

**5 SEM TDC GEO M 5**

**2 0 1 3**

( November )

**GEOLOGY**

( Major )

Course : 505

( **Fossil Fuel** )

Full Marks : 48

Pass Marks : 19

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

**GROUP—A**

( **Coal** )

( Marks : 18 )

1. Choose and write the correct answer :  $1 \times 2 = 2$

(a) The calorific value of anthracite coal  
is —.

( 3300–3900 / 6600–8550 /  
7700–8300 ) kcal/kg

(b) The correct sequence is

(i) peat-subbituminous-lignite-  
bituminous-anthracite

(ii) peat-lignite-subbituminous-  
bituminous-anthracite

(iii) peat-subbituminous-bituminous-  
lignite-anthracite

2. Write about any *two* of the following in brief :

4×2=8

(a) Rank of coal

(b) Proximate and ultimate analyses of coal

(c) Grade of coal

3. Write briefly about distribution of coal in India. Describe the geology of Makum Coal Field.

3+5=8

Or

Discuss the origin of coal.

8

( 3 )

GROUP—B

( Petroleum )

( Marks : 30 )

4. Choose and write the correct answer :  $1 \times 2 = 2$

(a) The acceptable theory regarding the origin of petroleum is —.

( organic theory / inorganic theory )

(b) The environment for the formation of petroleum should be —.

( aerobic / anaerobic )

5. Write briefly on any *two* of the following :

$2 \times 2 = 4$

(a) Elemental composition of crude oil

(b) Source rock

(c) Reservoir rock

6. Write notes on any *two* of the following :  $4 \times 2 = 8$

(a) Hydrocarbon trap and its classification

(b) Oil shale

(c) Primary and secondary migrations of petroleum

7. Describe the major petroliferous basins of India.

8

( 4 )

Or

Write briefly about the distribution and occurrence of hydrocarbon in Upper Assam Basin.

8. Describe the geology and structure of any one of the oil fields given below : 4+4=8

(a) Digboi

(b) Moran

(c) Nahorkatiya

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