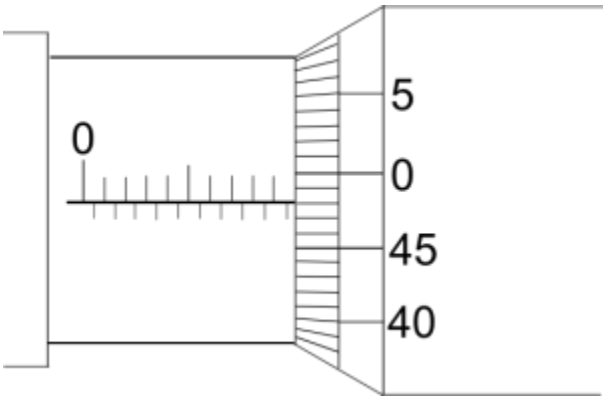
Q1 What is the reading as shown in the figure below?

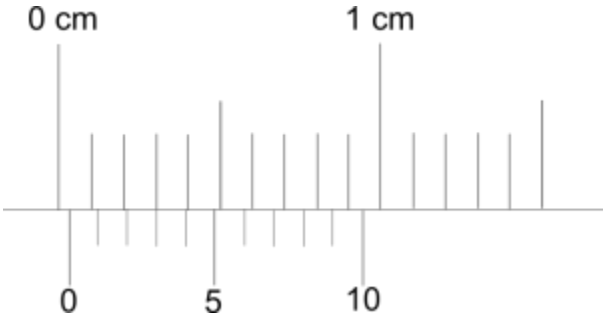


- 9.48 mm
- 9.98 cm
- 9.48 cm
- 9.98 mm

Q2 A vernier caliper is precise to _____ ?

- 0.01 mm
- 1 mm
- 0.1 mm
- 0.001 mm

Q3. What is the zero error as shown in the figure below?



- -0.3 mm
- 0.3 mm

- 0.03 mm
- -0.03 mm

Q4 What would you use to measure the diameter of a beaker in a lab?

- Micrometer screw gauge
- Measuring tape
- Metre rule
- Vernier calipers

5. Which of the following groups of physical quantities consists only of scalars?

- acceleration, mass, speed
- force, time, velocity
- mass, speed, time
- acceleration, force, velocity

6. Which of the following is a scalar quantity?

- The heat needed to boil some water
- The effort needed to hammer a nail into wood
- The braking force needed to stop a car
- The thrust needed to lift a rocket off the ground

8. 2.25 cm = _____

A: 22.5 mm
B: 225mm

C: 0.225 mm
D: 2250 mm

9 The significant numbers 0.002 has, are/is _____

A: one
B: two

C: three
D: four

10. The prefix for 10 power 9 is

A: giga
B: milli

C: nano
D: pico

11. The unit of force is _____

A: kilogram
B: meter

C: coulomb
D: newton

12. A student studies some equations. power = work / time force = mass × acceleration velocity = displacement/ time How many vector quantities are contained in the equations?

A: 1
B: 2

C: 3
D: 4

13. Which statement about scalars and vectors is correct?

A: A scalar has direction but no size.
B: A scalar has size but no direction.

C: A vector has direction but no size.
D: A vector has size but no direction.

14. A Train cover 210m in 4sec. Its speed is _____

A: 52.2 m/s
B: 71.4 m/s

C: 65 m/s
D: 29 m/s

15. A car is moving with uniform acceleration and attains the velocity of 72 km/h in 5min its acceleration is _____

A: 0.066 m/s2
B: 0.66 m/s2

C: 6.6 m/s2
D: 6 m/s2

16. The motion of a body in a straight line is called _____

A: vibratory motion
B: translatory motion

C: rotatary motion
D: oscillatory motion

17. A body is said to be in motion if it changes its position with respect to it_____

A: surrounding
B: time

C: speed
D: enivroment

18. speed in a given direction is called _____

A: acceleration
B: velocity

C: speed
D: distance

19. A car begins to move. It speeds up until it reaches a constant speed. It continues to travel at this constant speed for the rest of the journey. What happens to the acceleration and what happens to the velocity of the car during the journey?

A: Both the acceleration and the velocity change.
B: Only the acceleration changes.

C: Only the velocity changes.
D: Neither the acceleration nor the velocity changes.

20. Rate of change of velocity is know as

A: Displacement
B: Acceleration

C: Relative
D: Distance

21. Motion cannot be produced in a body without _____

A: weight
B: force

C: speed
D: enivroment

22. A car of mass 700 kg moving with the acceleration of 5m/s2 the net force act on body is _____

A: 4500 N

B: 6500 N

C: 3500 N
D: 522 N

24. F = _____

A: m x a
B: m / a

C: a x t
D: v x t

25. The quantity of matter present in a body is called_____

A: weight
B: force

C: mass
D: newton

26. A car of mass 900 kg moving with the acceleration of 3 m/s2 the net force act on body is _____

A: 2700N
B: 500N

C: 3500N
D: 6200N

27. How many laws of motion newton had proposed?

A: 4
B: 3

C: 5
D: 2

28. Which of the followings is wrong for a vertical motion against gravity?

1. velocity is always varying
2. acceleration never becomes zero
3. at maximum height velocity becomes zero, but acceleration is non-zero
4. acceleration is constant

29. Displacement-time graph for an object moving with constant velocity is a

1. Straight line parallel to time axis
2. straight line passing through origin
3. elliptical
4. straight line parallel to displacement axis

30. The area of velocity-time graph gives

1. displacement
2. acceleration
3. momentum
4. work done

31. The acceleration of a free fall body is

1. zero
2. 9.8 m/s^2
3. 4.9 m/s^2
4. infinite

32. A particle can have non-zero speed even if its velocity is zero.

1. True
2. False

33.A particle moving with uniform speed in a curved path can have an acceleration.

1. True
2. False

34. A particle moving with uniform speed in a curved path can have an acceleration.

1. True
2. False

35. For an object moving with uniform velocity, the acceleration is zero.

1. True
2. False