Unit–5

Surface Roughness Measurement

1. Surface roughness is the measure of:
A) Material hardness
B) Surface irregularities
C) Material density
D) Surface color

2. Surface roughness is generally produced by:
A) Machining processes
B) Heat treatment only
C) Welding only
D) Painting only

3. The average roughness value is represented by:
A) Rc
B) Rt
C) Ra
D) Rp

4. Which instrument is commonly used to measure surface roughness?
A) Vernier Caliper
B) Micrometer
C) Surface Roughness Tester (Profilometer)
D) Height Gauge

5. Surface roughness is usually expressed in:
A) Newton
B) Micrometers (μm)
C) Kilograms
D) Watts

6. A smoother surface generally has:
A) Higher roughness value
B) Lower roughness value
C) Higher hardness
D) Lower density

7. Which machining process generally produces the best surface finish?
A) Casting
B) Forging
C) Grinding
D) Welding

8. Surface roughness affects:
A) Wear and friction
B) Appearance only
C) Weight only
D) Color only

9. The stylus method measures roughness by:
A) Chemical reaction
B) Optical reflection
C) Tracing the surface profile
D) Heat transfer

10. Roughness symbols are specified on:
A) Electrical circuits
B) Engineering drawings
C) Balance sheets
D) Flow charts

Fill in the Blanks

1. Surface roughness refers to the _____ irregularities on a surface.

2. The most commonly used roughness parameter is _____.

3. Surface roughness is usually measured in _____.

4. A _____ is commonly used to measure surface roughness.

5. Grinding generally produces a _____ surface finish.

6. Surface roughness influences friction and _____.

7. The stylus method uses a _____ tip to trace the surface.

8. Surface finish symbols are indicated on _____ drawings.

9. Lower Ra value indicates a _____ surface.

10. Surface roughness is an important aspect of _____ control.