



Metriology & Quality Engg.
[Time: 3 Hours]

[Marks:80]

Please check whether you have got the right question paper.

N.B:

1. Question No. 1 is compulsory.
2. Solve any three out of remaining questions.
3. Assume suitable data if required and mention it clearly.
4. Figures to right indicate full marks.



- Q.1 A) Explain concept of quality and quality control 5
B) State and explain most primitive length standard used in measurements. State reasons why these standards were replaced by optical/length standards. 5
C) What do you mean by waviness and roughness? 5
D) Explain concept of flatness. 5
- Q.2 A) Explain different types of fits with suitable examples and sketches. Also explain various tolerance grades. 10
B) Explain Construction and working of Pneumatic Comparators. State their advantages and limitations. 10
- Q.3 A) Explain Tomlinson's surface roughness measuring instrument in detail. 10
B) Explain different types of quality costs in detail 10
- Q.4 A) Explain principle, construction, working of optical interferometer in details. 10
B) Explain various modern SQC tools. 10
- Q.5 A) Explain three wire method used in screw thread measurements. 10
B) With example of your choice explain procedure to prepare P charts and np charts. What inferences you can draw from these charts? 10
- Q.6 A) Explain principle, construction and working of Tool maker's Microscope 10
B) Sketch typical OC curve and Explain:- 10
1) Acceptable Quality level
2) Producers Risk
3) Consumers Risk
4) Lot Tolerance Percent Defective (LTPD)