

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

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## **CM-228-CBCS**

### **B.E. IV Semester**

Examination, June 2020

## **Choice Based Credit System (CBCS)**

### **Fuel Technology**

*Time : Three Hours*

*Maximum Marks : 60*

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.  
iii) Draw neat diagram wherever required.

1. a) Write short notes on:
  - i) Origin of coal
  - ii) Storage of coal
- b) What is pulverization of coal? State its advantages.
2. a) List various processes and their principle of operation for washing of coal.
- b) Explain the classification and composition of Indian coal.
3. a) Explain catalytic cracking process in detail. State advantage of catalytic cracking.
- b) What is reforming? Explain any reforming process in detail.
4. a) Define API viscosity and viscosity index flash point and fire point.

CM-228-CBCS

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- b) List various petroleum product and their utilization.
5. a) Write advantages and disadvantages of LPG and CNG over S.I. Engine fuel.
- b) Discuss Lurgi gas process for coal gas manufacture.
6. a) List various type of fuel cell. Discuss principle and working of alkaline fuel cell.
- b) Explain the working of proton exchange membrane fuel cell.
7. a) Write short note on types of solar cell and their fabrication.
- b) Write note on wind energy and tidal energy as renewable energy source.
8. Write note on any four:
- a) Frazer coal classification
  - b) Beehive coke oven
  - c) Indian crude
  - d) Lurgi-spaul gas retort
  - e) Proximate analysis of coal

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CM-228-CBCS