

Time: 3Hrs

Max. Marks: 80

Section – A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Write an essay on various theories that will explain origin of the Universe and solar system.

OR

2. Write notes on the following:

- Geological time scale
- Planets in the solar system.
- Various branches of earth sciences

3. Write an account on the atmospheric circulation, weather and climate changes and its mechanisms.

OR

4. Write notes on the following:

- Earthquakes
- Volcanoes
- Heat budget of the earth

5. Write an essay on internal structure of earth. Add a note on the composition properties and transportations within crust, mantle and move.

OR

6. Write notes on the following

- Mid-oceanic ridge.
- Island Arcs
- Geomorphology of Indian Subcontinent

7. Write an account on the earth's gravity field and resultant density distribution and gravitational mechanics.

OR

8. Write notes on the following:

- Paleo-magnetism
- Gravity and magnetic methods
- Geological mapping methods

Section – B

5 X 4 = 20

Each question carries 4 marks

9. Write notes on the any five of the following:

- Astronomy
- Oceanic current system
- Air / sea interaction
- Seismic waves
- Trenches
- Mass of the earth
- Rock susceptibility
- Earth's magnetic field

Time: 3Hrs

Max. Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Write an account on the concept of numerical analysis. Add a note on how you can find roots by various numerical methods. OR
2. Write notes on the following:
 - a. Newton's formula
 - b. Gauss's control difference formula
 - c. Richardson Extrapolation
3. Write an account on numerical differentiation and integration. Add a note on its applications.

OR

4. Write notes on the following:
 - a. Simpson's rule
 - b. Taylor series
 - c. Weddle's formula
 5. Write an account on the application of graphical representations in statistics.
- OR
6. Write notes on the following:
 - a. Mean and Median
 - b. Standard Deviation
 - c. Co-variance
 7. Discuss the concept of probability. Give certain examples to explain probability in natural environment, especially in geo-sciences.

OR

8. Write notes on the following:
 - a. Conditional Probability
 - b. Binominal Distribution
 - c. Random Variable

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Write notes on the any five of the following:
 - a. Newton - Raphson Method
 - b. Numerical integration by trapezoidal rule
 - c. Picard's Method
 - d. Euler's Method
 - e. Runge-Kutta Method
 - f. Mass function
 - g. Interpretation of Probability
 - h. Probability in Geoscience

Time: 3 Hours

Max. Marks: 80

15X4=60

Answer any Four questions, choosing ONE from each unit

All questions carry equal marks.

- i. Explain the working principles of static and astatic gravimeters. Describe the Locaste and Romberg gravimeter.

OR

- ii. Describe in detail various corrections applied to ground gravity and magnetic data.

- iii. Describe in detail the role of upward and downward continuation operations in gravity and magnetic data interpretation.

OR

- iv. What is meant by forward modeling of gravity anomalies? Discuss in detail the automatic gravity modeling of sedimentary basins by Bott's method.

- v. Explain various forms of conduction of electricity through rocks and various factors affecting resistivity.

OR

- vi. What is self potential? Describe origin of self potentials. Mention the limitations and applications of SP method.

- vii. Derive apparent resistivity equations for Wenner, Schlumberger and dipole-dipole arrays.

OR

- viii. Discuss in detail application of SP, IP and resistivity methods in mineral and ground water exploration.

Section -B

5 X 4 = 20

Each question carries 4 marks

- ix. Write about any five from the following.
- Factors affecting rock densities.
 - Magnetic classification of minerals and rocks.
 - Archie's and Ohm's laws.
 - Magnetic induced polarization.
 - Induced and remanent magnetizations
 - Green's theorem and Guss's law
 - Forward modeling of gravity and magnetic anomalies
 - Anisotropy.

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Write an essay on the principles of photo-geology and its applications in geosciences with examples.

OR

2. Write notes on the following:

- a. Areal Mosaic
- b. Stereoscope
- c. Photogrammetry

3. Explain how the electromagnetic spectrum of the earth will interact with atmosphere and surface of the earth.

OR

4. Write notes on the following.

- a. Principles of remote sensing
- b. Indian space programme
- c. Spatial characteristics

5. What is meant by image interpretation and add a note on fundamentals of image interpretation and digital image processing.

OR

6. Write notes on the following:

- a. Visual interpretation
- b. False colour composite
- c. Remote sensing in mineral exploration

7. What is the principle behind GIS Tool. Add a note on various components of GIS and its application in earth science.

OR

8. Write notes on the following:

- a. GIS software and hardware
- b. Raster and vector formats
- c. Relational database

Section -B

5 X 4 = 20

Each question carries 4marks

9. Write notes on any five of the following:

- a. Types of aerial photos
- b. Aerial photo interpretation
- c. LANDSAT and SPOT
- d. Spectral characteristics of water and soil
- e. Aerial photo vs satellite image
- f. Geo-referencing
- g. GIS data types
- h. Topology

Time:3hours

Max.Marks: 80

Answer all the questions

Unit-I

1. Write an account on the internal structure of the earth and discuss the composition of different layers.

Or

2. Write notes on the following
 - a. Solar system.
 - b. Composition of the crust.
 - c. Hydrosphere.

Unit-II

3. Discuss the process of weathering and erosion and resulted geological materials on the surface of the earth.

Or

4. Write notes on the following
 - a. Action of rivers.
 - b. Glacial features.
 - c. Submarine features.

Unit-III

5. Write an account on the rock cycle and discuss its importance in the study of rock genesis on the earth.

Or

6. Write notes on the following
 - a. Types of Igneous rocks.
 - b. Metamorphism.
 - c. Types of sediments.

Unit-IV

7. Write an account on economic mineral deposits occurring on the earth and their utility in the economic development of a country.

Or

8. Write note on the following
 - a. Manganese deposits of India.
 - b. Coal Fields of India.
 - c. Petroleum resources of India.

Unit-V

9. Discuss in detail the environmental impacts on the earth due to various man made activities, give examples.

Or

10. Write notes on the following
 - a. Ground water pollution.
 - b. Impacts of mining.
 - c. Mangrove environment.

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Explain Continental Drift theory and Write a brief note on evidences which are support to it.

OR

2. Write short notes on any TWO of the following:

- a) Orogeny
- b) Isostasy
- c) Structure of Earth

3. Write brief note on Mechanism of movement of plates Mantle convections.

OR

4. Write short notes on any TWO of the following:

- a) Conventional currents
- b) Plate boundaries
- c) Subduction zone

5. Explain about Convergent and Divergent plates with suitable diagrams and examples

OR

6. Write short notes on any TWO of the following:

- a) Rift valleys
- b) Transform Faults
- c) Triple junction

7. Write Theories of palaeomagnetism-Ice ages and their periodicity.

OR

8. Write short notes on any TWO of the following:

- a) Mid-oceanic ridges
- b) Polar wandering
- c) Island arc

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:

- a) Time scale
- b) Trench
- c) Peninsular India
- d) Seduction zone
- e) Benioff zone
- f) Rift valley
- g) Laxmi Ridge
- h) San Adreas fault

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

UNIT-I

1. Write in detail about the classification of silicate minerals with neat sketches?

OR

2. Write an essay on olivine group of minerals

UNIT-II

3. Describe the structure, chemistry and optical properties of amphibole group of Minerals

OR

4. Write an essay on mica group of minerals

UNIT-III

5. Write about the structure, chemistry, physical and optical properties of silica minerals ?

OR

6. Write an essay on native elements ?

UNIT-IV

7. Write in detail about chemistry and paragenesis of the Sulphide group of minerals?

OR

8. Write an essay on gem stones?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following

- a. Chemistry of carbonate minerals
- b. Structure of pyroxenes
- c. Physical properties of non-silicate minerals
- d. Smictite group of minerals
- e. Isomorphism
- f. Give 3 mineral names and chemical composition from garnet group
- g. Give 3 mineral names and chemical composition from feldspar group
- h. Paragenesis of halides

Time: 3Hrs

Max. Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Discuss about the principles of Stratigraphy ?

OR

2. Write an essay on Correlation and stratigraphic codes ?

3. Discuss about the magneto and cyclo-stratigraphy ?

OR

4. Give a detail note on chronology and chrono-stratigraphy ?

5. Write an essay on Geology and tectonics of Cuddapah Basin ?

OR

6. Write an essay on Gondwana System ?

7. Write in detail about ostracoda fossils ?

OR

8. Give a detail note on roll of pollens and spores in stratigraphic and paleoecological studies ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following

- a. Uniformitarianism
- b. Facies
- c. Diagenesis
- d. Litholog
- e. SEM
- f. Wentworth scale
- g. Index fossil
- h. Chrono-stratigraphy

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Define stress and strain and discuss strain ellipsoids ?
OR
2. Write about the mechanical properties of rocks and their controlling forces ?
3. Discuss about the folds and different types ?
OR
4. Write an essay on faults ?
5. Write about the concepts of petrofabrics ?
OR
6. Write an essay on stereographic treatment of field studies ?
7. Write in detail about tectonics of orogenic belts of India ?
OR
8. Write an essay of evolution of sedimentary basins ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following
 - a. Ductile deformation
 - b. Young's modulus
 - c. Stress ellipsoid
 - d. Overthrust
 - e. Oceanic crust
 - f. Subduction zone
 - g. Dynamics of faulting
 - h. Orogenic belts

DR. B.R. AMBEDKAR UNIVERSITY, ETCHERLA, SRIKAKULAM
M.Sc. Geology, II Semester
Model Question Paper
G204: Sedimentology

Time: 3Hrs

Max. Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.
Answer four questions, choosing ONE from each Unit.

1. Write about the history and development of sedimentology ?
OR
2. Write an essay on different types of sedimentary structures ?
3. Discuss about the sedimentary textures ?
OR
4. Give a detail note on sedimentary environments ?
5. Write an essay on clastic sediments ?
OR
6. Write an essay on limestones and dolomites ?
7. Write in detail about grain size analysis and its interpretations ?
OR
8. Give a detail note on heavy minerals and its applications in provenance study ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following
 - a. Mechanical transport
 - b. Facies
 - c. Diagenesis
 - d. Litholog
 - e. SEM
 - f. Wentworth scale
 - g. Graded bedding
 - h. Ripple marks

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Write briefly on concept of cadastral survey and give the importance GPS and Compass in Mapping

OR

2. Write short notes on any TWO of the following:

a) Geological map

b) Typology

c) Cartography

3. Explain about Satellite Remote sensing. How the Electromagnetic Radiation Earth surface features in difference wavelength regions.

OR

4. Write short notes on any TWO of the following:

a) Signal diction

b) Recording Scanning Mechanisms of Satellite

c) Aerial photograph

5. Explain Thermal Remote Sensing, Micro Wave Remote sensing.

OR

6. Write short notes on any TWO of the following:

a) SLAR Satellite Altimeters

b) ERDAS

c) Micro wave radiometers

7. Explain GIS - basic flow chart for GIS application

OR

8. Write short notes on any TWO of the following:

a) Elements of spatial data

b) Remote sensing data

c) Town planning,

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:

a) GPS

b) Cadastal survey

c) Remote sensing

d) Non-photographic systems sensors

e) Indian Satellites

f) Airborne Sensors

g) Digital Elevation Models

h) Environmental Management

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Explain physical properties of Crystalline and amorphous substances.

OR

2. Write short notes on any TWO of the following:

- a) Electrical Properties of crystalline substances
- b) Thermal Properties of crystalline substances
- c) Magnetic Properties of Amorphous substances

3. Explain Plane polarized light and Double refraction.

OR

4. Write short notes on any TWO of the following:

- a) Cleavage
- b) Zoning
- c) Pleochroism

5. Write a note about Olivine group of Minerals

OR

6. Write short notes on any TWO of the following:

- a) Zeolite group
- b) Feldspar group
- c) Epidote group

7. Write a note about Pyroxene group of minerals.

OR

8. Write short notes on any TWO of the following:

- a) Apatite
- b) Calcite
- c) Gypsum

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:

- a) Polymorphism
- b) Pseudomorphism
- c) Isotropism
- d) Anisotropism
- e) Carbonates
- f) Phosphates
- g) Garnet
- h) Cordierite

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Write in detail about the magma generation and differentiation?

OR

2. Write an essay on bowen's reaction series and single silicate system phase equilibrium ?

3. Describe the criteria for classification of igneous rocks with an example ?

OR

4. Write an essay on Granitic rocks ?

5. Write about the structures and textures of metamorphic rocks ?

OR

6. Write an essay on regional metamorphism ?

7. Write in detail about plate tectonics and metamorphism ?

OR

8. Write an essay of charnockites ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following

- a. xenolith
- b. Assimilation
- c. Gneiss
- d. Carbonotites
- e. Anorthosites
- f. Impure calcareous rocks
- g. Distribution of ducan traps
- h. Binary magma

Time: 3Hrs

Max. Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Discuss about the concept of geochemistry and geochemical evolution of earth ?

OR

2. Write an essay on Geochemical classification of elements ?

3. Discuss about the role of trace element in geochemistry ?

OR

4. Give a detail note on principles of ionic substitution in minerals ?

5. Write an essay on geochemical cycle ?

OR

6. Write an essay on geochemical mobility in low and high P-T conditions ?

7. Write in detail about migration of elements in endogenic environment ?

OR

8. Give a detail note on applications of isotopes in geology ?

Section -B

5 X 4 = 20

Each question carries 3 marks

9. Answer any five of the following
 - a. Composition of meteorites
 - b. Primary differentiation
 - c. Isomorphism
 - d. Dispersion
 - e. Radioactive decay
 - f. Mineral stability
 - g. Ionic substitution
 - h. REE

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Discuss about the metallogenic epochs and provinces ?

OR

2. Write an essay on ore bearing fluids and principles of mineral deposits ?

3. Discuss about the physical properties of ore minerals under microscope ?

OR

4. Give a detail note on structures and textures of ore minerals ?

5. Write an essay on chromite deposits ?

OR

6. Write an essay on placer deposits ?

7. Write an essay on coal deposits ?

OR

8. Give a detail note on precious stones ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following

- a. Sublimation
- b. Thermometer
- c. Genesis of bauxite
- d. Uses of bauxite
- e. Mica distribution
- f. Clay varieties
- g. Use of barites
- h. Reflectivity

DR. B.R. AMBEDKAR UNIVERSITY, ETCHERLA, SRIKAKULAM
M.Sc. Geology, III Semester
Model Question Paper
G304: Hydrogeology

Time: 3Hrs

Max. Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.
Answer four questions, choosing ONE from each Unit.

1. Write an essay on hydrological cycle ?
OR
2. Describe the vertical distribution of ground water and types of aquifers ?
3. Define the darcy's law and discuss the applications of darcy's laws ?
OR
4. Write a note on various methods of groundwater exploration ?
5. Write about various types of wells and discuss methods of drilling for groundwater development ?
OR
6. What is rainwater harvesting and discuss various methods of artificial recharging ?
7. Write an essay floods and coastal hazards ?
OR
8. Discuss about the soil erosion, causes and controlling measures ?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following
 - a. Confined aquifer
 - b. Specific yield
 - c. Water table contour map
 - d. Tracer technique
 - e. Sea water intrusion
 - f. Arsenic problem
 - g. Global warming
 - h. Land desertification

DR. B.R. AMBEDKAR UNIVERSITY, ETCHERLA, SRIKAKULAM
M.Sc. GEOLOGY, III SEMESTER
Model Question paper
G 310: INTRODUCTION TO ECONOMIC GEOLOGY (ELECTIVE)

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. What are Mineral based Industries in India and what are its raw materials.
OR
2. Write short notes on any TWO of the following:
 - a) Ilamanite
 - b) Asbestos
 - c) Garnet
3. Explain Process of mineral formation with examples.
OR
4. Write short notes on any TWO of the following:
 - a) Controls of ore localization
 - b) Residual oxidation
 - c) Supergene enrichment
5. Write a note Economic minerals of India such as ceramic materials, Construction materials.
OR
6. Write short notes on any TWO of the following:
 - a) Pigments
 - b) Asbestos
 - c) Mica
7. Write brief note on Mode of occurrence, Origin and distribution of Limestone.
OR
8. Write short notes on any TWO of the following:
 - a) Mine explosives and magazines
 - b) Adit
 - c) Stope

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:
 - a) Refractory
 - b) Abrasives
 - c) Hydrothermal replacement
 - d) Placer deposits
 - e) Hematite
 - f) Monazite
 - g) Petroleum and Natural gas
 - h) Underground mining of coal

DR. B.R. AMBEDKAR UNIVERSITY, ETCHERLA, SRIKAKULAM
M.Sc. GEOLOGY, III SEMESTER
Model Question paper
G 311: INTRODUCTION TO PETROLEUM GEOLOGY (ELECTIVE)

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Write brief note on Physical properties and Origin of petroleum.

OR

2. Write short notes on any TWO of the following:

- a) Organic maturation
- b) Thermal cracking of kerogen
- c) Bacterial action in formation of Petroleum

3. Explain about reservoir and trap rocks and their classification.

OR

4. Write short notes on any TWO of the following:

- a) Primary Migration
- b) Secondary Migration
- c) Oil Sea pages

5. Write briefly about Krishna-Godavari petroleum basin.

OR

6. Write short notes on any TWO of the following:

- a) Stratigraphical Traps
- b) Structural Traps
- c) Bombay High

7. What are the Methods of petroleum exploration.

OR

8. Write short notes on any TWO of the following:

- a) Well logs and maps
- b) Zonal evaluation
- c) Enhanced oil recovery methods

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:

- a) Kerogen
- b) Sedimentary Basin
- c) Petroleum reservoirs of India
- d) Primary and Secondary porosity
- e) Cambay basin
- f) Assam Oil field
- g) Gamma log
- h) Electrical Induction method

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Discuss about the sampling methods and sampling errors in assaying of mineral deposits?

OR

2. Write an essay on assaying methods ?
3. Write about geological prospecting for coal deposit ?

OR

4. Give a detail note on principles of geochemical interpretation ?
5. Write an essay on application of electrical methods in mineral exploration study ?

OR

6. Give a detail note on geomorphological and remote sensing techniques in mineral exploration?
7. Write an essay on changing pattern of mineral consumption and strategies ?

OR

8. Give a detail note on mineral based industries in AP?

Section -B

5 X 4 = 20

Each question carries 4 marks

9. Answer any five of the following
 - a. Geological guides
 - b. Random sampling
 - c. Geobotany
 - d. Anomaly
 - e. Logging
 - f. Critical minerals
 - g. P and S waves
 - h. Qualitative interpretation

Time: 3 Hours

Max. Marks: 80

15X4=60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

2. Write an essay on classification of petroleum reservoir rocks.
OR
3. Write short notes on any TWO of the following:
 - a. Surface occurrence of oil and gas
 - b. Porosity
 - c. Nature of Organic source for hydrocarbons
4. Discuss about the various geological factors controlling the hydrocarbon migration. Explain with expels of any two sedimentary basins of India.
OR
5. Write short notes on any TWO of the following.
 - a. Primary migration
 - b. Stratigraphic traps
 - c. Reservoir fluids
6. Write an essay on favorable geological conditions of Coal formation.
OR
7. Write short notes on any TWO of the following:
 - a. Development of Coal facies
 - b. Temperature and redox potential
 - c. Grade of Coal
8. Give an account on classification and distribution of Gondwana Coals in India.
OR
9. Write short notes on any TWO of the following:
 - a. Microscopic constituents of Coal
 - b. Petrography of Gondwana Coals
 - c. Coal bed Methane

Section -B

5 X 4 = 20

Each question carries 4 marks

10. Write about any five from the following.
 - b. Vitrinite.
 - a. Transgression.
 - b. Stratigraphy of KG basin.
 - c. Salt Domes.
 - d. Gasification.
 - e. Peatification.
 - f. Coal bed methane.
 - g. Ozone depletion.

Time: 3Hrs

Max.

Marks: 80

Section - A

15 X 4 = 60

Each question carries 15 marks.

Answer four questions, choosing ONE from each Unit.

1. Write about the principles of Geomorphology ?

OR

2. Define a drainage basin and discuss about drainage patterns with neat sketches ?

3. Discuss about the fluvial processes and resulting landforms ?

OR

4. Write an essay on aeolian processes and resulting landforms ?

1. Write about types of dams and geological investigations for construction of dams ?

OR

2. What are different types of bridges and discuss about the various foundation problems ?

3. Write in detail about concrete aggregates ?

OR

4. Define a landslide and write about various types of landslides and controlling factors?

Section -B

5 X 4 = 20

Each question carries 4 marks

5. Answer any five of the following

- a. Mass wasting
- b. Topographic map
- c. Karst topography
- d. Moraines
- e. Shoreline
- f. Tunnel types
- g. Hanging valley
- h. Causes of landslides

DR. B.R. AMBEDKAR UNIVERSITY, ETCHERLA, SRIKAKULAM
M.Sc. GEOLOGY, IV SEMESTER
Model Question paper

G 408: Introduction to Remote Sensing (ELECTIVE)

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Write a brief history of remote sensing for earth observation.

OR

2. Write short notes on any TWO of the following:

- a) Remote Sensing Data Collection
- b) Remote Sensing Process
- c) Electromagnetic Radiation

3. Explain Frame Captured Sensors, Line Scanners, Photographic Cameras, Digital Cameras, Videography in Remote sensing.

OR

4. Write short notes on any TWO of the following:

- a) Along-track Scanners
- b) Hyperspectral Scanners
- c) Across-track Scanners

5. Write brief notes on Satellite-based Sensors in Visible and Infrared Wavelengths.

OR

6. Write short notes on any TWO of the following:

- a) Radar Interferometry
- b) Lidar Principles
- c) High-spatial Resolution Sensors

7. Explain Global Seafloor Topography and what are the sonar systems used regularly for the marine survey.

OR

8. Write short notes on any TWO of the following:

- a) Remote Sensing Applications in: Geology
- b) Remote Sensing Applications in: Agriculture
- c) Remote Sensing Applications in: Oceanography

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:

- a) Remote Sensing
- b) Atmospheric-Energy-Matter Interactions
- c) Scanners
- d) Cameras
- e) RADAR
- f) LIDAR
- g) Sonar
- h) GIS

Time: 3Hours

Max.Marks:80

Each question carries 15 marks.

Answer four questions, choosing ONE from each unit.

15x4=60

1. Explain the Basic principles of environmental geology.
OR
2. Write short notes on any TWO of the following:
 - a) Man's influence on Earth's energy balance
 - b) Nonrenewable energy resources
 - c) Alternative renewable sources
3. What are the Pollution and natural hazards explain briefly with examples.
OR
4. Write short notes on any TWO of the following:
 - a) Coastal environment
 - b) Engineering constructions dams, highways and reservoirs
 - c) Deforestation
5. Write a brief note about Water pollution and precautions for it.
OR
6. Write short notes on any TWO of the following:
 - a) Solid waste disposal and environment
 - b) Waste utilization
 - c) Pollution management
7. What are Essential, non essential, toxic metals, and their level of exposure.
OR
8. Write short notes on any TWO of the following:
 - a) Environmental laws and legislation in India.
 - b) Kidney failure
 - c) Migration of elements through food chain.

Section - B

5x4=20

Each question carries 4 marks

9. Write about any five from the following:
 - a) Ecology
 - b) Renewable source
 - c) Earthquakes
 - d) Landslides
 - e) Water pollution
 - f) Waste chemicals Impact on environment
 - g) Toxic metals
 - h) Trace elements

