

NATIONAL COUNCIL OF SCIENCE MUSEUMS
BIDHAN NAGAR, KOLKATA 700091

APTITUDE TEST FOR TECHNICIAN 'A' (MACHINIST)

Name of the candidate:

Date: 23.07.2019

Roll no.:

Duration: 45 minutes

- Tick mark against the appropriate choice in the answer sheet provided.
- All questions carry equal marks.
- There is no negative mark for wrong answers.

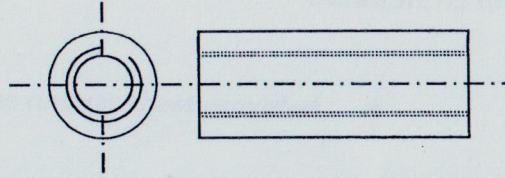
1. The cutting tool in a milling machine is held in position by _____.
a. Arbor b. Spindle c. Column d. Knee
2. Which of the following cutting tool material is the hardest?
a. Cemented carbide b. High speed steel
c. High speed carbon steel d. Diamond
3. Increase in cutting speed _____
a. Deteriorates surface finish b. Has no effect on surface finish
c. Improves surface finish d. First improves surface finish and then deteriorates
4. The angle made by the face of the tool and the plane parallel to the base of the cutting tool is known as _____.
a. Clearance angle b. Cutting angle
c. Rake angle d. Lip angle
5. The commonly used value of helix for a standard twist drill is _____.
a. 12° b. 90° c. 150° d. 118°
6. The point angle of a drill for drilling hard steel is _____.
a. 10° b. 29° c. 60° d. 135°
7. Morse taper is one of the internationally accepted standard tapers. The morse taper are available in numbers from?
a. 0 to 7 b. 0 to 8 c. 1 to 7 d. 1 to 8
8. A gear wheel has 36 teeth (z) and 3 mm module (m) its pitch diameter cutter?
a. 12 mm b. 75 mm c. 80 d. 108 mm
9. A main purpose of using worm and worm wheel drives in machines and their accessories is to?
a. Transmit large torque
b. Provide large speed reduction from worm shaft to worm wheel
c. Transmit higher speeds
d. Provide large speed reduction from worm wheel to worm shaft

10. In a planning machine the depth of cut is given by?
a. Adjusting tool slide
b. Rotating the feed screw of the tool holder
c. Moving cross slide
d. Lifting the work piece
11. One of the taper turning methods in lathe is by offsetting the tail stock. Which part of the tail stock is offset?
a. Body
b. Base
c. Carriage
d. Spindle
12. Indexing head mechanisms work with ____
a. Rack and gear
b. Worm and worm gear
c. Two helical gears
d. Two bevel gears
13. The distance a drill moves into the work for each revolution of the spindle is called ____
a. Speed of drill
b. Cutting speed of drill
c. Feed of drill
d. Depth of drill
14. The accuracy of lathe depends on the accuracy of
a. Carriage
b. Bedways
c. Tail stock
d. Compound slide
15. The base of the compound rest in a lathe is graduated in ____
a. cm
b. mm
c. metre
d. degrees
16. Main use of a coolant in machine tool is ____
a. To minimize the friction between the mating parts
b. To cool the parts of the machine
c. To wet the two mating parts
d. To save the machine tool from heating
17. Clapper box in a shaper is used to ____
a. Avoid overhanging tools
b. Lift the tool in the middle of the strokes
c. Lift the tool during return stroke
d. Lift the tool during cutting stroke
18. Which type of chuck is used for self-alignment of work?
a. Magnetic chuck
b. Three jaw chuck
c. Four jaw chuck
d. None of these
19. Which of the following is used for finishing or polishing?
a. Reamer
b. Trammel
c. Side chisel
d. Trepanning tool
20. The tool used to withdraw a drill from the sleeve is called ____
a. Punch
b. Key
c. Allen key
d. Drift

21. The process of cutting very large circular holes by using a drill machine is called ____.
- a. Counter sinking
 - b. Reaming
 - c. Trepanning
 - d. Counter boring

22. The _____ is the part of the drill bit that is held in the turning device?
- a. Body
 - b. Tip
 - c. Chuck
 - d. Shank

23. What does this drawing explain?
- a. Stepped hole
 - b. Internal thread
 - c. Blind hole
 - d. None of the above



24. In a micrometer, when the zero on the thimble is below the index line, then the zero error _____
- a. Must be deducted from the reading
 - b. Need not be considered
 - c. Must be added to the reading
 - d. None of the above

25. _____ are used for finding diameters of wires and for finding thickness of metal sheets.
- a. Wire gauge
 - b. Limit gauge
 - c. Micrometer
 - d. Snap gauge

26. The extreme permissible dimensions of a part is known as its _____.
- a. Tolerance
 - b. Limit
 - c. Allowance
 - d. Clearance

27. Which thread is generally used in screw jacks?
- a. Buttress thread
 - b. Whitworth thread
 - c. Square thread
 - d. BA thread

28. The pitch of a three-start thread is 2mm. What will be its lead?
- a. 6 mm
 - b. 2/3 mm
 - c. 1.5 mm
 - d. 2 mm

29. Which of the following is NOT an alloy?
- a. Steel
 - b. Brass
 - c. Bronze
 - d. Chromium

30. $\frac{3}{4} + \frac{1}{64} =$ _____.
- a. $\frac{50}{64}$
 - b. $\frac{40}{64}$
 - c. $\frac{4}{64}$
 - d. $\frac{49}{64}$

----- X -----