Nov-Dec-2012

Total No. of Questions : 12]

SEAT No. :

P926

[Total No. of Pages : 4

[4263] - 219

T.E. (Mechanical Engineering)

MECHATRONICS

(2008 Pattern) (Semester - II)

Time :3 Hours] *[Max. Marks :100*

Instructions to the candidates:

1) *Answer three questions from Section - I and three questions from Section - II.*
2) *Answers to the two sections should be written in separate books.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Figures to the right indicate full marks.*
5) *Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
6) *Assume suitable data, if necessary.*

SECTION - I

Q1) a) Distinguish between [8]

i) Sensitivity drift and zero drift.

ii) Accuracy and precision.

b) What is the function of filters? How are filters classified? [8]

OR

Q2) a) An electrical resistance strain gauge of resistance 120 Ω and gauge factor 2.0 is bonded to a specimen of steel. What will be the resistance change of the gauge due to stress of 60 MN/m^2 (tensile) in the specimen. (Modulus of elasticity E = 180 GN/m^2) [8]

b) With respect to principle, construction, advantages, types and any one application, discuss Thermocouples. [8]

Q3) a) State four level measurement transducers and explain any one of it with respect to schematic diagram, working application. [8]

b) With respect to Construction, working and applications discuss Tachogenerators in brief. [8]

OR

P.T.O.