

No. of Printed Pages : 4 181762/171762/121762
Roll No. /031762/084532/031846
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**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

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

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:
a) TQM b) Kaizen
Q.38 Define and classify transducer. (CO7)

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