

## Answers to objective questions

M.Sc. Geology, Semester-III

Paper- CC-7.

Q.1: (i) True (ii) True (iii) True (iv) True (v) True (vi) 1mm to 1meters  
(vii) visible (viii) silt & clay (ix) Atolls  
(x) Narmada, also Tapi river (Tapti river)

PAPER - CC-8.

Q.1: (i) chalcopyrite (ii) Koderma (iii) Bituminous  
(iv)  $FeCr_2O_4$  ( $FeO.Cr_2O_3$ ) (v) Eastern coast of India  
(vi) True (vii) False (viii) False (ix) True (x) True.

Paper:- EC-2

Q.1: (i) Bituminous (ii) Lignite (iii) carbonisation,  
(iv) Jammu & Kashmir (v) good <sup>+</sup> (vi) Lignite  
(vii) True (viii) True (ix) True (x) True.

SEMESTER-IV PAPER-CC9

Q.1: (i) Aquiclude (ii) specific yield (iii) Aquifer (iv) Aqueduct  
(v) Soil profile.  
(vi) False (vii) True (viii) True (ix) True (x) True.

Paper - EC-4.

Q.1: (i) Trap (ii) migration (iii) Petroleum (iv) structural  
(v) Gujarat (vi) False (vii) True (viii) True  
(ix) True (x) True.

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University Department of Geology.  
M. Sc. Geology, Semester-III  
Paper- CC-7, Model questions. Full marks-70.

Q.1: Compulsory question:  $1 \times 10 = 10$  marks.

Write True or False for the following statements:

- i) Hard rocks produce ridge like structure on the topography.
- ii) Dunes move ahead in the lee ward direction.
- iii) Submerged coasts indicate subsidence of land or rise in sea level.
- iv) River valley follows a fault.
- v) The shape of coasts depends on structure and nature of rocks.

Fill in the blanks

- vi) The wave length of microwave spectrum ranges from --- to ---.
- vii) In high oblique photo, the axis of the camera is highly inclined and the horizon is ---.
- viii) Loess is an aeolian deposit composed mainly of ---.
- ix) Circular reefs enclosing a shallow body of water are called ---.
- x) An important river flowing in the Peninsular India which meets the Arabian Sea is ---.



the horizon is --- (visible)

EC-7 Contd. Answer any FOUR of the following: - 4x15=60 marks

Q.2: Describe the characteristic features of fluvial land forms.

Q.3: Define Karst. Give an account of relief features of Karst topography.

Q.4: Describe the influences of structural features and lithology on the development of land forms.

Q.5: Define drainage pattern. Describe types of drainage patterns with neat sketches.

Q.6: Write short notes on any three of the following:

- a) Application of Geomorphology in Groundwater exploration,
- b) Dunes,
- c) Glaciation,
- d) Electromagnetic spectrum,
- e) G.I.S.

Q.7: Write short notes on any three of the following:

- i) Atmospheric Window
- ii) Photogrammetry and its application
- iii) Absorption of EMR
- iv) space programme in India.

Q.8: Give an account of the techniques for identification of igneous, sedimentary and metamorphic rocks in images.

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University Department of Geology.  
M.Sc., Geology, Semester - III Full marks - 70  
Paper - CC-8 (Model Questions)

1. Compulsory question: - Fill in the blanks: - 10x1 = 10 marks

- (i) In Khetri and Singhbhum, Copper occurs mainly as - - - - -.
- (ii) Ruby mica is found in - - - - -.
- (iii) Jharia in Jharkhand is famous for - - - - - coal deposits.
- (iv) The chemical composition of chromite is - - - - -.
- (v) The important placer deposits of monazite and ilmenite occur along - - - - - of India.

Write True or False about the following statements: -

- (vi) Bauxite deposits in Jharkhand are found on plateau.
- (vii) Gondwana coal deposits contain lignites.
- (viii) Anthracite deposits in India are associated with Permian rocks.
- (ix) The Digboi Oil field is associated with Tertiary Sandstone.
- (x) The gold-quartz mineralisation in Kolar Gold field took place during Dharwar orogeny.

Answer any FOUR questions: - 4x15 = 60 marks  
Q.2: Describe the processes of formation of magmatic deposits. Give Indian examples of such deposits.

Q.3: Give an account of the process of Supergene Sulphide Enrichment.

Q.4: Describe the mode of occurrence and distribution of Iron ore deposits in India.

Q.5: Describe the mode of occurrence and distribution of mica in India.

Q.6: Define coal. Describe the mode of origin of coal.

Q.7: Describe the processes of origin of Petroleum.

Q.8: Write short notes on any Three: - (a) Ore, (b) Types of Coal

(c) Petroleum Traps (d) CBM (e) Refractory minerals.



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M.Sc. Geology, Semester - III Full marks - 70

Papers - EC - 2, (Model questions)  
Group - A,  $1 \times 10 = 10$  marks

Q.1. Compulsory Question.

Fill in the blanks: (i) Jharia is famous for --- coal deposits

- (ii) Neyveli is known for its --- deposits.  
(iii) Heating of coal in complete absence of air is called ---.  
(iv) Anthracite deposits are found in --- in India.  
(v) High temperature carbonisation of coal is done at temperature of ---.  
(vi) A low grade soft brown coal with high moisture content is ---.

Write True or False for the following statements: —

- (vii) Lower Gondwana rocks contain Glossopteris flora.  
(viii) Bituminous coals were formed during Permian time.  
(ix) The most important CBM producing belts are associated with Gondwana coals.  
(x) The Gondwana coals of India are of drift origin.

Q.2: Define carbonisation of coal. Describe methods of carbonisation of coal.  $4 \times 15 = 60$  marks.

Q.3: Give an account of methods of Geophysical prospecting for coal deposits.

Q.4: Write short notes on any three of the following:  
a) Trace elements in coal, b) open cast mining c) Briquetting of coal.

Q.5: Describe various methods of underground mining of coal.

Q.6: Describe the geological and geographical distribution of coal deposits of Jharkhand.

Q.7: Give an account of geological and geographical distribution of Lignite deposits in India.

Q.8: Write about coal mining hazards and its mitigation.

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M.Sc. Geology, Semester - IV

Paper - CC-9, Model questions, Full marks-70.

Q.1. Compulsory question:  $1 \times 10 = 10$  marks.

Fill in the blanks:

- (i) A rock formation which is porous but not permeable to allow water move through it is called -----
- (ii) Quantity of water that a unit volume of aquifer drains by gravity is called -----
- (iii) A rock body which allows water to flow through it or to accumulate within it is called -----
- (iv) A tunnel made for water supply is called -----
- (v) Layers present in a vertical section of a pit from ground surface to the underlying bed rock make -----

Write True or false for the following statements: -

- (vi) Perched water table lies in the zone of saturation.
- (vii) Porosity is a broad measure of storage capacity of an aquifer.
- (viii) Limestone is not suitable for a dam foundation.
- (ix) Crushing strength or Compressive strength of a rock is the maximum force applied per unit area which the rock body can withstand.
- (x) Transverse strength is the capacity of a rock body by which it can withstand bending loads.



contd. cc-9

Answer any FOUR questions from the following:  $4 \times 15 = 60$  marks

Q.2: Describe the role of groundwater in completion of hydrological cycle.

Q.3: Define aquifers. Describe various types of aquifers.

Q.4: Give an account of different Groundwater provinces of India.

Q.5: Write about the role of industrialisation and mining activities in pollution of surface and groundwater.

Q.6: Describe structural and geological conditions which are suitable for a dam and its reservoir.

Q.7: Give an account of various methods of mining ~~from~~ for underground mineral deposits.

Q.8: Write short notes on any three of the following:

a) Water Table

b) Global warming

c) Mining hazards

d) Porosity and permeability.

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M.Sc. Geology, Semester - IV Full marks - 70.  
Paper: EC-4, model questions  
Group A 10x1 = 10 marks

Q.1 Compulsory question:-

Fill in the blanks:-

- (i) A rock body which prevents movement of oil and causes its accumulation is called a - - - - -.
  - (ii) Oil moves away from its place of formation through porous rocks. This is called - - - - - of oil.
  - (iii) - - - - - is a general term denoting all naturally occurring hydrocarbons in gaseous, liquid and solid state.
  - (iv) A trap for petroleum accumulation produced due to faulting is called - - - - - trap.
  - (v) Ankleshwar oil field is situated in - - - - - state.
- Write True or False for the following statements:-
- (vi) An oil pool is an open cavity in the rocks in which a lake of oil exists.
  - (vii) Digboi oil field is associated with Tipton Sandstone.
  - (viii) The most important oil bearing rock formations in India belong to eocene to miocene age.
  - (ix) The Bombay High is the largest offshore oil field of India.
  - (x) Limestone of miocene age is the reservoir rock in Bombay High oil field.

Answer any FOUR of the following:

4x15 = 60 marks

Q.2: Describe the process of origin of Petroleum.

Q.3: Define Reservoir Traps. Describe structural, stratigraphic and combination traps.

Q.4: Write about the methods of Geophysical exploration of Petroleum.

Q.5: Give a brief account of Petroleum basins of India.

Q.6: Describe the geology of Digboi oil field.



Contd. Ec-4.

Q.7: Describe the structure and geology of Bombay (Mumbai) High oil field.

Q.8: Write short notes on any three of the following:

- (a) Reservoir rock
  - (b) Palynology
  - (c) Use of microfossils in Petroleum study.
  - (d) Migration of Petroleum.
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