

**NC-522**

Seat No. \_\_\_\_\_

**First Year B. Sc. Examination**

April/May – 2003

**Industrial Chemistry : Paper – I**

*(Vocational)*

Time : Hours]

[Total Marks :

- 1 (a) What is catalytic cracking ? Give flow diagram of fluidized bed catalytic cracking.  
(b) Discuss the industrially important chemicals derived from ethylene.  
(c) Write a note on uses of natural gas.

**OR**

- 1 (a) Write a note on activated charcoal.  
(b) Discuss isomerism with illustrations.  
(c) Describe the chemical constitution of coal. Give uses of coke.
- 2 (a) Give classification of fuels. Explain calorific value of coals.  
(b) Explain antiknocking term. Discuss one method to improve antiknocking properties of gasoline.  
(c) Write a note on manufacture of starch.

**OR**

- 2 (a) Write a difference between graphite and diamond.  
(b) What is primary solid fuel ? Explain origin and formation of coal.  
(c) Discuss the coal-gas treatment plant with flow diagram.
- 3 (a) Name different methods for concentrating the ores. Give a brief account of any one of them.  
(b) Write a note on importance of fluxes.  
(c) Explain the principles of extraction of methods from sulphide ores.

**OR**

- 3 (a) Explain the term : Smelting and slags.  
(b) Write a note on technology of roasting.  
(c) Write a note on different types of furnaces.
- 4 (a) Write a note on reduction of metals.  
(b) Give a brief account of orthosilicates. Explain the structure of silica.  
(c) Give physical methods of sterilization of water for municipal purposes.

**OR**

- 4 (a) Write a note on 'Noise pollution'.  
(b) Give a brief account of Nitrogen-cycle.  
(c) Write a note on organic and inorganic water pollutants.
- 5 Answer any **three** of the following :
- (1) Give a brief account of pesticide pollution.
  - (2) Write a note on effect of pollution on human life.
  - (3) Give a brief account of sewage analysis
  - (4) Write a note on ethanol or glycerol
  - (5) Write a note on radioactive pollutants.

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