

Mechanical

1) A flat surface can be produced by a lathe machine, if the cutting tool moves

- a. parallel to the axis of rotation of workpiece
- b. perpendicular to the axis of rotation of workpiece
- c. at an angle of 45°
- d. none of the above

2) What is the function of cone pulley drive in lathe machines?

- a. Drive the lead screw
- b. Change the spindle speed
- c. Drive the tail-stock
- d. All of the above

3) Which of the following is a mechanism for mechanized movements of the carriage along longitudinal axis?

- a. Cross-slide
- b. Compound rest
- c. Apron
- d. Saddle

4) The function of taper turning process is to _____

- a. reduce the diameter of a workpiece along its length
- b. reduce the diameter by removing material about an axis offset from the axis of workpiece
- c. remove the material from end surface of a workpiece
- d. all of the above

5) The process of bevelling sharp ends of a workpiece is called as _____

- a. knurling
- b. grooving
- c. facing
- d. chamfering

6) In an isolated system, _____ can be transferred between the system and its surrounding.

- a. only energy
- b. only mass
- c. both energy and mass
- d. neither energy nor mass

7) Which of the following is an extensive property?

- a. Volume
- b. Pressure
- c. Viscosity
- d. All of the above

8) How is absolute pressure measured?

- a. Gauge pressure + Atmospheric pressure
- b. Gauge pressure – Atmospheric pressure
- c. Gauge pressure / Atmospheric pressure
- d. None of the above

9) The extensive properties of a system, _____

- a. are independent of the mass of the system
- b. depend upon temperature of the system
- c. depend upon the mass of the system
- d. none of the above

10) An isobaric process, has constant _____

- a. density

- b. pressure
- c. temperature
- d. volume

11) Which of the following energy conversion devices convert heat into work?

- a. Electrical generators
- b. I. C engines
- c. Condensers
- d. All of the above

12) Lancashire boilers are _____

- a. externally fired boilers
- b. internally fired boilers
- c. both a. and b.
- d. none of the above

13) Smoke tube boilers have large water to steam ratio, hence _____

- a. have high evaporation rates
- b. are slow in operations
- c. temperature stresses inducing failure of feed water arrangement are maximum

d. all of the above

14) Which of the following statements are false for reaction turbines?

- 1. Flow of water can be regulated without any losses**
- 2. It works on the principle of impulse and reaction**
- 3. They are suitable for low heads**
- 4. Water flows at constant atmospheric pressure over the runner**

a. 1, 2 and 3

b. 2 and 4

c. 1 and 4

d. 1, 2, 3 and 4

15) In four stroke cycle engine, cycle is completed in _____

- a. two strokes of the piston
- b. two revolutions of the crankshaft
- c. three strokes of the piston
- d. four revolutions of the crankshaft

16) Which type of bearings are known as anti friction bearings?

- a. Sliding contact bearings
- b. Rolling contact bearings
- c. Both a. and b.
- d. None of the above

17) In roller bearings which type of rolling elements are used?

- a. Cylindrical rollers
- b. Taper rollers
- c. Spherical rollers
- d. All of the above

18) Why is the load carrying capacity low in ball bearings?

- 1. Due to line contact between inner race and the ball
 - 2. Due to greater axial dimensions
 - 3. Due to less radial dimensions
 - 4. Due to point contact between inner race and the ball
- a. 1 and 3
 - b. only 1
 - c. only 4

d. 2 and 4

19) Cylindrical roller bearings have greater _____

- a. axial load carrying capacity
- b. thrust load carrying capacity
- c. radial load carrying capacity
- d. all of the above

20) Which of the following statements is/are true?

- a. Jaw clutch is a positive clutch
- b. The power transmitting capacity of a friction clutch is inversely proportional to the coefficient of friction between contacting surfaces
- c. Driving and driven plates in friction clutches are held together due to radial force applied by the helical springs
- d. All of the above