



17203

21314

2 Hours/50 Marks

Seat No.

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- Instructions :** (1) **All** questions are **compulsory**.
(2) *Illustrate your answers with **neat** sketches **wherever** necessary.*
(3) *Figures to the **right** indicate **full** marks.*
(4) *Assume suitable data, if **necessary**.*
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MARKS

1. Attempt **any nine** of the following : **18**
- a) Name four ores of iron.
 - b) Give composition and properties of wrought iron.
 - c) State any two applications of heat resisting steel Nichrome.
 - d) What is the effect of Cr and Co on properties of steel ?
 - e) What is corrosion ? Give its types.
 - f) State and explain factors affecting on atmospheric corrosion.
 - g) How the protection of metal done by the modification of environment ?
 - h) Why the galvanized containers are not used for storing food stuff ?
 - i) Write any four characteristics of good/ideal fuel.
 - j) What are significance of proximate analysis ?
 - k) Write composition, properties of Biogas.
 - l) Define lubricant. Name any two examples of liquid lubricants.
2. Attempt **any four** of the following : **16**
- a) Write the chemical reactions taking place in zone of heat absorption.
 - b) Write composition, properties and applications of 18-8 stainless steel, 18-4-1 high speed steel.
 - c) Distinguish between cast iron, pig iron and steel.
 - d) Define fuels. Give its detail classification.
 - e) State and explain fractional distillation of crude petroleum. Write composition and uses of petrol and kerosine oil.
 - f) What is LPG ? Give its composition, properties and uses.

P.T.O.



3. Attempt **any four** of the following :

16

- a) Write the factors affecting the immersed corrosion.
 - b) Describe the mech. of immersed corrosion by absorption of oxygen gas.
 - c) Differentiate between Galvanising and Sherardizing. Write the similarity between galvanising and sherardizing.
 - d) Define the following properties of lubricant
 - i) Viscosity
 - ii) Oiliness
 - iii) Flash point
 - iv) Pour point.
 - e) Define lubrication. Explain the boundary lubrication.
 - f) Write four functions of lubricant used in gears.
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