

Code No:56093

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. II Sem., II Mid-Term Examinations, April – 2014

INSTRUMENTATION AND CONTROL SYSTEM ENGINEERING

Objective Exam

Name: _____

Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. Which of the following is an mechanical type of speed measurement device []
a) Eddy current drag cup Tachometer b) Tacho generator
c) Inductive Tachometer d) Centrifugal force Tachometer
2. An electric resistance strain gauge is not sensitive to []
a) tensile strain b) compressive strain c) shear strain d) all of these
3. Which of the following devices are used to measure torque on a rotating shaft []
a) Dynamometer b) Load cell c) proving ring d) none of these
4. Open loop control systems are generally _____ stable when compared with closed loop control systems. []
a) more b) less c) equally d) comparison not possible
5. Which of the following devices are non-contact type of speed measurement []
a) Inductive Tachometer b) Tachogenerators
c) Photoelectric type Tachometer d) both a &c
6. A seismic instrument is a []
a) first order system b) second order system c) zero order system d) none of these
7. A Dummy gauge is one []
a) which is used for temperature compensation only
b) which is bonded to a separate unstrained component of same material as test specimen and undergoes resistance change due to temperature only.
c) which are unmounted gauges used for completing the bridge circuit
d) none of these
8. _____ Dynamometers are also called as torque meters []
a) Absorption b) Driving c) Transmission d) both a &b
9. Which of the following are the effects of feed back on the parameters of the control system []
a) Accuracy will be increased b) Gain will be decreased c) a & b d) none of these
10. Which of the following is not an elastic force transducer []
a) Proving ring b) Strain gauge load cell c) Pneumatic force meter d) all of these

Cont.....2

II Fill in the blanks

11. The disturbance or noise signal generated in a system can be _____ by introducing feedback in to the system
12. _____ dynamometers measure the torque as well as provide the energy to operate the device to be tested.
13. _____ is the mass of water vapour in a unit volume of air
14. The sensitivity of a gauge in _____ strain can be neglected.
15. A _____ can be used to measure the speed of object moving with cyclic motion whether rotary or reciprocating.
16. Strain gauges are often mounted on a rotating shaft to measure _____ strain.
17. The study of the properties of air-water vapour mixture is called _____.
18. _____ dynamometers absorb the mechanical energy when torque is measured.
19. The natural frequency of Piezo-Electric accelerometer is _____ as it can be used for wide range of applications
20. If the dynamic displacement –time variation is continuous and repetitive in nature, it is termed as _____.

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