c) Explain Existing conservation projects.

- Q.5 Answer the following. (Any two)** **12**
- a) Effects of Human interference in habitat destruction and Human & Wildlife Conflicts.
 - b) Explain In-situ and ex-situ conservation
 - c) Write on Extinct, Endangered and Vulnerable Species.

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M.Sc. (Semester - I) (New) (NEP CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Research Methodology (2328103)

Day & Date: Thursday, 11-01-2024
 Time: 03:00 PM To 05:30 PM

Max. Marks: 60

Instructions: 1) All Questions are compulsory.
 2) Figure to right indicate full marks.

Q.1 A) Choose correct alternative.

08

- 1) What is the name of the conceptual framework in which the research is carried out?
 - a) Research theory
 - b) Outline of Research
 - c) Research example
 - d) Research design
- 2) The format of thesis writing is the same as in _____.
 - a) Writing of Seminar illustration
 - b) Preparation of research paper/article
 - c) A research dissertation
 - d) Presenting a workshop/meeting paper
- 3) Field-work-based research is classified as: _____.
 - a) Empirical
 - b) Historical
 - c) Investigational
 - d) Biographical
- 4) The conclusions/findings of which type of research cannot be generalized to other situations?
 - a) Casual Relative Research
 - b) Historical Research
 - c) Expressive Research
 - d) Experimental Study
- 5) How to judge the depth of any research?
 - a) By study title
 - b) By examine duration
 - c) By research objectives
 - d) By total disbursement on research
- 6) The first step of research is: _____.
 - a) Selecting a problem
 - b) Searching a problem
 - c) Finding a problem
 - d) Identifying a problem
- 7) Research problem is selected from the stand point of: _____.
 - a) Researcher's notice
 - b) Economic support
 - c) Social relevance
 - d) Obtainability of relevant works
- 8) A research problem is not feasible only when: _____.
 - a) it is researchable
 - b) it is new and adds somewhat to the knowledge
 - c) it consists of independent and dependent variables
 - d) it has value and significance

- B) Fill in the blanks.** **04**
- 1) _____ is a dynamic process that can be organized into four stages: Exploring Investigating, Processing, and Creating.
 - 2) _____ is generally owned by the creator of the work in the first instance.
 - 3) _____ is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
 - 4) _____ is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

Q.2 Answer the following. (Any Six) **12**

- a) What are the indicators of a good scientific journal?
- b) Why is it important for researchers to attend conferences?
- c) What are the elements of a scientific research article?
- d) Explain any two principles of scientific research.
- e) What is a research design?
- f) What are the applications of information technology in scientific research?
- g) How library play a significant role in scientific research?
- h) What is research hypothesis?

Q.3 Answer the following. (Any Three) **12**

- a) Why copyright is important in research?
- b) What are various ways to arrange bibliography?
- c) How to write plagiarism free research article?
- d) Which topics are considered to conduct scientific workshop?

Q.4 Answer the following. (Any Two) **12**

- a) Discuss on the care to be taken while writing a dissertation.
- b) Which are the general preparations for researcher while going for a filed work?
- c) Explain the need for publication of an article after carrying out research.

Q.5 Answer the following. (Any Two) **12**

- a) Discuss important software used in data analysis for research.
- b) Explain the importance of ethics in research for innovative outcomes.
- c) What are characteristics and types of research?

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M.Sc. (Semester - I) (Old) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Fundamentals of Environmental Science (MSC20101)

Day & Date: Friday, 05-01-2024
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

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

Q.1 A) Choose correct alternative.

10

- 1) Human population growth curve is a _____.
 a) S -shaped curve b) Parabola curve
 c) J - shaped curve d) Zig-zag curve
- 2) Food chain in which microorganism's breakdown the food formed by primary producers is _____.
 a) parasitic food chain b) consumer food chain
 c) detritus food chain d) predator food chain
- 3) Species that have many offspring at one are usually _____.
 a) r-selected b) k-selected
 c) both r and k selected d) not selected
- 4) The first species to live on new land, such as that formed from volcano lava, are called _____.
 a) climax community b) keystone species
 c) foundation species d) pioneer species
- 5) A symbiotic relationship where both of the co-existing species benefit from the interaction is called _____.
 a) commensalism b) parasitism
 c) Mutualism d) communism
- 6) Which of the following is not a way that humans have increased the carrying capacity of the environment?
 a) Agriculture
 b) using large amounts of natural resources
 c) domestication of animals
 d) use of languages
- 7) A symbiotic relationship where both of the co-existing species benefit from the interaction is called _____.
 a) commensalism b) parasitism
 c) mutualism d) communism
- 8) In an aquatic food chain phytoplankton is called as _____.
 a) Primary produces b) Tertiary consumers
 c) Secondary consumers d) Primary consumers
- 9) Hydrosphere includes _____.
 a) animals b) plants
 c) soil d) water bodies

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M.Sc. (Semester - I) (Old) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Environmental Chemistry & Instrumentation (MSC20102)

Day & Date: Sunday, 07-01-2024

Max. Marks: 80

Time: 03:00 PM To 06:00 PM

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

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

- 1) Which of the following is not a type of exergonic reaction?
 - a) Formation of table salt from Sodium and chlorine
 - b) Combustion reaction
 - c) Chemiluminescence
 - d) Photosynthesis
- 2) The Gibbs free energy is positive when a change in enthalpy and change in entropy are positive at _____.
 - a) High temperatures
 - b) Low temperature
 - c) All temperatures
 - d) Only at 0 Kelvin
- 3) Write 1 Faraday in terms of coulombs.
 - a) 96500 C
 - b) 95600 C
 - c) 9560 C
 - d) 9650 C
- 4) What is the size of colloidal particles?
 - a) 10-20 nm
 - b) More than 20 nm
 - c) Less than 10 nm
 - d) 30 to 50 nm
- 5) Which of the following is a characteristic of a colloid?
 - a) It forms 2 layers with a solution
 - b) It forms turbid layers
 - c) It forms heterogeneous layer
 - d) It forms a homogeneous layer
- 6) A mole of any substance contains _____.
 - a) 6.022×10^{26} particles
 - b) 6.022×10^{22} particles
 - c) 6.022×10^{23} particles
 - d) 3.022×10^{22} particles
- 7) 0.44×10^{23} atoms of oxygen contain _____.
 - a) 1 mole of oxygen
 - b) 2 moles of oxygen
 - c) 3 moles of oxygen
 - d) 4 moles of oxygen

SLR-EI-8

Q.6 Answer the following.

- a) Discuss the analysis methods for Sox, PM and NO_x. **10**
- b) Explain the applications of neutralization and precipitation. **06**

Q.7 Answer the following.

- a) Discuss in detail about nutrient pathways. **08**
- b) Briefly discuss the Potentiometry, Conductometry and Colorimetry. **08**

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M.Sc. (Semester - I) (Old) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE

Computer Applications in Environmental Science (MSC20103)

Day & Date: Tuesday, 09-01-2024
Time: 03:00 PM To 06:00 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) Choose correct alternative.

10

- 1) What is included in an E-mail address?
 - a) Domain name followed by user's name.
 - b) User's name followed by domain name.
 - c) User's name followed by postal address.
 - d) User's name followed by street address.
- 2) Which of the following is the smallest visual element on a video monitor?
 - a) Character
 - b) Pixel
 - c) Byte
 - d) Bit
- 3) Which of the following is an output device?
 - a) Keyboard
 - b) Mouse
 - c) Light pen
 - d) VDU
- 4) What is the mean of the Booting in the system?
 - a) Restart computer
 - b) To scan
 - c) Install the program
 - d) To turn off
- 5) Which of the following is equal to a gigabyte?
 - a) 1024 bytes
 - b) 512 GB
 - c) 1024 megabytes
 - d) 1024 bits
- 6) _____ is the study, design, development, implementation support or management of computer -based informational systems-particularly software applications and computer hardware.
 - a) Remote sensing.
 - b) Information technology.
 - c) Geographical information system.
 - d) None of these.
- 7) What is the full form of URL?
 - a) Uniform Resource Locator.
 - b) Unique Reference Label.
 - c) Unique Resource Locator.
 - d) None of these
- 8) Following which is the development of efficient algorithms for measuring sequence similarity is an important goal of branch is called as _____.
 - a) Information analysis
 - b) Biomodeling
 - c) Bioinformatics
 - d) Biotechnology

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M.Sc. (Semester - I) (Old) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Environmental Geo-Climate (MSC20108)

Day & Date: Thursday, 11-01-2024

Max. Marks: 80

Time: 03:00 PM To 06:00 PM

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

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

- 1) Atmospheric humidity is measured by _____
 a) Lysimeter b) Hydrometer
 c) Psychrometer d) Anemometer
- 2) Which is the warmest layer of the atmosphere?
 a) Thermosphere b) Troposphere
 c) Stratosphere d) Mesosphere
- 3) Which of the following statement is not true of trade winds.
 a) They blow from the horse latitude to the doldrums
 b) They are constant in strength and direction
 c) They are deflected to the right to become south east traits in the southern hemisphere
 d) They sometimes contain intense depressions
- 4) Evening sun is not as short as the mid-day sun. What is the reason?
 a) in the evening radiations travel
 b) In the evening the temperature of the sun decreases
 c) Ozone in atmosphere absorbs more light in evening
 d) In the evening radiations travel larger distance through atmosphere
- 5) Cyclones of the Bay of Bengal region mainly occurred due to _____
 a) The monsoon period
 b) The pre-monsoon periods
 c) The pre and post monsoon period
 d) post monsoon periods
- 6) What are the factors which influence the temperature of any area?
 1) Ocean Currents & Winds 3) Altitudes
 2) Latitudes 4) Natural vegetation
 Select the code for the correct answer from the options given below:
 a) 1 and 2 only b) 2 and 3 only
 c) 1,2 and 4 only d) 1,2,3, and 4

- 7) DDT stands for _____
- Di-chloro-diphenyl trichloroethane
 - Dichloro-triphenyl di-chloro ethane
 - Dichloro-tri-ammonium methane
 - Difluoro-diphenyl tri bromo-butane
- 8) When moist air cooled it may reach a level when its capacity to hold water vapor ceases?
- 100% relative humidity
 - Dew point reached
 - Change in pressure gradient
 - all of the above
- 9) Carbon dioxide constitutes _____ % to the atmospheric volume.
- | | |
|---------|----------|
| a) 0.03 | b) 0.003 |
| c) 0.3 | d) 3.0 |
- 10) Which state in India is the largest producer of Bauxite?
- | | |
|----------------|--------------|
| a) Odisha | b) Karnataka |
| c) Maharashtra | d) Kerala |

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

- The water content in atmosphere decreases as temperature increases. (True / False)
- Temporary hardness in water is caused by carbonates of Ca^{++} and Mg^{++} . (True / False)
- Crust is known as most dense layer of the earth. (True / False)
- The rate of chemical weathering is increased by acids. The most common natural acid on the earth surface is carbonic. (True / False)
- Fe^{3+} refers to ferric ion. (True / False)
- Acid rain reacts with marble and lime stone to form calcium sulphate. (True / False)

Q.2 Answer the followings.**16**

- Explain SMOG formation?
- Explain fluoride contamination in ground water?
- Explain atmospheric stability?
- Explain geostrophic wind?

Q.3 Answer the followings.**16**

- Define rocks. Classify and discuss economic importance of sedimentary rocks?
- What do you mean by deforestation? Explain causes effects and control measures of deforestation?

Q.4 Answer the followings.**16**

- Define normal lapse rate? Explain different types of lapse rate?
- Explain with neat labelled diagram interior structure of earth?

- Q.5 Answer the followings.** **16**
- a) Write note on weathering? Describe types of weathering and factor affecting weathering processes?
 - b) Which are the elements of weather and climate. Add note on weather forecast model?
- Q.6 Answer the followings.** **16**
- a) Write a detailed note on sea floor spreading?
 - b) Explain in detail forms of condensation?
- Q.7 Answer the followings.** **16**
- a) Explain what are the temperature measurements and controls?
 - b) Elaborate the term floods and droughts and its causes and effects?

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M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Biodiversity and Conservation (MSC20201)

Day & Date: Monday, 18-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

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

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

- 1) Which among the following places come under UNESCO world heritage sites list?
 - a) Jim Corbett National Park
 - b) Nanda Devi & Valley of flowers National parks
 - c) Rajaji National Park
 - d) None of these
- 2) In which year was project Tiger launched?
 - a) 2004-05
 - b) 1983-84
 - c) 2013-14
 - d) 1973-74
- 3) Which dedication was signed at UNCED 1992 at Rio De Janerio?
 - a) Agenda 39
 - b) Agenda 19
 - c) Agenda 22
 - d) Agenda 21
- 4) Which of the following is established for documenting rare and endangered species of animals and plants?
 - a) Blue Data book
 - b) Green Data Book
 - c) Red Data Book
 - d) None of these
- 5) WWF stand for:
 - a) Web World Federation
 - b) World Wildlife Federation
 - c) World Wildlife Fund
 - d) World Web Federation
- 6) Which one of the following state is related with 'Silent Valley Project'?
 - a) Uttarakhand
 - b) Kerala
 - c) Himachal Pradesh
 - d) Tamil Nadu
- 7) Seed bank is an example of an _____ conservation.
 - a) ex-situ
 - b) in-situ
 - c) biodiversity
 - d) all of these
- 8) Which of the following is the first biosphere reserve of India?
 - a) Sundarbans
 - b) Nilgiri
 - c) Nanda Devi
 - d) Panchmari
- 9) Which of the following factor does not help in the wildlife management?
 - a) Habitat of wildlife
 - b) Behavior of wildlife
 - c) food habitat of wildlife
 - d) Name of wildlife
- 10) Which scientist has classified species diversity?
 - a) Thoeprustus
 - b) Whittaker
 - c) Lineus
 - d) Treshaw

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

- 1) Those species whose number of individuals is greatly reduced recently and is decreasing continuously and rare at a high risk of endangerment in the wild are known as vulnerable species. True / False
- 2) Deforestation is the primary reason for the decrease in species diversity in tropical countries True / False
- 3) Rhinoceros is almost extinct in India. True / False
- 4) Human alteration of habitats is the greatest threat to global biodiversity. True / False
- 5) The total genetic information contained within all individuals of species is known as genetic diversity. True / False
- 6) In 29 December, 1993 the convention of Biodiversity enters into force. True / False

Q.2 Answer the following. 16

- a) Write a note on Keystone species?
- b) Explain species richness and evenness?
- c) Describe mega diversity regions of India?
- d) Write a note on disturbance on diversity?

Q.3 Answer the following.

- a) Explain the zoning of Biosphere reserves? **08**
- b) Elaborate the Animal Conservation projects in India? **08**

Q.4 Answer the following.

- a) Discuss World Heritage Sites and Write criteria for being selected as a Cultural World Heritage Site? **08**
- b) Explain the strategies of Biodiversity conservation? **08**

Q.5 Answer the following.

- a) Discuss In-Situ and Ex-Situ Conservation with examples? **08**
- b) Explain in detail types of forest ecosystem? **08**

Q.6 Answer the following.

- a) List the biological regions in India? Explain each region properly with characteristic significance? **08**
- b) Explain in detail concept of Biodiversity Hotspot? **08**

Q.7 Answer the following.

- a) Discuss the importance of Western Ghats with respect to its faunal species characteristics? **08**
- b) Write an account on the significance of coral reefs in marine ecosystem? **08**

Seat No.	
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M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Water and Wastewater Engineering (MSC20202)

Day & Date: Tuesday, 19-12-2023
 Time: 11:00 AM To 02:00 PM

Max. Marks: 80

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

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

- 1) Which of the following tends to resist conventional methods of wastewater?
 - a) Refractory organics
 - b) Priority pollutants
 - c) Suspended solids
 - d) Nutrients
- 2) Which of the following wastewater constituents are removed by chemical immobilization?
 - a) suspended solids
 - b) Phosphorous
 - c) Metals
 - d) BOD
- 3) Which of the following represent the heavier inert matter in wastewater?
 - a) Screens
 - b) Debris
 - c) Grit
 - d) Waste
- 4) Which of the following is the most commonly used coagulant?
 - a) Ferric sulphate
 - b) Coal
 - c) Alum
 - d) Lime stone
- 5) What is the amount of phosphorous present in municipal wastewater?
 - a) 5-20 mg/L
 - b) 4-12 mg/L
 - c) 2-8 mg/L
 - d) 1-2 mg/L
- 6) How does the wastewater enter the reactor?
 - a) Top and side
 - b) Side
 - c) Bottom
 - d) Top
- 7) What is the minimum percentage of solid in wastewater?
 - a) 60%
 - b) 50%
 - c) 30%
 - d) 40%
- 8) What is the color of septic wastewater?
 - a) Light brown
 - b) Dark brown
 - c) Black
 - d) Grey
- 9) What is the term used for the reuse of sewage sludge?
 - a) Biosolids
 - b) Potential solids
 - c) Manure
 - d) Solids
- 10) Activated sludge process is an example of _____.
 - a) Anaerobic suspended growth process
 - b) Anaerobic attached growth process
 - c) Aerobic attached growth process
 - d) Aerobic suspended growth process

- B) Fill in the blanks OR Write True / False** **06**
- 1) The pressure exerted by the sewage when running full from inside is called internal pressure. True / False
 - 2) If the pH value of sewage is 7 it is alkaline. True / False
 - 3) Skimming tanks are used to remove the grease and oil. True / False
 - 4) Five-day BOD is taken at a temperature of 15°C. True / False
 - 5) The maximum depth of sedimentation tanks is limited to 6 meter. True / False
 - 6) Sewage treatment units are designed for average flow only. True / False

- Q.2 Answer the following.** **16**
- a) Write short note on CETP?
 - b) Write a note on skimming tanks?
 - c) Discuss in brief on Nano-filtration?
 - d) How demographic progression is useful in the water and wastewater?

- Q.3 Answer the following.**
- a) What is the meaning of package and drinking water? Give their major WHO standards for drinking water? **08**
 - b) Define skimming? Write its principle, applications and designing aspects of skimming tanks? **08**

- Q.4 Answer the following.**
- a) What is grit? Why it is necessary to provide grit chamber? **08**
 - b) What is barminitors? How it is useful in the wastewater treatment? **08**

- Q.5 Answer the following.**
- a) Write in short flocculation and disinfection? Give its applications in wastewater management? **08**
 - b) What do you understand by a UASB? Explain with the help of neat and sketch? **08**

- Q.6 Answer the following.**
- a) Describe in brief various unit operations for chemical classification? **08**
 - b) Explain in short sludge volume index and food to microorganism(F/M) ratio? **08**

- Q.7 Answer the following.**
- a) Describe in detail principle, working and applications of reverse osmosis for wastewater treatment? **08**
 - b) What is sludge composting? Explain in detail Sludge composting method and its applications? **08**

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**M.Sc. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE**

Remote Sensing, GIS and GPS in Environmental Science (MSC20206)

Day & Date: Wednesday, 20-12-2023
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

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

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

- 1) The basic requirement of any sensor system is _____.
a) Radiometric resolution b) Spatial resolution
c) Spectral resolution d) ALL of these
- 2) Which of the following types of resolution corresponds to the smallest difference of radiant energy detected by a sensor?
a) Spectral resolution b) Radiometric resolution
c) Temporal resolution d) Spatial resolution
- 3) The number of Spectral bands in the enhanced thematic mapper sensor on the remote Sensing Satellite LANDSAT-7 is _____.
a) 64 b) 10
c) 8 d) 24
- 4) The process by which it is possible to take two or more thematic map layers of same area and overlay them on the top of other to form a composite new layer is known as?
a) mapping b) map projection
c) map overlay d) Topology
- 5) What are the numbers of orbital planes and Satellites in one orbit for a GPS, respectively?
a) Six and four b) Twenty-four & six
c) Three and four d) Four & twenty-eight
- 6) Which one of the following helps to identify the objects on the earth surface?
a) atmospheric window b) radiometric error
c) Signature d) electric waves
- 7) The altitudinal distance of geostationary Satellite from the earth is about:
a) 26,000 km b) 36,000 km
c) 30,000 Km d) 44,000 km
- 8) Pic up the correct statement from the following:
a) In remote sensing technique, the observation place, is called a platform.
b) platforms may be either stationary or mobile.
c) Spatial resolution of the imaging System becomes poorer with increase of platform height
d) All of these

- 9) Remote Sensing techniques makes use of the properties of _____ emitted, reflected or diffracted by the sensed objects.
- a) electric waves
 - b) sound waves
 - c) electromagnetic waves
 - d) wind waves
- 10) The infrared portion of EMR lies between _____.
- a) $0.4 - 0.7 \mu m$
 - b) $0.5 mm to 1m$
 - c) $0.7 - 1.3 \mu m$
 - d) $0.7 to 14 \mu m$

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

- 1) In the process of GIS, digitalization is done for better output. True/False
- 2) Data can be shared in the process of GIS. True/False
- 3) An image having spatial resolution of 0.5m is more accurate than image having spatial resolution of 1.5m? True/False
- 4) An 8-bit image can represent 256 Shades of single color depending on the energy level. True/False
- 5) Temporal resolution of the satellites projected in geostationary orbit is zero. True/False
- 6) Geostationary operational Environmental Satellite (GOES) was launched by NOAA. True/False

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

- a) Write in brief principles of remote sensing.
- b) What are the constituents of electromagnetic radiations?
- c) Explain History of remote sensing.
- d) Discuss types of sensors.

Q.3 Answer the following.

- a) Explain what do you mean by electromagnetic spectrum?
- b) Define resolution and what are its types?

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

- a) Write an account on raster data model.
- b) Discuss various types of platforms used in remote sensing?

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

- a) Explain GIS tasks and write note on digitization and manipulation.
- b) Discuss in detail level of measurement and write note on nominal and ordinal.

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

- a) What do you meant by topology? Explain its advantages.
- b) Write note on navigation system and its applications.

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

- a) Explain in detail concept of unmanned aircraft system (UAS).
- b) Write note on: node and vertices.

08**08**

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

Environmental Pollution, Monitoring and Control (MSC020301)

Day & Date: Friday, 05-01-2024

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) Figures to the right indicate full marks.

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

- 1) What is the hazardous pollutant released from LED's?
 - a) Arsenic
 - b) Barium
 - c) Cobalt
 - d) Cadmium
- 2) To remove the oil from the surface of calm sea water is known as _____.
 - a) Dredging
 - b) Skimming
 - c) Dispersants
 - d) Centrifuge
- 3) What is a permissible noise level for commercial area during night time?
 - a) 65dB
 - b) 70dB
 - c) 60dB
 - d) 55dB
- 4) Full form of DDT is _____.
 - a) dichloro-diethyl-trichloroethane
 - b) dihydro-diphenyl-trichloroethane
 - c) dichloro-diphenyl-trichloroethane
 - d) dihydro-diethyl-trichloroethane
- 5) What is soil profile?
 - a) A cross sectional view of the horizons in a soil
 - b) A front view of the horizons in a soil
 - c) A cross sectional view of the horizons in rocks
 - d) A front view of the horizons in rocks
- 6) Thermal pollution of water bodies is due to _____.
 - a) Discharge of heat (hot water) from power plants
 - b) Discharge of chemicals from industries
 - c) Discharge of waste from mining
 - d) Discharge of agricultural run off
- 7) Photochemical smog is most common in _____ cities.
 - a) cold and dry
 - b) sunny and dry
 - c) sunny and humid
 - d) cold and humid
- 8) High wind speeds result in _____ pollutant concentrations.
 - a) lower
 - b) higher
 - c) moderate
 - d) remove

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M.Sc. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Environmental Microbiology, Biotechnology & Nanotechnology
(MSC020302)

Day & Date: Sunday, 07-01-2024

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) Figures to the right indicate full marks.

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

- 1) Two bacteria found to be useful in genetic engineering experiments are _____.
 a) Nitrobacter & azotobacter b) Nitrosomonas & Klebsiella
 c) Rhizobium & diplococcus d) E. Coli & agrobacterium
- 2) Which of the following is useful biological indicator of Sulphur dioxide pollution?
 a) Pseudomonas b) Bryophytes
 c) Algal blooms d) Lichens
- 3) In relation to the bacterium's optimal growth requirements which group would you expect to be most likely involved in decomposition of compost piles?
 a) Acidophilic b) Halophilic
 c) Thermophilic d) Psychrophilic
- 4) The concept of putting microbes to help clean up the environment is called _____.
 a) Pasteurization b) bioremediation
 c) Fermentation d) biolistic
- 5) Which of the following does not employ bacteria?
 a) oxidation pond b) contact aerators
 c) Trickling filters d) rotating biological contactors
- 6) Activated sludge treatment process involves microbes in the growth phase of _____.
 a) Lag phase b) Stationary phase
 c) Death phase d) Log phase

SLR-EI-17

Q.4 Answer the following.

- a) Write note on transmission of microbial diseases through the environment. **08**
- b) Explain green nano - technology and its applications. **08**

Q.5 Answer the following.

- a) Elaborate the concepts GMO and GEM and how they are used in modern food production? **08**
- b) Define nano and write note on atomic structure and atomic size? **08**

Q.6 Answer the following.

- a) How do environmental factors affect enzyme activity? Explain in detail? **08**
- b) Explain the use of nano particles for environmental remediation? **08**

Q.7 Answer the following.

- a) Explain in detail polymerase chain reaction (PCR). **08**
- b) Explain how environmental factors affect microbial growth and adaptations to extreme environments? **08**

- B) Fill in the blanks OR Write True/ False. 06**
- 1) Median can't be determined graphically.
 - a) True
 - b) False
 - 2) Ogive is a graph which represents the data of a cumulative frequency distribution.
 - a) True
 - b) False
 - 3) The harmonic mean of a set of observations is the reciprocal of the arithmetic mean of the reciprocals of the observations.
 - a) True
 - b) False
 - 4) The scattered diagram is a graph on which the data are represented in the form of bars.
 - a) True
 - b) False
 - 5) The geometric mean is defined as the 'nth' root of the product of 'n' observations.
 - a) True
 - b) False
 - 6) Probability is measure of the relative chance of occurrence of an event from among a set of alternatives.
 - a) True
 - b) False

- Q.2 Answer the following. 16**
- a) Write a note on cumulative frequency curve?
 - b) Discuss methods of sampling?
 - c) Write short note on tabular presentation?
 - d) Write significance of mean?

- Q.3 Answer the following.**
- a) What is cluster analysis? Add a note on different types of clusters? 08
 - b) What is the importance of various statistical techniques in environmental science? 08

- Q.4 Answer the following.**
- a) Write importance of graphic representation and add note on Box and Whisker plots? 08
 - b) What is null hypothesis? Discuss type I and type II error in testing of hypothesis? 08

- Q.5 Answer the following.**
- a) Explain test of hypothesis – T-Test and F - Test? 08
 - b) A person spends his time on different activities daily (in Hrs): Draw a pie chart for this information. 08

Activity	Office work	Exercise	Travel	Watching shows	Sleeping	Miscellaneous
No. of Hrs	9	1	2	3	7	2

- Q.6 Answer the following.**
- a) What are basic principles of experimental design? 08
 - b) Explain mean and its significance and demerits in detail. 08

Q.7 Answer the following.

- a) Calculate the geometric mean of the following data:

08

No. of seeds per plant	80-90	90-100	100-110	110-120	120-130	130-140
No of plants	12	22	37	27	26	10

- b) What are characteristics of Chi-Square test? The ratio of the male and female births is expected to be 1:1. It was found in 1 village that the male children born were 52 and female were 48. Calculate the χ^2 and interpret your test.

08

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**M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE**

Environmental Virology, Toxicology and Bio-safety (MSC020401)

Day & Date: Monday, 18-12-2023

Max. Marks: 80

Time: 03:00 PM To 06:00 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.

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

- 1) Which of the following phase determines the specificity of the virus?
 - a) Uncoating
 - b) Attachment
 - c) Release
 - d) Penetration
- 2) The most common target organ of toxicity is the _____.
 - a) Heart
 - b) Lung
 - c) CNS (brain and spinal cord)
 - d) Skin
- 3) The organs least involved in systemic toxicity are _____.
 - a) Brain & peripheral nerves
 - b) Muscle and bone
 - c) Liver & kidney
 - d) Hematopoietic System & lungs
- 4) The use of antitoxin in the treatment of snake bite is an example of _____.
 - a) Dispositional antagonism
 - b) Chemical antagonism
 - c) Receptor antagonism
 - d) Functional antagonism
- 5) Which of the following are tools used in risk analysis?
 - a) Toxicology
 - b) Epidemiology
 - c) Clinical trials
 - d) All of these
- 6) Therapeutic index is determined by using the formula _____.
 - a) EC 50/LD 50
 - b) LD₅₀/ED 99
 - c) LD 50/ED 50
 - d) None of these
- 7) The effective dose is best described as which of the following:
 - a) The dose at which 50% of all test animals die
 - b) The dose at which some of the animals demonstrate a response to the chemical
 - c) The dose at which all of the animals demonstrate a response to the chemical
 - d) The dose at which 50% of all test animals demonstrate a response to the chemical.
- 8) QSAR Stands for _____ in toxicological studies.
 - a) Quality standardization and assured results
 - b) Quality for safe and reliable assessment
 - c) Qualitative structure - activity relationship
 - d) None of these
- 9) Dermal dose is given through the _____.
 - a) Mouth
 - b) Skin
 - c) Inhalation Route
 - d) None of these

10) When an ant bites a person, which irritating chemical it (ant) injects into his (person) body?

- a) Acetic acid
- b) Tartaric acid
- c) Citric acid
- d) Formic acid

B) Write True / False.

06

- 1) Chlorine compounds is appropriate chemical disinfectant used in COVID-19 laboratory. True / False
- 2) Categorization for the health care waste (HCW) segregation is Risk HCW / Non risk HCW/ sharps. True / False
- 3) Biological indicator *Bacillus subtilis* used for the QC of the autoclave. True / False.
- 4) Personal records Biosafety cabinet document is useful for ISO accreditation. True / False
- 5) Adenoviruses in general are associated with mild upper respiratory infections in most domestic animals. True / False
- 6) Dmitri Ivanovsky discovered the viruses. True / False

Q.2 Answer the following.

16

- a) Write note on good laboratory practices (GLP).
- b) Write note on decontamination.
- c) Explain in short TLM.
- d) Write note on maintenance of laboratory animals.

Q.3 Answer the following.

16

- a) Define carcinogen and explain its sources, effects and preventions of it.
- b) What do you meant by virology? Write note on virological laboratory.

Q.4 Answer the following.

16

- a) Explain in detail role of biotic and abiotic interactions of bio-magnification.
- b) Explain toxicant effects on cellular and ecosystem level effects.

Q.5 Answer the following.

16

- a) Explain in detail In-silico method and integrated toxicity testing methods.
- b) Write note on: Isolated zone and Double-door entry.

Q.6 Answer the following.

16

- a) Write a detailed note on Infrastructure principles of biosafety.
- b) Explain History and principles of virology in detail.

Q.7 Answer the following.

16

- a) Elaborate concept of toxicants and xenobiotics.
- b) Explain in detail LOEC (Lowest observed effect Concentration) and write its disadvantages.

Seat No.	
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M.Sc. (Semester - IV) (New) (CBCS) Examination: Oct/Nov-2023
ENVIRONMENTAL SCIENCE
Environmental Impact Assessment and Environmental Audit
(MSC020403)

Day & Date: Wednesday, 20-12-2023
 Time: 03:00 PM To 06:00 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) Choose correct alternative.

10

- 1) An environmental auditing helps in achieving the:
 - a) public awareness
 - b) resource optimization
 - c) waste minimization
 - d) all of these
- 2) The major projects plans should be examined to ensure:
 - a) Quality of environment
 - b) public health & safety
 - c) both a and b
 - d) none of these
- 3) The impacts caused by construction of dams and reservoirs include:
 - a) changes in microclimate
 - b) soil erosion
 - c) loss of vegetation cover
 - d) All of these
- 4) The environmental planning is:
 - a) The analysis of how we can prevent the poaching of environment.
 - b) The analysis of how people impact natural resources
 - c) The analysis of how we can preserve our biodiversity
 - d) The supply of management tool to conserve our environment.
- 5) The important step/s in the prediction of impacts is / are:
 - a) Carrying out the evaluation of impacts
 - b) Preparation of EMP
 - c) study of EIA
 - d) All of these
- 6) Which of the following is NOT correctly matched:
 - a) ISO- International Organization of Standards
 - b) EMS - Environmental Management System
 - c) WTO - Whole Trade Output
 - d) EIA - Environmental Impact Assessment
- 7) The development of a documented process to assess the environmental performance of suppliers prior to appointment, would be covered by which part of an ISO14001:2015 EMS?
 - a) Operation
 - b) Context of the organization
 - c) performance evaluation
 - d) Support
- 8) BIS stands for:
 - a) Bureau of Indian Standard
 - b) Bureau of Information Survey
 - c) Bureau of Investigation of Soil
 - d) Bureau of Investigation of Samples

- 9) The agency that has laid down the standards for the control of pollution of air, water and noise is:
- Ministry of Home Affairs
 - Central Pollution Control Tribunal
 - Central Pollution Control Board
 - Central Pollution Control Agency
- 10) The audit of the purchasing department against ISO 14001 would best be described as which of the following audit type?
- Third party audit
 - Legal compliance audit
 - Due diligence audit
 - Activity audit

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

- EIA is a tool which helps to evaluate environmental impacts of proposed developmental projects or programs. True/False
- EIA was introduced in India in 1978. True / False
- Screening criteria based on partial development. True / False
- Scoping is procedure of impact environmental issues. True / False
- EIA is including mechanism for monitoring auditing and evaluation. True / False
- EIA is three step activity. True / False

Q.2 Answer the following. 16

- Define EIA and EIS?
- Write short note on Environmental inventory?
- What are the criteria for category A projects?
- Explain NEPA, 1969?

Q.3 Answer the following.

- Explain methods for impact identification? 08
- Elaborate EMP and monitoring? 08

Q.4 Answer the following.

- Write note in detail objectives and techniques for public participation? 08
- Explain applicability and objective of environmental audit? 08

Q.5 Answer the following.

- Explain procedure of review report in EIA? 08
- What is NABET and functional areas? Explain? 08

Q.6 Answer the following.

- What is the checklist? Elaborate types and examples of checklist method? 08
- What do you understand about overlay? How it is useful in the study. Give its example? 08

Q.7 Answer the following.

- Explain what is environmental setting and components of EIA? 08
- What is Environmental Management Plan? Write the key features of Environmental Management Plan? 08