

Code No: 07A51001

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. I Sem., I Mid-Term Examinations, September – 2010

INDUSTRIAL INSTRUMENTATION

Objective Exam

Name: _____ **Hall Ticket No.**

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

I Choose the correct alternative:

- 1) In DC Tachogenerators used for measurement of speed of a shaft frequent calibration has to be done because []
 A) the contacts wear off B) The strength of permanent magnet decreases with age
 C) the armature current produces heating effect D) All of the above
- 2) When Seismic transducers are used in the acceleration made they should be designed with []
 A) stiff spring & small mass B) heavy mass & weak spring
 C) heavy mass & strong spring D) weak springs & small mass
- 3) Gyroscope is an instrument used for []
 A) leveling B) measuring angles C) measuring forces D) none
- 4) The Revolution Counters measures both []
 A) Revolution and frequency B) Revolution and time
 C) Revolution and voltage D) none
- 5) An electronic stroboscope uses _____ to produce flashes of light []
 A) Multivibrator circuit B) instrumentation amplifier
 C) Schmitt trigger D) amplifier circuit
- 6) A magnetic pickup sensor measures speed by generating a voltage whose ____ is ____ to rotational speed. []
 A) Frequency, inverse B) Frequency, proportional
 C) Frequency, inversely proportional D) none
- 7) For Pressure less than about 10^{-2} torr []
 A) viscosity of gases is inversely proportional to pressure
 B) viscosity of gases is directly proportional to pressure
 C) viscosity of gases is independent of pressure D) None
- 8) The difference between type A Mechanical Bevel Protractors & type B Mechanical Bevel Protractors is []
 A) type B is provided with fine adjustment device or acute angle
 B) type A is provided with fine adjustment device or acute angle
 C) type A is of larger range D) type B is of larger range

Cont.....2

Code No: 07A51001

:2:

Set No.1

- 9) Angle measurements based on Sine principle is usually limited to []
A) 90^0 B) 360^0 C) 9180^0 D) 45^0
- 10) A McLeod gage can measure pressure as low as []
A) 0.05torr B) 0.005torr C) 0.0005torr D) 0.00005torr

II Fill in the blanks:

- 11) Revolution Counter is used for the measurement for the measurement of _____
- 12) Very low pressure is named as _____
- 13) _____ compares the unknown dimensions of a part with some standard which represents the basic size and dimensional variations from the master setting.
- 14) In Dynamometer often _____ is used to measure the force.
- 15) In a stroboscope the shaft speed is given by _____.
- 16) In Spring Balance method of force measurement the most common type of spring used is _____
- 17) Plain Gauges are classified according to their purposes as _____, _____ and _____
- 18) The variation in the optical properties of different rough surfaces is used in _____ method of roughness measurement.
- 19) Ratio of true to projected surface area is called _____
- 20) Force Balance Pressure transducers use _____ principle.

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Code No: 07A51001

Set No. 2

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. I Sem., I Mid-Term Examinations, September – 2010

INDUSTRIAL INSTRUMENTATION

Objective Exam

Name: _____ **Hall Ticket No.**

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

I Choose the correct alternative:

- 1) The Revolution Counters measures both []
 A) Revolution and frequency B) Revolution and time
 C) Revolution and voltage D) none
- 2) An electronic stroboscope uses _____ to produce flashes of light []
 A) Multivibrator circuit B) instrumentation amplifier
 C) Schmitt trigger D) amplifier circuit
- 3) A magnetic pickup sensor measures speed by generating a voltage whose ____ is ____ to rotational speed. []
 A) Frequency, inverse B) Frequency, proportional
 C) Frequency, inversely proportional D) none
- 4) For Pressure less than about 10^{-2} torr []
 A) viscosity of gases is inversely proportional to pressure
 B) viscosity of gases is directly proportional to pressure
 C) viscosity of gases is independent of pressure D) None
- 5) The difference between type A Mechanical Bevel Protractors & type B Mechanical Bevel Protractors is []
 A) type B is provided with fine adjustment device or acute angle
 B) type A is provided with fine adjustment device or acute angle
 C) type A is of larger range D) type B is of larger range
- 6) Angle measurements based on Sine principle is usually limited to []
 A) 90^0 B) 360^0 C) 9180^0 D) 45^0
- 7) A McLeod gage can measure pressure as low as []
 A) 0.05torr B) 0.005torr C) 0.0005torr D) 0.00005torr
- 8) In DC Tachogenerators used for measurement of speed of a shaft frequent calibration has to be done because []
 A) the contacts wear off B) The strength of permanent magnet decreases with age
 C) the armature current produces heating effect D) All of the above

Cont.....2

Code No: 07A51001

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. I Sem., I Mid-Term Examinations, September – 2010

INDUSTRIAL INSTRUMENTATION

Objective Exam

Name: _____ **Hall Ticket No.**

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

I Choose the correct alternative:

- 1) The difference between type A Mechanical Bevel Protractors & type B Mechanical Bevel Protractors is []
 A) type B is provided with fine adjustment device or acute angle
 B) type A is provided with fine adjustment device or acute angle
 C) type A is of larger range D) type B is of larger range
- 2) Angle measurements based on Sine principle is usually limited to []
 A) 90^0 B) 360^0 C) 9180^0 D) 45^0
- 3) A McLeod gage can measure pressure as low as []
 A) 0.05torr B) 0.005torr C) 0.0005torr D) 0.00005torr
- 4) In DC Tachogenerators used for measurement of speed of a shaft frequent calibration has to be done because []
 A) the contacts wear off B) The strength of permanent magnet decreases with age
 C) the armature current produces heating effect D) All of the above
- 5) When Seismic transducers are used in the acceleration mode they should be designed with []
 A) stiff spring & small mass B) heavy mass & weak spring
 C) heavy mass & strong spring D) weak springs & small mass
- 6) Gyroscope is an instrument used for []
 A) leveling B) measuring angles C) measuring forces D) none
- 7) The Revolution Counter measures both []
 A) Revolution and frequency B) Revolution and time
 C) Revolution and voltage D) none
- 8) An electronic stroboscope uses _____ to produce flashes of light []
 A) Multivibrator circuit B) instrumentation amplifier
 C) Schmitt trigger D) amplifier circuit
- 9) A magnetic pickup sensor measures speed by generating a voltage whose ____ is ____ to rotational speed. []
 A) Frequency, inverse B) Frequency, proportional
 C) Frequency, inversely proportional D) none

Cont.....2

Code No: 07A51001

:2:

Set No.4

- 10) For Pressure less than about 10^{-2} torr []
A) viscosity of gases is inversely proportional to pressure
B) viscosity of gases is directly proportional to pressure
C) viscosity of gases is independent of pressure D) None

II Fill in the blanks:

- 11) The variation in the optical properties of different rough surfaces is used in _____ method of roughness measurement.
- 12) Ratio of true to projected surface area is called _____
- 13) Force Balance Pressure transducers use _____ principle.
- 14) Revolution Counter is used for the measurement for the measurement of _____
- 15) Very low pressure is named as _____
- 16) _____ compares the unknown dimensions of a part with some standard which represents the basic size and dimensional variations from the master setting.
- 17) In Dynamometer often _____ is used to measure the force.
- 18) In a stroboscope the shaft speed is given by _____.
- 19) In Spring Balance method of force measurement the most common type of spring used is _____
- 20) Plain Gauges are classified according to their purposes as _____ , _____ and _____

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