

M.Sc. (Geology) CBCS Pattern Sem IV
PSCGEOT15.1 : Geology Paper-III (Elective) : Fuel Geology
(Coal, Petroleum and Nuclear)

P. Pages : 2

Time : Three Hours



GUG/S/18/20256

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks
2. Draw neat sketches wherever necessary.

1. Describe in detail Indian and International classification for coking and non-coking coals.

OR

Write short notes on:-

- a) Sedimentology of coal bearing strata
- b) Structures associated with coal seams
- c) Proximate analysis of coal
- d) Coal gasification

2. Describe in detail classification and optical properties of macerals and microlithotypes.

OR

Write short notes on :-

- a) Techniques and methods of coal microscopy
- b) Reflectance and fluorescence microscopy
- c) Exploration of methane from coal bed.
- d) CBM

3. Describe in detail origin of petroleum.

OR

Write short notes on :-

- a) Petrophysical properties of reservoir rocks
- b) Stratigraphic traps
- c) Hydrocarbons
- d) Combination traps

4. Describe in detail mineralogy and geochemistry of radioactive minerals.

OR

Write short notes on:-

- a) Atomic minerals as source of energy
- b) Metallogenic epochs
- c) Measurement of radioactivity
- d) Uranium and thorium exploration in India

5. Write short notes:-

- a) Rank of coal
- b) Ultimate analysis of coal
- c) Lignite deposits in India
- d) Generation of methane from coal beds
- e) Kerogene.
- f) Reservoir fluids
- g) Scintillation counters
- h) Gamma ray logging of bore holes
