

Q.P. Code :09946

[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) With help of suitable sketches explain plug gauges and snap gauges 5  
 B) Write short note on-Planning for quality 5  
 C) Explain advantages and limitations of pneumatic comparators. 5  
 D) Explain importance of surface conditions in various applications. 5
- Q.2 A) Explain Taylors Principle of Gauge Design with suitable example, 10  
 B) Explain Tomlinson's surface roughness measuring instrument in detail. 10
- Q.3 A) Explain following with respect to flatness testing:- 10  
 1. Principal of interference  
 2. Concept of flatness  
 3. Optical Flats  
 4. Application of Principle of interference in flatness testing  
 B) Explain concept of quality of design and quality of conformance. 10
- Q.4 A) Explain following parameters with respect to surface roughness measurement:- 10  
 1) Waviness  
 2) Roughness  
 3)  $R_a$  Value  
 4)  $R_z$  Value  
 B) Explain various modern SQC tools 10
- Q.5 A) Explain Principle, Construction and working of Parkinson's Gear tester. 10  
 B) Explain following terms- 10  
 1) R chart  
 2) P chart  
 3) GANT chart  
 4) Pareto chart
- Q.6 A) Explain construction and working of Profile Projector. State various applications of Profile projector. 10  
 B) Sketch OC curve and explain various elements of it. Also explain double sampling plans. 10

