

Total No. of Questions : 4]

SEAT No. :

PE585

[Total No. of Pages : 1

[6578]-58

S.E. (Robotics & Automation) (Insem)

MATERIALS SCIENCE AND ENGINEERING METALLURGY

(2019 Pattern) (Semester - III) (211503)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4.*
- 2) *Figures to the right indicates full marks*
- 3) *Neat Diagram must be drawn wherever necessary*
- 4) *Assume Suitable data if necessary*
- 5) *Use of Logarithmic Table, Slide rule is Electronic pocket calculator is allowed*

Q1) a) Differentiate between slip and twinning. [7]

b) What is meant by Nondestructive test? Explain Radiography test. [8]

OR

Q2) a) Explain the term cold working and hot working. [7]

b) Give the principal of Brinell hardness test? Which are the factors affect Brinell Hardness test. [8]

Q3) a) Define Following terms with suitable example. [7]

i) Phase

ii) Alloy

iii) Component

iv) Solid Solution

b) Draw equilibrium diagram that illustrate the existence of a Peritectic reaction. [8]

OR

Q4) a) Explain solidification of pure metals. [7]

b) What is coring? Which alloys show cored structure and under what condition? [8]

