11920

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

Instructions : (1) All Questions are *compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

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

Marks

1. Attempt any NINE : **9 × 2 = 18**

(a) Define :

(i) Matrix

(ii) Slag

(b) Write two ores of iron with chemical formula.

(c) Name the products of blast furnace.

(d) Define heat treatment of steel.

(e) Define corrosion. Give its types.

(f) Name the metal oxide film which is more protective. Explain.

(g) Give reason galvanised containers are are not used for storing food staff.

(h) Write two functions of Extenders.

(i) Write any four characteristics of good fuel.

(j) Write any two applications of Bio-diesel.

(k) Define fuel. Give its types.

(l) Define Lubricant. Give its types.

2. Attempt any FOUR : **4 × 4 = 16**

(a) Write chemical reactions taking place in zone of reduction of blast furnace.

(b) Explain :

(i) Normalising

(ii) Tempering

(c) Write composition of steel. Explain its classification based on percentage of carbon.

(d) Write any four advantages and disadvantages of gaseous fuel.

(e) Explain proximate analysis of coal.

(f) Give chemical composition of Bio-gas. Write its two uses.

3. Attempt any FOUR : **4 × 4 = 16**

(a) Explain oxygen absorption method with labelled diagram.

(b) Explain metal cladding with labelled diagram.

(c) Differentiate between galvanising and tinning.

(d) Explain fluid-film lubrication with diagram.

(e) Define following :

(i) Oiliness

(ii) Volatility

(iii) Cloud point

(iv) Pour point

(f) Explain following :

(i) Saponification

(ii) Emulsification
