

- Q.27 Define Tolerances and give its classification. (CO3)
- Q.28 Explain the need and standard procedure for calibration. (CO4)
- Q.29 Explain 3 wire method with suitable diagram.(CO5)
- Q.30 Explain the working principle of gear tooth vernier with diagram. (CO5)
- Q.31 Define Quality. Write various characteristics of quality. (CO6)
- Q.32 How will you do the angular measurement using Sine bar? (CO6)
- Q.33 Explain in brief the concept of surface roughness & give its classification. (CO7)
- Q.34 Explain dial gauge with neat diagram. (CO8)
- Q.35 Write any four Characteristics of comparator.(CO8)

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Write short note on any two : (a) V-Block (b) Slip Gauge. (CO1)
- Q.37 Explain various types of gauges with suitable diagram. (CO4)
- Q.38 Explain working principle of Tool Maker Microscope with labelled diagram. (CO8)

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Subject:- Engineering Metrology

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The unit of Luminous Intensity is _____?(CO1)
a) Candela b) Meter
c) Kelvin d) Mole
- Q.2 Which instrument is used for testing Flatness or straightness of a surface (CO1)
a) Vernier Caliper b) Micrometer
c) Autocollimator d) All of these
- Q.3 A 20 mm hole "H" with tolerance grade IT8 is donated by (CO2)
a) Ø20H8 b) Ø20h8
c) 20H8 d) None of these
- Q.4 The full form of "TQM" is (CO3)
a) Total Quality Management
b) The Quality Management
c) Total Quotient Management
d) Total Quantity Management

- Q.5 Negative allowance is called? (CO3)
 a) Tolerance b) Clearance
 c) Interference d) None of these
- Q.6 Which of the following gauges is used to check the inside taper hole? (CO4)
 a) Thread gauge b) Rectangular Gauge
 c) Taper Plug Gauge d) Square Gauge
- Q.7 According to Taylor's principle which type of gauge checks both size and geometric features? (CO4)
 a) Go Gauge b) No Go Gauge
 c) Both a & b d) None of the above
- Q.8 Full form Of BSW thread is (CO5)
 a) British standard whitworth
 b) Bharat standard wool
 c) Bachelor of social work
 d) British standard width
- Q.9 Full form of ISO is (CO6)
 a) Indian organization for standardization
 b) Indonesia organization for standardization I
 c) International standards office
 d) International organization for standardization
- Q.10 Full full form of CMM is (CO8)
 a) Computerized Measuring Machine
 b) Coordinate Measuring Machine
 c) Co-operate Measuring Mechanicm
 d) All of these

SECTION-B

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

- Q.11 Accuracy of an instrument (CO1)
 Q.12 Least count of an instrument (CO1)
 Q.13 Parallax error (CO2)
 Q.14 Runout (CO2)
 Q.15 Tolerance (CO3)
 Q.16 No-Go Gauge (CO4)
 Q.17 Major diameter of a thread (CO5)
 Q.18 Function of profile projector (CO6)
 Q.19 Surface roughness tester (CO7)
 Q.20 Comparator (CO8)

SECTION-C

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

- Q.21 Name of any five linear measuring Instruments. (CO1)
 Q.22 Define Try Square, V-Block and Straight Edge. (CO1)
 Q.23 Name of any five angular measuring Instruments. (CO1)
 Q.24 Define Straightness, flatness, parallelism and ovality. (CO2)
 Q.25 Define Error and its effect on Quality. (CO2)
 Q.26 Describe the principle of "Interference fit" with sketch (CO3)