

17203

16117

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) 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 NINE of the following:** **18**
- Define heat treatment. State its two purposes.
 - Name various products of blast furnace.
 - Give composition of pig iron.
 - Give composition of HSS.
 - Name various oxide film. Classify them into protective and non protective.
 - Why tinned containers are used for storing food stuff?
 - How galvanising is different from shearardizing?
 - Give four characters of good paint.
 - Give composition of LPG.
 - Define flash point and fire point.
 - List four expectations from good lubricant.
 - How CNG is more economical than other fuel?

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) List various zones of blast furnace. Give reactions involved in zone of reduction with temperature.
 - b) Give difference between annealing and normalising.
 - c) Describe open hearth process for steel.
 - d) Differentiate between solid, liquid and gaseous fuel.
 - e) Explain proximate analysis in coal sample for determining moisture and volatile matter.
 - f) Give composition, properties and application of Bio-gas.
- 3. Attempt any FOUR of the following:** **16**
- a) Explain mechanism of corrosion due to evolution of H₂ gas? (with labelled diagram)
 - b) Describe the process of metal spraying with its advantages and disadvantages.
 - c) How will you protect following from corrosion?
 - (i) Underground pipe line
 - (ii) Iron machineries
 - d) Explain fluid film lubrication with diagram.
 - e) Give classification of lubricant. Give one example for each.
 - f) Give selection criteria for lubricant used in I.C. engine and steam engine, sewing machine.
-