

April 2026

Govt ITI MULABAGAL

Question Paper

Duration: 30 Mins

Total Marks: 44

ID: ITISKILL4486JR

Student Name: _____	Roll No: _____
---------------------	----------------

1. Which heat treatment process is used to reduce internal stresses of a hardened tool?

- | | |
|----------------|----------------|
| A) Annealing | B) Stabilizing |
| C) Normalizing | D) Tempering |

2. Which gas is used in nitriding process?

- | | |
|-------------|-------------------|
| A) Hydrogen | B) Carbon dioxide |
| C) Ammonia | D) Helium |

3. What is the process of increasing carbon percentage on the surface of low carbon steel?

- | | |
|--------------|----------------|
| A) Hardening | B) Carburizing |
| C) Nitriding | D) Tempering |

4. What is 7 with expression of fit 30H7/g6?

- | | |
|-----------------------------|-----------------------------|
| A) Shaft and hole allowance | B) Shaft tolerance grade |
| C) Hole tolerance grade | D) Shaft and hole tolerance |

5. What is the type of fit for the expression Fit 25H7/p6?

- | | |
|---------------------|-------------------|
| A) Interference fit | B) Clearance fit |
| C) Running fit | D) Transition fit |

6. What is the type of fit if minimum size of the shaft is larger than maximum size of hole?

- | | |
|--------------|-----------------|
| A) Running | B) Transition |
| C) Clearance | D) Interference |

7. Which of the following structures of steel is obtained due to the drastic cooling from the austenite structure?

- | | |
|-------------|---------------|
| A) Ferrite | B) Cementite |
| C) Pearlite | D) Martensite |

8. What is the type of fit if minimum size of hole is larger than maximum size of shaft?

- | | |
|---------------|-----------------|
| A) Transition | B) Force |
| C) Clearance | D) Interference |

9. Which of the following property of metal is impart by annealing?

- | | |
|--------------|---------------------|
| A) Ductility | B) Hardness |
| C) Toughness | D) Surface hardness |

10. What is the name of the pattern of work surface caused by the movement of cutting tool?

- | | |
|---------------------|--------------------|
| A) Roughness | B) Waviness |
| C) Roughness facing | D) Surface texture |

11. Where the taper threads are used?

- | | |
|---------------|---------|
| A) Stud | B) Nut |
| C) Wood screw | D) Bolt |

12. Which metal is to be case hardened?

- | | |
|----------------------------|---------------------------|
| A) Cast iron (heavy parts) | B) Alloy steel parts |
| C) High carbon steel | D) Low carbon steel parts |

13. Which one of the following is disadvantage of tailstock offset method?

- | | |
|---|--|
| A) Only external taper can be turned | B) Good surface finish can be obtained |
| C) External taper thread can be produce | D) Power feed can be given |

14. What is the unit of deviation in limits and fits?

- | | |
|---------------|----------------|
| A) Centimeter | B) Mill micron |
| C) Millimeter | D) Micron |

15. What does QA and QC stand for?

- | | |
|--|--|
| A) Quality adjustment and quality complete | B) Quality assurance and quenching control |
| C) Quality assurance and quenching control | D) Quality assurance and quality control |

16. Which one of the following is disadvantages of taper turning by attachments?

- | | |
|--|---|
| A) Length taper can be produced | B) Power feed can be produced |
| C) Both external and internal tapers can be produced | D) Only limited taper angle can be turned |

17. Which surface is finished by honing?

- | | |
|---------------------------------|---------------------------------------|
| A) Internal cylindrical surface | B) Both external and internal surface |
| C) External cylindrical surface | D) Flat surface |

18. What is 'L' in tailstock offset method?

- | | |
|----------------------|------------------------|
| A) Length of offset | B) Amount taper |
| C) Length of the job | D) Length of the taper |

19. What does AQL stands for?

- | | |
|-----------------------------|--------------------------|
| A) Acceptance quality level | B) Aquired quality limit |
| C) Acceptance quality limit | D) Another quality limit |

20. In Which case hardening process the ammonia gas is introduced?

- | | |
|----------------|------------------------|
| A) Cyaniding | B) Induction hardening |
| C) Carburizing | D) Gas nitriding |

21. What is the heating temperature in gas nitriding process?

- | | |
|--------------------------|--------------------------|
| A) Up 200 Degree Celsius | B) Up 500 Degree Celsius |
| C) Up 300 Degree Celsius | D) Up 400 Degree Celsius |

22. Which deviation is zero in hole basis system?

- | | |
|----------------------------|---|
| A) Lower deviation is zero | B) Both upper and lower deviation is below basic size |
| C) Upper deviation is zero | D) Both upper and lower deviation is zero |

23. How many fundamental deviations are recommended by BIS?

- | | |
|-------|-------|
| A) 20 | B) 25 |
| C) 24 | D) 30 |

24. What heat treatment process the nitriding comes under?

- | | |
|-------------------|----------------|
| A) Hardening | B) Tempering |
| C) Case hardening | D) Normalizing |

25. Which deviation is zero in shft basis system?

- | | |
|---|---|
| A) Lower deviation is zero | B) Upper deviation is zero |
| C) Both upper and lower deviation is below basic size | D) Both upper and lower deviation is zero |

26. Which heat process is increase the toughness and decrease the brittleness?

- | | |
|-------------------|--------------|
| A) Case hardening | B) Annealing |
| C) Normalizing | D) Tempering |

27. What is the hole basis system?

- | | |
|------------------------------|---|
| A) Size of shaft is constant | B) Size of both hole and shaft are varied |
| C) Size of hole is constant | D) Size of the hole is varied |

28. What is the representation IT in limits and fits?

- | | |
|---------------------|--------------------|
| A) Tolerance number | B) Tolerance |
| C) Tolerance unit | D) Tolerance grade |

29. Which of the following abrasive is preferred for lapping soft steels and non-ferrous metal?

- | | |
|--------------------|---------------------|
| A) Silicon carbide | B) Boron carbide |
| C) Aluminium oxide | D) Natural corundum |

30. Which one of the advantage of mass production?

- | | |
|--------------------------------|--|
| A) Gauges are to be used | B) Special purpose machinery are necessary |
| C) Jigs and fixture are needed | D) Time for manufacturing of components is reduced |

31. What is the types of fit for the expression 20H7/g6?

- | | |
|------------------|---------------------|
| A) Clearance fit | B) Trasition fit |
| C) Force fit | D) Interference fit |

32. What is the type of fit in expression 75 H8/j7?

- | | |
|---------------------|-------------------|
| A) Clearance fit | B) Transition fit |
| C) Interference fit | D) Force fit |

33. Why heat treatment of metal is necessary?

- | | |
|--|---|
| A) To increase strength of the metal | B) To make the metal rust-proof |
| C) To produce certain desired properties | D) To make good appearance on the component |

34. What is the preheating temperature of steel?

- | | |
|-------------------------------|-------------------------------|
| A) Upto 400 Degree Centigrade | B) Upto 500 Degree Centigrade |
| C) Upto 600 Degree Centigrade | D) Upto 300 Degree Centigrade |

35. What is the representation of zero line in limit and fits?

- | | |
|-------------------|-----------------|
| A) Tolerance size | B) Actual size |
| C) Basic size | D) Nominal size |

36. Which material is used to make the stylus of mechanical surface indicator?

- | | |
|---------------|----------------------|
| A) Diamond | B) High speed steel |
| C) Mild steel | D) High carbon steel |

37. Which one of the following heat treatment process produces a scale free surface on the components?

- | | |
|--------------------|------------------------|
| A) Flame hardening | B) Induction hardening |
| C) Nitriding | D) Case hardening |

38. Which is used to prevent concentration of abrasives on lapping surface?

- | | |
|-------------|------------|
| A) Absorber | B) Holder |
| C) Retainer | D) Vehicle |

39. What is the purpose of normalizing steel?

- | | |
|--------------------------|--|
| A) Improve machinability | B) Remove induced stresses |
| C) Soften the steel | D) Increase the toughness and reduce brittleness |

40. What is direction of finishing in surface texture?

- | | |
|-------------|--------------|
| A) Waviness | B) Lay |
| C) Flaw | D) Roughness |

41. Which letter represents basic hole?

- | | |
|-------|-------|
| A) H | B) Bh |
| C) BH | D) h |

42. Which one of the following is the solid carburizing material?

- | | |
|-------------|-------------|
| A) Petrol | B) Charcoal |
| C) Kerosene | D) Ammonia |

43. Which axis the tool moves in taper turning attachment?

- | | |
|--------------------------------|---------------------------|
| A) Angular to lathe axis | B) Parallel to lathe axis |
| C) Perpendicular to lathe axis | D) Vertical to lathe axis |

44. How the turning tool is moving in tail stock offset method?

- | | |
|--------------------------------|---------------------------|
| A) Vertical to lathe axis | B) Angular to lathe axis |
| C) Perpendicular to lathe axis | D) Parallel to lathe axis |