



Seat No.	
-------------	--

**M.Sc. – I (Semester – I) Examination, 2015
ENVIRONMENTAL SCIENCE (NEW – CBCS)
Paper – I : Fundamentals of Environment**

Day and Date : Monday, 16-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Total. Marks : 70

- Instructions :**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question **1** is **compulsory**.
 - 4) Answer **any two** questions from **2, 3, 4**.
 - 5) Answer **any two** questions from **5, 6, 7**.
 - 6) Draw **neat** and labelled diagrams **wherever** necessary.

1. Select the appropriate answers :

14

- 1) Community is
 - a) Species structure and diversity index of an area
 - b) Biomass
 - c) Autotrophic and heterotrophic components
 - d) All of above
- 2) Humus provides _____ to the plants and improves ability of the soil
 - a) Minerals and to drain moisture
 - b) Proteins and to retain water
 - c) Vitamins and to absorb the moisture
 - d) Nutrients and retain the water
- 3) Lithosphere is composed of
 - a) Crust and upper part of upper mantle
 - b) Oceanic crust and upper mantle
 - c) Continental crust and lower mantle
 - d) None of above
- 4) Which factor of ecosystem includes plants, animals and microorganisms ?
 - a) Biotic factors
 - b) Direct factors
 - c) Abiotic factors
 - d) None of above



- 5) Animals that have adapted to live in deserts are known as
- a) Fossorial
 - b) Xerocoles
 - c) Arboreal
 - d) Terrestrial
- 6) Association between sea Anemone and Hermit crab in gastropod shell is that of
- a) Parasitism
 - b) Commensalism
 - c) Amensalism
 - d) Symbiosis
- 7) Top soil is the most important factor for restoration of degraded forest ecosystems because it provides
- a) Nutrients and natural seed bank
 - b) Moisture and faecal matter
 - c) Micro-nutrients and moisture
 - d) None of above
- 8) An ecological niche is
- a) the role and position a species has in its environment
 - b) how it meets its needs for food and shelter
 - c) how it survives and how it reproduces
 - d) all of above
- 9) When one animal copies the appearance, actions, or sounds of another animal to avoid predators, it is called
- a) Mimicry
 - b) Commensalism
 - c) Competition
 - d) Symbiosis
- 10) An association of individuals of different species living in the same habitat and having functional interactions is
- a) Biotic community
 - b) Ecological niche
 - c) Population
 - d) Ecosystem
- 11) A population with equal number of births and deaths will show
- a) Acceleration phase of growth
 - b) Plateau phase
 - c) Exponential growth phase
 - d) Initial growth phase



- 12) A terrestrial animal must be able to
- a) Excrete large amounts of salts in urine
 - b) Actively pump out salts through skin
 - c) Conserve water
 - d) Excrete large amounts of water through urine
- 13) Biotic potential is increase in population under
- a) Optimum conditions
 - b) Climatic conditions
 - c) Natural conditions
 - d) Stable conditions
- 14) Which one of the following pairs of gases are the major causes of “Greenhouse Effect” ?
- a) CO₂ and N₂O
 - b) CO₂ and O₃
 - c) CO₂ and CO
 - d) CFCs and HFCs
2. Define the word environment. Explain the importance of environmental science or studies with three suitable examples. **14**
3. ‘Technological advances have made our lives easy but it also has brought its own set of problems with it’ – Explain the statement in the context of environment and development with suitable examples. **14**
4. Define the term lithosphere and explain the structure of lithosphere with suitable diagrams. **14**
5. Write in short notes on : **14**
- a) Ecological amplitude
 - b) Ecological pyramid.
6. Explain in brief on : **14**
- a) Habitats and micro-habitats and their significance
 - b) Explain the concept of ecological niche with suitable examples.
7. Write short note on : **14**
- a) Desert ecosystem
 - b) Population ecology.
-



Seat No.	
-------------	--

M.Sc. – I (Semester – I) Examination, 2015
ENVIRONMENTAL SCIENCE
Paper – II : Environmental Chemistry (New – CBCS)

Day and Date : Wednesday, 18-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

- Instructions :**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question 1 is **compulsory**.
 - 4) Answer **any two** questions from 2, 3, 4.
 - 5) Answer **any two** questions from 5, 6, 7.
 - 6) Draw **neat** and labeled diagrams **wherever** necessary.

1. Select correct answer among the following : 14

- 1) _____ estimated by winkler or iodometric method and electrometric method.
A) COD B) BOD C) DO D) TOC
- 2) In composition of atmosphere _____ is the major components of atmosphere.
A) Helium B) Xenon
C) Nitrogen D) None of the above
- 3) First law of thermodynamics is a restatement of
A) Law of conservation of charge
B) Law of conservation of parity
C) Law of conservation of energy
D) Law of conservation of mass
- 4) Thermodynamics is the branch of physical science concerned with
A) Mass and its transformations to and from other forms of energy
B) Potential and its transformations to and from other forms of energy
C) Kinetic energy and its transformations to and from other forms of energy
D) Heat and its transformations to and from other forms of energy



- 5) Calorimetry is a branch of science dealing with
- A) Measuring the amount of chemicals consumed
 - B) Measuring the maximum pressure developed in a reaction
 - C) Measuring the amount of energy transferred as heat
 - D) Measuring the amount of work done in a reaction
- 6) How many grams of NaF would have to be added to 2.00 L of 0.100 M HF to yield a solution with a pH = 4.00 ?
- A) 300 g
 - B) 36 g
 - C) 6.9 g
 - D) 60 g
- 7) Substances which cannot be decomposed into two different substances by chemical process are called
- A) Atoms
 - B) Molecules
 - C) Elements
 - D) Compounds
- 8) After a chemical reaction, the total mass of reactants and products _____
- A) Is always increased
 - B) Is always decreased
 - C) Is not changed
 - D) Is always less or more
- 9) Chlorine demand of water is equal to
- A) Applied chlorine
 - B) Residual chlorine
 - C) Sum of residual chlorine
 - D) Difference of applied and residual chlorine
- 10) Standard BOD measures at _____
- A) 20°C
 - B) 25°C
 - C) 30°C
 - D) 35°C
- 11) Eutrophication of water means
- A) Degradation of plant nutrient in water bodies
 - B) Activation of metals in water bodies
 - C) Accumulation of pesticides in water bodies
 - D) Assimilation of gases in water bodies
- 12) The adsorption capacity of activated carbon is measured by
- A) Freundlich isotherm
 - B) Langmuir isotherm
 - C) BET isotherm
 - D) All of the above



- 13) Following which metal is associated with Minamata disease ?
A) Hg B) Cd C) Pb D) Cr
- 14) The _____ shield protects life forms from the destructive effect of high energy UV radiations.
A) Oxygen B) Nitrogen C) Ozone D) Water vapors
2. What is atmosphere ? Explain sources and processes of formation of organic particular matter. **14**
3. What are the causes of fluctuation in global temperature ? **14**
4. What is soil salinity ? Explain the ion exchange reaction in soil. **14**
5. Write the photochemical reaction of **14**
A) PAN
B) Photochemical smog.
6. Write short notes on : **14**
A) Green Chemistry
B) Carcinogens in air.
7. Write the significance of **14**
A) Redox potential
B) Lambert-Beer Law.
-



Seat No.	
-------------	--

M.Sc. I (Semester – I) Examination, 2015
ENVIRONMENTAL SCIENCE (New – CBCS)
Paper – III : Environmental Statistics and Computer Applications

Day and Date : Friday, 20-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

- Instructions :**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question **1** is **compulsory**.
 - 4) Answer **any two** questions from **2, 3, 4**.
 - 5) Answer **any two** questions from **5, 6, 7**.
 - 6) Draw **neat** and labeled diagrams **wherever** necessary.
 - 7) **Scientific calculator** is allowed for calculations.

1. Select correct answer among the following :

14

- 1) PARAM is an example of
 - A) Super computer
 - B) PC
 - C) Laptop
 - D) PDA
- 2) ALU is
 - A) Arithmetic Logic Unit
 - B) Array Logic Unit
 - C) Application Logic Unit
 - D) None of above
- 3) A term that means the same as the term 'variable' in ANOVA procedure is
 - A) Factor
 - B) Treatment
 - C) Replication
 - D) Variance
- 4) The median of a series of numerical values is
 - A) Equal to the average
 - B) A graph or chart
 - C) A number
 - D) A frequency table
- 5) A hypothesis may be classified as
 - A) Simple
 - B) Composite
 - C) Null
 - D) All of the above



- 6) The need for inferential statistical methods derives from the need for
- A) Population B) Association
C) Sampling D) Probability
- 7) The variance of 15 observations is 4. If each observation is increased by 9, the variance of the resulting observation is
- A) 2 B) 3 C) 4 D) 5
- 8) What is the expected number of heads appearing when a fair coin is tossed three times ?
- A) 2.1 B) 1.5 C) 3.2 D) 4.1
- 9) _____ transforms one interface into another interface.
- A) Program B) Software C) Data D) None
- 10) Which technology is used in a CDROM Drive ?
- A) Mechanical B) Electromechanical
C) Optical D) Fiber Optical
- 11) An optical input device that interprets pencil marks on paper media is
- A) O.M.R. B) Punch card reader
C) Optical scanners D) Magnetic tape
- 12) The “information” being handled by GIS refers to
- A) Spatial information B) Tabular information
C) Visual information D) Non-spatial information
- 13) Human beings are referred to as Homo sapiens. Which device is called Silico sapiens ?
- A) Monitor B) Hardware
C) Robot D) Computer
- 14) What is the access point (AP) in wireless LAN ?
- A) Device that allows wireless devices to connect to a wired network
B) Wireless devices itself
C) Both (A) and (B)
D) None of the mentioned



2. Calculate the following : 14

A) What is mode ? Mention its merits and demerits. Calculate the mode for the following data.

Variable	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	10	20	25	18	12

B) Data on waxy endospermic plant were recorded in maize. Calculate the standard deviation from the following data.

Waxy endospermic plant	7	8	9	10	11	12
Number of Plants	13	13	18	17	15	14

3. Which are the various statistical methods of dispersion ? Calculate the mean, variance, standard deviation and coefficient variation for maturity data recorded on an nearly maturing mutant variety of Caster. 14

Days to maturity : 140, 140, 141, 141, 142, 145, 146, 150, 150, 155

4. Answer the following : 14

- A) Discuss the concept of skewness and kurtosis.
- B) What is hypothesis testing ? Discuss its significance with suitable examples.

5. Write short notes on the following : 14

- A) Methods of Statistical Sampling.
- B) Concept of Probability and Theorems.

6. Write in brief on the following : 14

- A) What are the applications of statistics and computer technology in environmental science ?
- B) What is a computer ? Draw a block diagram of a computer system and discuss the functionalities of each in detail.

7. Write an account on the following : 14

- A) What are the three major classes of printers and how do they differ ?
 - B) What is importance of computer network ? Discuss various types of it.
-



Seat No.	
-------------	--

**M.Sc. – I (Semester – I) Examination, 2015
(New – CBCS)
ENVIRONMENTAL SCIENCE
Paper – IV : Introduction to Geoscience**

Day and Date : Monday, 23-11-2015

Total Marks : 70

Time : 10.30 a.m. to 1.00 p.m.

- Instructions:** 1) Answer **any five** questions.
2) **All** questions carry **equal** marks.
3) Question **1** is **compulsory**.
4) Answer **any two** essay questions from **2, 3, 4**.
5) Answer **any two** short note questions from **5, 6, 7**.
6) Draw **neat** and labelled diagrams **wherever** necessary.

1. Fill in the blanks with appropriate answers :

14

- 1) "The effects of land use tend to be cumulative and therefore, we have an obligation to those who follow". This is the _____ Fundamental Concept of Environmental Geoscience.
a) Second b) Fourth c) Sixth d) Seventh
- 2) _____ is a metamorphic product of sandstone.
a) Phyllite b) Marble c) Quartzite d) Amphibolite
- 3) P-waves move with a velocity about _____ first to be recorded by the seismographs.
a) 1 km/second b) 2 kms/second
c) 4 kms/second d) 6 kms/second
- 4) Weathering, erosion, transportation and deposition are various processes related to _____ rocks.
a) Igneous b) Metamorphic
c) Sedimentary d) None of these



- 5) _____ is a form of igneous rocks which relatively thin tabular sheets of magmas which have penetrated along approximately horizontal bedding planes.
- a) Dykes b) Sills c) Batholiths d) Lapoliths
- 6) Sediments having size ranging between 2 to 0.0625 mm are term as _____
- a) Clay b) Silt c) Granule d) Sand
- 7) In the earth's interior, the _____ is in liquid form composed mostly of an iron-nickel alloy and is 2270 km thick.
- a) Crust b) Upper mantel c) Inner core d) Outer core
- 8) Bauxite deposit is formed by _____ concentration.
- a) Hydrothermal b) Supergene enrichment
c) Residual d) Placer
- 9) The block above the fault is called the _____
- a) Hanging wall b) Footwall c) Fault line d) Fault trace
- 10) Maximum metallic deposit belong to the _____ age.
- a) Mesozoic b) Palaeozoic c) Cenozoic d) Precambrian
- 11) Which of the following is a sedimentary rock ?
- a) Chert b) Marble c) Slate d) Quartzite
- 12) Which of the following mineral has the highest specific gravity ?
- a) Quartz b) Mica c) Galena d) Garnet
- 13) _____ is a mnemonic from feldspar and silicate, which identifies, the silicate-rich igneous rocks characterized by their light coloured variable.
- a) Ferromagnesian b) Felsic c) Mafic d) Siliceous
- 14) In a soil profile, the _____ is closest to the surface and typically has a gray or black colour because of high concentrations of humus (decomposed plant and animal tissues).
- a) A-horizon b) B-horizon c) C-horizon d) O-horizon



2. Give in details on global water balance. **14**
 3. What is mountain formation ? Describe in detail the various processes of mountain building. **14**
 4. What is rock cycle ? Discuss in detail the processes responsible for deformation of rocks. **14**
 5. Write notes on : **14**
 - a) Core.
 - b) Geo-indicator.
 6. Write brief on : **14**
 - a) Soils of India.
 - b) Mineral resources of Maharashtra.
 7. Write an account on : **14**
 - a) La Nina effects.
 - b) Environmental impacts of processing and smelting of ores in India.
-



Seat No.	
-------------	--

M.Sc. – II (Semester – III) (CGPA) Examination, 2015
ENVIRONMENTAL SCIENCE
Paper – IX : Environmental Pollution (New)

Day and Date : Monday, 16-11-2015

Total Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

- Instructions :**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question **1** is **compulsory**.
 - 4) Answer **any two** questions from **2, 3, 4**.
 - 5) Answer **any two** questions from **5, 6, 7**.
 - 6) Draw **neat** and labelled diagrams **wherever** necessary.

1. Choose a correct alternatives from the given options :

14

- 1) Formation of Ozone hole is maximum over
a) India b) Antarctica c) Europe d) Africa
- 2) Some reliable indicators of air pollutants (SO₂ and NOX gases) are
a) Ferns and Cycas
b) Green algae and Aquatic liverworts
c) Lichens and Mosses
d) Neem tree and Eichornia
- 3) Noise is measured using sound meter and the unit is
a) Hertz b) Decibel c) Joule d) Sound
- 4) Which of the following indices represents the background noise level in the ambient environment ?
a) L_{dn} b) L₁₀ c) L₉₀₀ d) L₅₀



- 5) Atomic Absorption Spectroscopy is used to analyze
- a) Heavy metals
 - b) Particle size
 - c) Dissolved gases
 - d) Dissolved organic compounds
- 6) Minamata disease was due to
- a) Inorganic mercury
 - b) Phenyl mercury
 - c) Compound mercury
 - d) Methyl mercury
- 7) Black lung disease is found in the people working in
- a) Organic Solvent Industry
 - b) Coal Mine
 - c) Electroplating Industry
 - d) Paint Industry
- 8) According to WHO maximum permissible limit of Nitrate (NO_3) in drinking water is
- a) 50 ppm
 - b) 45 ppm
 - c) 55 ppm
 - d) 65 ppm
- 9) For composting the maximum moisture content of the mixture is
- a) 65%
 - b) 50%
 - c) 40%
 - d) 30%
- 10) The most harmful effect of ionizing radiation precisely involves
- a) Cell membrane
 - b) DNA
 - c) Mitochondria
 - d) Ribosome
- 11) The following radioactive isotopes are formed by nuclear fission
- a) Cr^{51} , Cu^{64}
 - b) Zr^{95} , Mn^{54}
 - c) Sr^{90} , I^{131}
 - d) All of the above
- 12) Ocean can provide an abundant supply of which nuclear fuel
- a) Thorium
 - b) Deuterium
 - c) Tritium
 - d) Plutonium
- 13) 'Love canal' dump site contained which type of waste
- a) Chemical waste
 - b) Municipal waste
 - c) Hospital waste
 - d) Nuclear waste
- 14) Which is the most common gas released from landfills ?
- a) CO
 - b) CH_4
 - c) H_2S
 - d) CO_2



2. What are the air pollutants ? Give its sources and significant impacts in detail.
 3. What is Noise pollution ? Describe the sources and control measures.
 4. Write an account on Solid waste pollution problems in India and suggest the remedial measures with suitable case study.
 5. Write notes on : **14**
 - 1) Water Quality Parameters and its significance.
 - 2) Mining induced soil pollution.
 6. Explain in brief : **14**
 - 1) Classification of Solid Waste.
 - 2) Nuclear Pollution.
 7. Write an account on : **14**
 - 1) Eutrophication process.
 - 2) Marine pollution and its consequences.
-



Seat No.	
----------	--

M.Sc. II (Semester – III) (CGPA) Examination, 2015
ENVIRONMENTAL SCIENCE
Paper – X : Environmental Biotechnology (New)

Day and Date : Wednesday, 18-11-2015
Time : 2.30 p.m. to 5.00 p.m.

Total Marks : 70

- Instructions :**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question **1** is **compulsory**.
 - 4) Answer **any two** questions from **2, 3, 4**.
 - 5) Answer **any two** questions from **5, 6, 7**.
 - 6) Draw **neat** and labeled diagrams **wherever** necessary.

1. Select correct answer among the following :

14

- 1) _____ plays a very important role in the degradation of soil xenobiotics.
A) Microorganisms B) Fish
C) Human D) Both A and B
- 2) _____ compound which found in all living cells and plays a key role in energy transformation.
A) ADP B) ATP C) Chlorophyll D) Granum
- 3) Metabolism is determined by
A) size of protein in the cells
B) availability of amino acids
C) proteins formed as dictated by genetic material
D) protein composition DNA
- 4) In human body the optimum temperature for enzymatic activity is
A) 37°C B) 40°C C) 25°C D) 30°C
- 5) Soil Decomposition rate is dependent on
A) pH B) temperature
C) moisture content D) all of the above

P.T.O.



- 6) Removal of exchangeable sodium from the soil is called
- A) Denitrification B) Desalinization
C) Desodication D) Acidification
- 7) GMO can be useful for
- A) Mitigation pollution B) To produce disease resistant crop
C) High yield crop production D) All above
- 8) Biological agents, such as microbes or there components which can be used to kill pests are called as
- A) bioinsecticides B) biopesticides
C) bioremediation D) biofertilizers
- 9) Accumulation of xenobiotic is called as
- A) Bioaccumulation B) Biomagnification
C) Biotreatment D) None of these
- 10) Rhizofiltration means
- A) Removal of pollutant by using root mass
B) Removal of pollutant by using bacterial mass
C) Removal of pollutant by using rhizobacteria mass
D) None of these
- 11) In _____ process microorganisms that produce acids are used to solubilize desirable metals.
- A) bioremediation B) biodegradation
C) bioacidification D) bioleaching
- 12) In _____ waste water treatment processes methane is produced.
- A) anaerobic digestion B) activated sludge processes
C) trickling filters D) all of the above
- 13) _____ of the following stereochemical structures is biodegraded at a much slower rate.
- A) meta B) ortho C) para D) all of the above
- 14) The addition of known active microbes to soil or water with the purpose of accelerating microbial processes is called
- A) nutrient amendment B) nutrient stimulation
C) cometabolism D) carbonization



2. What is Enzyme ? Discuss the effect of Environmental factor on enzyme activity. **14**
 3. Define Heavy metals. Explain the biodegradation of heavy metal by giving suitable examples. **14**
 4. Explain the Environmental significance of bacteria, fungi and algae. **14**
 5. Write short note on : **14**
 - a) In-situ and ex-situ bioremediation
 - b) Prokaryotic and eukaryotic.
 6. Briefly discuss on : **14**
 - a) Biological filtration processes for air pollution
 - b) Microbial Pesticide.
 7. Give a brief account on : **14**
 - a) Application of GMOs
 - b) Microbial growth and kinetics.
-



Seat No.	
-------------	--

M.Sc. – II (Semester – III) (New-CGPA) Examination, 2015
ENVIRONMENTAL SCIENCE
Paper – XI : Environmental Impact Assessment and Environmental
Audit

Day and Date : Friday, 20-11-2015

Total Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

- Instructions:**
- 1) Answer **any five** questions.
 - 2) **All** questions carry **equal** marks.
 - 3) Question **1** is **compulsory**.
 - 4) Answer **any two** questions from **2, 3, 4**.
 - 5) Answer **any two** questions from **5, 6, 7**.
 - 6) Draw **neat** and labelled diagrams **wherever** necessary.

1. Choose a correct alternatives from the given options.

14

- 1) The NEPA was enacted on
 - a) January 1, 1986
 - b) January 1, 1970
 - c) June 5, 1986
 - d) June 5, 1972
- 2) Eco-labelling is governed by
 - a) ISO 14001
 - b) ISO 14020
 - c) ISO 14010
 - d) ISO 14040
- 3) Rapid EIA is called
 - a) A study of 3 months
 - b) A study of 4 months
 - c) A study of 6 months
 - d) A study of 1 year
- 4) Environmental assessment of developmental projects follows the following sequence to achieve sustainable development
 - a) EA EMP and EIA
 - b) EIA EA and EMP
 - c) EMP EA and EIA
 - d) EIA EMP and EA



- 5) The scoping during EIA process under Indian EIA notification 2006 is applicable to
- a) A category of projects
 - b) B1 category of projects
 - c) a) and b) both
 - d) a), b) and c)
- 6) Public participation is ideally most important at which stage of EIA process ?
- a) Proposing mitigation measures
 - b) Post monitoring of the project
 - c) In evaluating the relative significance of the likely impacts
 - d) In determining the scope of EIA
- 7) EIS stands for
- a) Environmental Impact Statement
 - b) Environmental Impact Settlement
 - c) Environmental Impact Solution
 - d) Environmental Impact Scenario
- 8) The EIA report of a hydropower project would be valid up to how many years after the environmental clearance of the project ?
- a) 5 years
 - b) 6 years
 - c) 10 years
 - d) 1 year
- 9) Which categories of project do not require EIA in accordance with the Indian EIA notification 2006 ?
- a) Category A
 - b) Category B1
 - c) Category B2
 - d) None of above
- 10) Which of the following statement is correct in the context of EIA ?
- a) The process considers broad range of potential alternatives
 - b) It provides early warning of cumulative effects
 - c) Focuses on sustainability agenda
 - d) Focuses on standard agenda
- 11) Public hearing is conducted
- a) Prior to site selection
 - b) Prior to approval of terms of reference
 - c) After preparation of EIA
 - d) After environmental clearance



- 12) IAIA stands for
 - a) International Association of Impact Assessment
 - b) Indian Association of Impact Assessment
 - c) International Assembly of Impact Assessment
 - d) Indian Assembly of Impact Assessment
 - 13) Ministry of Environment and forests amended the EIA notification making public hearing mandatory for environmental clearance on
 - a) 27th January 1996
 - b) 10th April 1997
 - c) 27th January 1997
 - d) None of the above
 - 14) Terms of reference is fixed at which stage of EIA process ?
 - a) Screening stage
 - b) Scoping stage
 - c) Detailed EIA stage
 - d) Project appraisal stage
 2. Give an account on National Environmental Policy Act. Explain in brief the scope and objectives of EIA. **14**
 3. Explain the necessity of public participation in environmental decision making. Add a note on advantages and disadvantages of public participation. **14**
 4. Write a detailed note on preparation and writing of EIA for water resources. **14**
 5. Write in short : **14**
 - a) Soil and noise environment
 - b) Baseline information for EIA.
 6. Explain in brief : **14**
 - a) Environmental impact statement
 - b) Matrices method.
 7. Write short note on : **14**
 - a) Environmental auditing in India.
 - b) Evaluation and mitigation of impact on socio economic environment.
-



Seat No.	
-------------	--

M. Sc. – II (Semester – III) Examination, 2015
ENVIRONMENTAL SCIENCE
Paper – XII : Natural Resource Management (New – CGPA)

Day and Date : Monday, 23-11-2015
Time : 2.30 p.m. to 5.00 p.m.

Total Marks : 70

- Instructions :** 1) Answer **any five** questions.
2) **All** questions carry **equal** marks.
3) Question 1 is **compulsory**.
4) Answer **any two** questions from 2, 3, 4.
5) Answer **any two** questions from 5, 6, 7.
6) Draw **neat** and labeled diagrams **wherever** necessary.

1. Choose correct alternative for the following :

14

- i) Following is not a non-conventional energy resource.
a) Solar energy b) Coal
c) Wind energy d) Geothermal energy
- ii) The potentially renewable resource is
a) Solar energy b) Fossil fuels c) Fertile soil d) Wind
- iii) Amongst the following cleanest fuel is
a) Coke b) Gasoline/Petrol
c) Natural Gas d) Diesel
- iv) India has huge resources of which nuclear material ?
a) Uranium b) Thorium c) Plutonium d) Deuterium
- v) The generation of hydroelectric power depends on
a) Load of the river b) Rainfall of the country
c) Slope of the valley d) All of the above

P.T.O.



- vi) The major impact of Tehri dam is
- a) 110 villages have been displaced
 - b) 35 villages in Koteshwar will be fully submerged
 - c) Relocation of Tehri dam
 - d) It envisages the generation of large amount of electricity
- vii) Good water management practice(s) is/are
- a) Identification of aquifers and their judicious exploitation
 - b) Recycling sewage water
 - c) Prevention of flow of effluents into nearby water streams
 - d) All of the above
- viii) Land degradation can be prevented by
- a) preparing land data by remote sensing
 - b) farming a time bound nation-wide land use planning
 - c) land management
 - d) all of the above
- ix) The disaster at present for survival of living beings on earth planet is _____
- a) Deforestation
 - b) Radiation Hazards
 - c) Glaciers
 - d) Desertifications
- x) The deforestation is done mainly because of
- a) Population explosion of human and livestock
 - b) Increased demand of timber and fuel wood
 - c) Human activities for settlements, dams, factories
 - d) All the above
- xi) Moist temperate forest in India are found in
- a) Himalayan range
 - b) Gujarat
 - c) Peninsular region
 - d) Western Ghats
- xii) Planting of flower and fruit trees along road sides is include in
- a) Agro forestry
 - b) Social forestry
 - c) Urban forestry
 - d) Van mahotsav



- xiii) Social Forestry Program (1976) includes raising of trees of multiple uses for the benefit of
- a) Urban Community
 - b) Rural
 - c) Hills
 - d) All the above
- xiv) Plantation on public and common land is known as
- a) Social forestry
 - b) Farm
 - c) Agro forestry
 - d) Reforestation
2. Give detail accounts of, the conservation of Mineral resources and their distribution in India. **14**
3. What are the causes of water stress ? Explain water conservation strategy in India. **14**
4. Write brief account of Land degradation, its causes and consequences. **14**
5. Write short note on : **14**
- a) Nuclear Energy
 - b) Rain water harvesting.
6. Explain in brief : **14**
- a) Mining and their impacts
 - b) Social forestry.
7. Discuss in short : **14**
- a) Water availability and its demand
 - b) Importance of conservation of Energy.
-