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## CM-403 (GS)

B.E. IV Semester Examination, June 2020

### Grading System (GS)

#### Fuel Technology

Time : Three Hours

Maximum Marks : 70

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) What is rank of coal?  
b) What is meant by calorific value?
2. Explain about the properties of main hydrocarbons found in crude oil Aliphatic, Alicyclic and Polycyclic Aromatic Hydrocarbons (PAH).
3. Briefly explain the NCB and Seylar's coal classification.
4. What is a Coke Oven? Define calorific value, gross calorific value, net calorific value, caking and coking of coal.
5. Explain coal Carbonization. What are the types of carbonization? Differentiate each one from other.
6. Describe the manufacturing of metallurgical coke by Otto Hoffman's oven method.  
OR  
Write the significance of coal cleaning. Briefly explain working of rheoloveur washer.
7. Compare and contrast thermal and catalytic cracking.  
OR  
Explain petroleum refining and processing.
8. Write short notes on any two:
  - a) Hydrogen as a fuel
  - b) Transportation of liquid fuels
  - c) Synthetic gases
  - d) Water gas
  - e) Theories of coal formation

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