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Your Roll No.....

243

B.Sc. Prog./II

C

IC-202—Fossil Fuels and Fermentation Industries

(Admissions of 2005 and onwards)

Time : 3 Hours

Maximum Marks : 75

(Write your Roll No on the top immediately on receipt of this question paper.)

Attempt six questions in all.

Question No. 1 is compulsory.

1. (i) What is producer gas ? Give its composition and uses.
- (ii) Give the composition of crude petroleum.
- (iii) Give the differences between toilet soap and washing soap.
- (iv) What are chief characteristics of a good lipstick ?
- (v) Briefly describe the properties of catalysts. $3 \times 5 = 15$

P.T.O.

2. (i) What is coal tar ? Give an account of the various fractions obtained by the distillation of coal tar. Give their uses.
- (ii) What is coal gasification ? What are the various categories in which coal gasification is divided ?
Explain. 6×2=12
3. (i) Write about the carbonization of coal.
- (ii) What are synthetic lubricants ? Give examples.
- (iii) Give the properties of lubricants. 4×3=12
4. (i) Write a note on soap additives.
- (ii) Discuss the advantages and disadvantages of soap as surfactants.
- (iii) Give the differences between soaps and detergents.

4×3=12

5. (i) What are the necessary constituents of a nail enamel ? Give *one* formulation.
- (ii) What are various types of creams ? What are their main ingredients ?
- (iii) What are suntan lotions ? Give the formulation of a typical suntan lotion. $4 \times 3 = 12$
6. (i) What are catalysts ? Write their properties.
- (ii) Briefly describe the steps involved in Wacker process.
- (iii) What are zeolites ? Give their applications. $4 \times 3 = 12$
7. (i) Discuss the method for the production of Lysine.
- (ii) How is ethanol prepared by the fermentation process from molasses ?
- (iii) Name the strain used in the synthesis of the following : $4 \times 3 = 12$
- (a) Vitamin B₂
- (b) Vitamin B₁₂
- (c) Vitamin C
- (d) Streptomycin.

8. Write notes on any *three* of the following : 4×3=12

(i) Cracking

(ii) LPG

(iii) Synthetic detergents

(iv) Jasmone.