Question Bank-2

Subject- Engineering Metrology [EME]   **Scheme- I**

Subject Code-22342   **Semester- III**

Chapter No. 4 <u>Screw Thread Measurement & Gear Measurement</u>

2 Marks

1) **Define Major Diameter & Minor Diameter**
2) **Define Effective Diameter with sketch**
3) **State the types of screw thread with sketch**
4) **State the types of Errors in screw thread**
5) **State any two types of Pitch errors in screw thread**
6) **Draw Gear tooth Vernier Caliper**
7) **Draw Parkinson's Gear Tester**
8) **State the working principle of tool maker's microscope**
9) **State the methods of gear tooth calibration**

4 Marks

1) **Explain Parkinson's Gear Tester with neat sketch.**
2) **Explain working of involute measuring machine with neat sketch.**
3) **Explain Gear tooth Vernier Caliper method**
4) **Explain how to find Major diameter on floating carriage**
5) **Explain how to find Minor diameter on floating carriage**
6) **Explain how to find Effective diameter on floating carriage**
7) **Explain floating carriage method for screw measurement.**
8) **Explain a) backlash b) Runout**
9) **Explain a) Drunken error b) progressive error c) periodic pitch error d) irregular error with neat sketch**
10) **Explain best wire size with neat sketch.**
11) **Explain two wire method for effective diameter measurement (EDM)**

Chapter No. 5 *Linear and Angular Measurement*

2 Marks

1) State four instrument for linear measurement
2) Define least count with example.
3) State four instrument for angular measurement
4) Write short note on V block
5) Diffentiate between firm joint caliper and spring type calliper
6) Write short note on surface plate and Vernier caliper
7) Draw universal bevel protractor.
8) State any four limitation of sine bar
9) Working principle of Clinometer for angular measurement

4 Marks

1) Explain working of Bevel Protector with neat sketch
2) Explain working of Angle Dekkor with neat sketch
3) Explain working of Spirit Level with neat sketch
4) Explain working of Sine bar with neat sketch
5) Explain working of Clinometer with neat sketch
6) Explain A] radius gauges B] screw pitch gauges
7) Construct Angle of 33° 19' 15" using minimum number of angle gauges and draw the sketch of arrangement.
8) Construct Angle of 117° 8' 42" using minimum number of angle gauges and draw the sketch of arrangement.
9) Construct Angle of 116° 35' 6" using minimum number of angle gauges and draw the sketch of arrangement.

10) Diffentiate angle gauge and slip gauges

Chapter No. 6 <u>Other Measurements</u>

2 Marks

1) **Define A] Primary texture B] Secondary texture**
2) **Define RMS Value with neat sketch**
3) **Define CLA Value with neat sketch**
4) **Define Lay and flaw**
5) **Define Sampling length and Lay**
6) **Define Rz Value with neat sketch**
7) **List down methods of squareness Testing**
8) **List down methods of parallel testing**
9) **List down types of Co-ordinate measuring machines**

4 Marks

1) **List down various techniques of qualitative analysis and explain any one briefly.**
2) **Explain Symbol of surface finish on drawing.**
3) **Differentiate Alignment test and performance test**
4) **Differentiate Primary texture and Secondary texture**
5) **By using optical flat and monochromatic light source, explain how will you determine flatness of surface.**
6) **Explain method of alignment tests True running of main spindle and Parallelism of main spindle to saddle on Lathe machine**
7) **Explain method of alignment tests True running of internal taper on milling machine**
8) **Explain how will you check flatness of work table on a horizontal milling machine.**
9) **Explain method of alignment of both centers in vertical plane on Lathe machine with neat sketch**
10) **Explain with neat sketch the procedure for squareness testing of drilling machine spindle.**
11) **In measurement of surface roughness, height of successive 10 peaks and troughs are 33, 25, 30, 19,22,27,29,20,18,32 microns. It is obtained for 10 mm length, find the value of CLA & RMS.**