Reg. No. : | | | | | | | | | | | | |

Question Paper Code : X67606

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2020.

Second Semester

Civil Engineering

HS 1153 — ENGINEERING CHEMISTRY — II

(Common to All Branches)

(Regulations 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define flash point.
2. What is meant by refractoriness?
3. What is meant by differential aeration corrosion?
4. What is Electroless plating?
5. What is vulcanization?
6. What are Kevlar fibers? What are its important applications?
7. What is knocking?
8. What are the requisites of metallurgical coke?
9. What are bond angles?
10. What is PDB format?

PART B — (5 × 16 = 80 marks)

11. (a) What are refractories? How are they classified? Discuss their properties and uses. (16)

Or

(b) (i) Explain the mechanism of lubrication in detail. (8)

(ii) What is the difference between cloud point and pour point? How to measure them? (8)

12. (a) (i) What are the factors influencing corrosion? (8)

(ii) Explain the sacrificial anodic technique in detail with a neat diagram. (8)

Or

(b) (i) What is paint? Discuss in detail. (8)

(ii) How is gold electroplating done? Explain. (8)

13. (a) (i) Write the preparation and properties of polyvinyl chloride and polycarbonate. (8)

(ii) What is compounding of plastics? Explain in detail. (8)

Or

(b) (i) Describe the compression moulding process for the manufacturing of plastics. (8)

(ii) Write the preparation, properties and uses of Bakelite. (8)

14. (a) (i) With the help of a neat diagram explain Fischer-Tropsch process of synthesis of petrol. (8)

(ii) How coke is manufactured using Otto-Hoffman oven? (8)

Or

(b) Write short notes on the following:

(i) LPG (8)

(ii) CNG. (8)

15. (a) (i) What are structure keys? Row it is helpful in describing the chemical composition? (8)

(ii) Write a note on

(1) MOL format (4)

(2) PDB format. (4)

Or

(b) (i) Explain the applications of chem.informatics in drug designing. (8)

(ii) Write informative notes on SMILEYS notation (8)

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