

2022
M.Sc.
Third Semester
DISCIPLINE SPECIFIC ELECTIVE – 01
GEOLOGY
Course Code: MGLD 3.11(A)
(Fuel Geology & Geochemistry)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Define coal. Discuss the different methods associated with coal prospecting. 2+12=14
2. Write notes on the following: 7×2=14
 - (a) Lithotypes of coal
 - (b) Proximate analysis of coal

UNIT-II

3. Explain in detail the transformation of organic matter to crude oil. 14
4. Write notes on the following: 7×2=14
 - (a) Physical properties of crude oil
 - (b) Types of kerogens

UNIT-III

5. Write notes on the following: 7×2=14
 - (a) Digboi oilfield
 - (b) Source rock and its types
6. Define reservoir rock. Discuss the different categories of reservoir rocks. 2+12=14

UNIT-IV

7. Explain in detail the Goldschmidt rule and Ringwood modification in substitution of elements. 14
8. Write notes on the following: 7×2=14
- (a) Chemical composition of earth
 - (b) Compatibility of trace elements

UNIT-V

9. Explain in detail the radioactive decay of rubidium for dating various geological processes. 14
10. Write notes on the following: 7×2=14
- (a) Closure temperature of a mineral
 - (b) Oxygen isotopes as indicator for glacial and interglacial period
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