Chapter # 2
KINEMATICS - Solved (MCQs)

Q. 1 Tick the correct answer. Also, fill up the Bubble Sheet.

1) A type of motion in which a body moves about its own axis is called:

A) Vibratory motion	**B)** Rotatory motion ☑
C) Circular motion	**D)** Random motion

2) See-saw game is example of ---------- motion:

A) Rotatory	**B)** Circular
C) Random	**D)** Vibratory ☑

3) Brownian motion is:

A) Linear motion	**B)** Circular motion
A) Vibratory motion	**B)** Random motion ☑

4) The motion of steering wheel is:

A) Random	**B)** Rotatory ☑
C) Linear	**D)** Vibratory

5) To and fro motion of a body about its mean position is known as:

A) Translatory motion	**B)** Vibratory motion ☑
C) Circular motion	**D)** Random motion

6) The motion of the pendulum of a clock is:

A) Rotatory	**B)** Random
C) Linear	**D)** Vibratory ☑

7) The flight of butterfly is called:

A) Rotatory motion	**B)** Random motion ☑
C) Linear motion	**D)** Vibratory motion

8) Which quantity is scalar:

A) Force	**B)** Power ☑
C) Velocity	**D)** Torque

9) Which is not a scalar quantity?

A) Speed	**B)** Distance
C) Displacement ☑	**D)** Power

10) Which of the following is a vector quantity?

A) Speed	**B)** Distance
C) Displacement ☑	**D)** Power

11) A change in position is called ----------?

A) Speed	**B)** Distance ☑
C) Displacement	**D)** Power

12) Which is not a scalar quantity?

A) Acceleration ☑	**B)** Work
C) Power	**D)** Mass

13) A ball is thrown vertically upward, its velocity at the highest point is:

A) $-10ms^{-1}$	**B)** $10ms^{-1}$
C) $zero$ ☑	**D)** $100ms^{-1}$

14) Falcon can fly at a speed of:

A) $100kmh^{-1}$	**B)** $200kmh^{-1}$ ☑
C) $250kmh^{-1}$	**D)** $50kmh^{-1}$

15) The acceleration of a car, which starts from rest and attain velocity of $20ms^{-1}$ in 8 seconds, will be:

A) $1.5ms^{-2}$	**B)** $2.0ms^{-2}$
C) $2.5ms^{-2}$ ☑	**D)** $3.0ms^{-2}$

16) a = ----------?

A) $\frac{vf-vi}{t}$ ☑	**B)** $\frac{vf+vi}{t}$
C) $\frac{vf^2-vi^2}{t}$	**D)** $\frac{vf^2+vi^2}{t}$

17) The speed of a tiger is:

A) $200Kmh^{-1}$	**B)** $70Kmh^{-1}$ ☑
C) $100Kmh^{-1}$	**D)** $80Kmh^{-1}$

18) A car is moving with speed of $20ms^{-1}$. Its speed in Kmh^{-1} is:

A) $36Kmh^{-1}$	**B)** $50Kmh^{-1}$
C) $72Kmh^{-1}$ ☑	**D)** $100Kmh^{-1}$

19) By dividing displacement of a moving body with time, we obtain:

A) Speed	**B)** Acceleration
C) Velocity ☑	**D)** Deceleration

20) Complete the equation: vf = ----------:

A) $vi - at$	**B)** $vi + \frac{1}{2}at^2$
C) $vi + at$ ☑	**D)** $\frac{s}{a}$

21) A train is moving at a speed of $72Kmh^{-1}$. Speed expressed in ms^{-1} is:

A) $10ms^{-1}$	**B)** $25ms^{-1}$
C) $20ms^{-1}$ ☑	**D)** $10m^2s^{-1}$

22) The disordered or irregular motion of an object is called:

A) Linear motion	**B)** Random motion ☑
C) Vibratory motion	**D)** Circular motion

23) The motion of steering wheel about its axis is:

A) Rotatory motion ☑	**B)** Random motion
C) Vibratory motion	**D)** Circular motion

24) A scalar has:

A) Direction only	**B)** Magnitude only ☑
C) Both A & B	**D)** None of these

25) Vector quantity is:

A) Weight ☑	**B)** Time
C) Volume	**D)** Work

26) The shortest distance between two points which has magnitude and direction is called:

A) Position	**B)** Displacement ☑
C) Length	**D)** Distance

27) A body covers a distance of $20m$ in $5s$, its speed will be:

A) $2ms^{-1}$	**B)** $4ms^{-1}$ ☑
C) $5ms^{-1}$	**D)** $10ms^{-1}$

28) A body moving along a circular path has:

A) Variable velocity	**B)** Uniform velocity
C) Zero velocity	**D)** Constant velocity ☑

29) The slope of distance – time graph give:

A) Speed of the body ☑	**B)** Distance covered by the body
C) Acceleration of the body	**D)** Deceleration of the body

30) Freely falling bodies move under the action of:

A) Force	**B)** Gravity ☑
C) Velocity	**D)** Mass

31) In SI unit, the value of "g" is:

A) $19.6ms^{-2}$	**B)** $9.8ms^{-2}$ ☑
C) $4.9ms^{-2}$	**D)** $12.5ms^{-2}$

32) A body has Translatory motion if it moves along a:

A) Straight line	**B)** Line without rotation ☑
C) Circle	**D)** Curved path

33) The motion of a body about an axis is called:

A) Circular motion	**B)** Rotatory motion ☑
C) Circle	**D)** Curved path

34) The motion of a body in a circular path is called:

A) Circular motion ☑	**B)** Rotatory motion
C) Vibratory motion	**D)** Random motion

35) Which of the following is a vector quantity?

A) Speed	**B)** Distance
C) Displacement ☑	**D)** Power

36) If an object is moving with constant speed then its distance time graph will be a straight line:

A) Along time axis	**B)** Parallel to time axis
C) Along distance axis	**D)** Inclined to time axis ☑

37) A straight line parallel to time axis on a distance time graph tells then:

A) Moving constant speed ☑	**B)** At rest
C) Moving with variable speed	**D)** In motion

38) A car starts from rest. It acquires a speed of $25ms^{-1}$ after 20 seconds. The distance moved by the car during this time is:

A) $31.25m$	**B)** $250m$ ☑
C) $500m$	**D)** $5000n$

39) Rest and motion are ---------- states:

A) Absolute	**B)** Constant
C) Variable	**D)** Relative ☑

40) The motion of dust and smoke particles is:

A) Linear motion	**B)** Random motion ☑
C) Rotatory motion	**D)** Vibratory motion

41) The motion of earth around the sun is an example of:

A) Linear motion	**B)** Circular motion ☑
C) Random motion	**D)** Vibratory motion

42) The motion of the string of a violin is:

A) Translatory motion	**B)** Rotatory motion
C) Vibratory motion ☑	**D)** None of these

43) What type of motion is that of freely falling bodies?

A) Rotatory motion	**B)** Circular motion
C) Vibratory motion	**D)** Linear motion ☑

44) A LIDAR is a:

A) Light detection gun	**B)** Ranging speed gun
C) Acceleration detection gun	**D)** Both "A" & "B" ☑

45) A car start from rest, its velocity becomes $20ms^{-1}$ in $8s$. Its acceleration is:

A) $1.5ms^{-1}$	**B)** $2.5ms^{-1}$ ☑
C) $7.8ms^{-1}$	**D)** $4.5ms^{-1}$

46) The slope of distance time graph gives.

A) Speed of moving body ☑	**B)** Distance covered by moving body
C) Acceleration of moving body	**D)** Deceleration of moving body

47) The graph of uniform velocity is:

A) Straight line ☑	**B)** Parabolic
C) Parallel to x-axis	**D)** Parallel to y-axis

48) If a body is falling under the gravity then its initial velocity will be:

A) Positive	**B)** Increasing
C) Negative	**D)** Zero ☑

49) If a body is thrown upward, then its gravitational acceleration will be:

A) Positive	**B)** Increasing
C) Negative ☑	**D)** Zero

50) If a ball is dropped from the top of the tower. The distance covered by it in the first second is:

A) 100 m	**B)** 10 m
C) 50 m	**D)** 5 m ☑

51) If a car is moving with uniform speed in a circle then its velocity will be:

A) Uniform	**B)** Variable ☑
C) Zero	**D)** None of the above

52) If a body is thrown vertically upward then its final velocity will be:

A) Positive	**B)** Negative ☑
C) Uniform	**D)** Zero

53) If a body is falling under the gravity, then its gravitational acceleration will be:

A) Positive ☑	**B)** Negative
C) Increasing	**D)** Zero

54) Series of experiments on free fall of heavy bodies was performed by:

A) Newton	**B)** Einstein
C) Galileo ☑	**D)** Al-Kundi

55) There are ---------- equation of motion.

A) 1	**B)** 2
C) 3 ☑	**D)** 4