

Question Bank (G scheme)

Name of subject: METROLOGY AND QUALITY

Subject code: 17530

Semester: V

Unit Test :II

Course : ME

Chapter 5 Measurement of surface finish

MARKS

- 1) Explain following terms used in surface finish measurement 4
 - A) Roughness B) lay C) waviness D) sampling length
- 2) How surface finish is to be representing on drawing? 3
- 3) In a measurement of a surface finish, following readings are taken.
32,25,40,25,35,20,36,18,42,22,32,21,36,18,36,20 microns. If these measurement were obtain over a length of 20mm. Determine CLA value and RMS value of this surface. 4
- 4) Differentiate between alignment test and performance test on any four parameters 3
- 5) Sketch the experimental set-up for following alignment tests 4
 - A) Parallelism of main spindle to saddle movement
 - B) True running of head stock center.

Chapter 6.1 Quality control

- 1) State objectives of Quality Control. 3
- 2) Define cost of Failure and cost of Prevention 3
- 3) With Suitable example Explain Quality of Design, Quality of Conformance , Quality of Performance.
- 4) Write short notes on Cost of quality and value of quality 4
- 5) Explain the meaning of optimum quality of design with the help of graph. 4

6.2 Total Quality Management

- 1) State and explain concept of TQM 3
- 2) What are the advantages of TQM implementation? 3
- 3) What is PDCA cycle. 3
- 4) Explain JIDOCA in brief. 3

- 5) What is DMAIC? 3
- 6) What is ISO 9000 Standard? 3

- 1) Describe how Quality Audit is Conducted? 4
- 2) State functioning of Quality Circle in Details ? How it Works? 4
- 3) What do you mean by Six Sigma? Describe with Suitable Example? 4

Chapter 7 Elementary SQC

- 1) What is SQC? State its objectives. 3
- 2) State advantages of Sampling over 100% Inspection. 3
- 3) Differentiate Defect and Defective. 3
- 4) Explain Double sampling 3

- 1) Compare Attribute Inspection and Variable Inspection. 4
- 2) Eight Samples of size 5 each have been collected with following observations, 4

Sr. No.	\bar{X}	R
1	2.008	0.027
2	1.998	0.011
3	1.993	0.017
4	2.002	0.009
5	2.001	0.014
6	1.995	0.020
7	2.004	0.024
8	1.999	0.018

Given $A_2 = 0.577$, $D_3 = 0$ and $D_4 = 2.114$ Draw proper control chart and conclude.