17227

15116

2 Hours / 50 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any SEVEN of the following: **14**

a) Define corrosion. Mention the types of corrosion.

b) Write the function of fillers.

c) Define cementation.

d) Define calorific value and ignition temperature.

e) Write the composition of LPG.

f) What are the properties of biodiesel.

g) Define lubricant.

h) Define hard water and soft water.

i) What is acidic buffer solution.

j) What are the advantages of chlorination.

Marks

2. Attempt any FOUR of the following: **12**

a) What are different types of oxide films and their effect on rate of corrosion.

b) Explain the mechanism of immersed corrosion by galvanic cell action.

c) Explain the sacrificial anodic protection method.

d) State and explain the principle of tinning process.

e) What are the characteristics of paint.

f) Write the advantages and disadvantages of solid fuel.

3. Attempt any FOUR of the following: **12**

a) Give the classification of fuel with suitable example.

b) What is the significance of proximate analysis.

c) Write construction and working of Bomb Calorimeter.

d) Explain fractional distillation of crude petroleum.

e) Write the composition and properties of CNG.

f) Write the characteristics of synthetic fluids.

4. Attempt the FOUR of the following: **12**

a) Explain fluid film lubrication.

b) State and explain the functions of good lubricants.

c) Define:

(i) Cloud Point

(ii) Flash Point

(iii) Neutralisation number

(iv) Emulsification

d) Explain zeolite process for softening of water.

e) Explain the mechanism of chlorination for disinfection of water.

f) Explain types of Buffer solution with suitable examples.