

No. of Printed Pages : 4
Roll No.

**6th Sem / Mech, T & D, Prod, Mechatronics, GE, CNC,
CAD/CAM, Found. & Forg., Mech. Engg.
(Fabrication Tech), Mech (CAD/CAM Design & Robotics)
Subject:- Inspection and Quality Control/ Metrology**

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1** The unit of Absolute temperature is_____? (CO1)
a) kelvin b) volt
c) ohm d) N/mm
- Q.2** Which standards are used by technicians or workers?
(CO1)
a) Primary standard b) Secondary Standards
c) Tertiary Standards d) Working standards
- Q.3** Micrometers are designed on the principle of _____
(CO2)
a) meters b) gauges
c) screw and nut d) compass
- Q.4** One micron = _____? (CO2)
a) 0.01 mm b) 0.1 mm
c) 0.001 mm d) 0.0001 mm

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- Q.5 A normal distribution curve has _____ peak? (CO4)
- a) Single b) Double
- c) Triple d) No
- Q.6 Name the chart which is also known as fraction defective chart? (CO4)
- a) p-chart b) C-chart
- c) R-chart d) X-chart
- Q.7 Full form of TQM is _____ (CO6)
- a) Thinking of Quality material
- b) Total Quantity Management
- c) Total Quality management
- d) None of these
- Q.8 Name the quality control tool used to identify a set of priorities? (CO6)
- a) Histogram
- b) Pareto chart
- c) Scatter diagram
- d) Cause and effect diagram
- Q.9 An LVDT has an output in the form of
- a) Rotary movement of core
- b) Linear movement of core
- c) Pulse
- d) None of the above
- Q.10 Thermocouples are _____ transducers? (CO7)
- a) Active b) Passive
- c) Adhesive d) None of these

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SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define Median
- Q.12 List any two steps of planning of inspection? (CO1)
- Q.13 Write the function of surface Plate (CO1)
- Q.14 Write the principle of Micrometre? (CO1)
- Q.15 Name any two types of comparators? (CO2)
- Q.16 Define control charts? (CO4)
- Q.17 Give any two examples of control charts for attributes? (CO5)
- Q.18 Name different systems of units? (CO5)
- Q.19 Expand SQC (CO4)
- Q.20 Define 5S? (CO6)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write five main objectives of Inspection? (CO1)
- Q.22 Write the steps involved in planning of inspection. (CO1)
- Q.23 Draw the labelled diagram of outside Micrometre? (CO2)
- Q.24 Enlist any five alignment test carried out on lathe machine. (CO2)
- Q.25 Define Error. Explain any 3 types of errors. (CO3)

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- Q.26 Explain plug gauge with neat sketch? (CO3)
- Q.27 Write the characteristics of normal distribution curve? (CO4)
- Q.28 Discuss single sampling plan? (CO5)
- Q.29 If $\bar{R}=2.6$, $\bar{\bar{X}}=7.6$, $n=5$, $A_2=0.58$ then find upper & lower control limits for \bar{X} -chart? (CO5)
- Q.30 Enlist any five methods of taking samples? (CO5)
- Q.31 What is Bevel Protector. Explain?
- Q.32 Name the various types of QC tools. Explain any one? (CO6)
- Q.33 Define comparator. Explain any one type of comparator.
- Q.34 Explain the construction of LVDT with neat sketch? (CO7)
- Q.35 Define passive transducers and give examples of passive transducers? (CO7)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain sine bar with the help of neat sketch? How it can be used for taper measurement? (CO2)
- Q.37 Explain the following: (CO5)
 - a) TQM
 - b) Kaizen
- Q.38 Define and classify transducer. (CO7)

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