# Winmeen Tnpsc Group 1 \& 2 Study Materials 

## Tnpsc Group 2 Complete Syllabus : https://goo.gl/fNSnMN <br> Tnpsc Group 2 Previous Questions : https://goo.gl/PYqsd7 <br> Tnpsc Group 2 Model Questions : https://goo.gl/xQvyTk

## 8. Motion

1. What is mean by Speed?

The most obvious feature of an object in motion is speed. It is a measure of how fast or slow an object is moving.
2. Give one Example for measuring Speed?

Two of the most exciting events in any sports meet is the 100 m dash and $4 \times 100 \mathrm{~m}$ relay. Though all athletes run the same distance, the athlete who runs the distance in the shortest time will be the winner. In other words, the athlete who has the highest speed or is the fastest will win.
3. What is speed?

- Speed of a body is the distance travelled by the body in one second.
- $\operatorname{SPEED}=$ DISTANCE TRAVELLED/ TIME TAKEN
- Distance travelled is measured in metre and time in second
- Therefore, the unit of speed is metre / second. $[\mathrm{m} / \mathrm{s}]$.
- It can also be expressed in kilometre / hour [ $\mathrm{km} / \mathrm{h}$ ]

4. How do you find out the distance covered by an Object in a given time?

The speed of an object, we can find out the distance covered by it in a given time. All we do is to multiply the speed and time.

Distance covered $=$ Speed x Time
5. Explain the term Variable Speed?

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The speed of a bus during a journey may vary. When the bus is nearing a bus stop, its speed decreases. On the highways the bus travels with greater speed. But in a city or town it travels with less speed due to heavy traffic. The bus has different speeds at different time intervals. So we say that it has variable speed.
6. How do you calculate the average speed?

We can calculate the average speed Average speed = Total distance travelled /total time taken
7. What is Uniform Speed?

If a body moves with the same speed at all times we say that it has uniform speed.
8. What is Displacement?

Displacement is the shortest distance between two points in a particular direction.
9. What is velocity? And how will you measure it?
velocity is the displacement of a body in one second.
VELOCITY = DISPLACEMENT /TIME TAKEN
Its unit is $\mathrm{m} / \mathrm{s}$. Velocity is nothing but speed in a definite direction.
10.What is Acceleration? How will you measure it?

Acceleration is the measure of change in velocity. Acceleration is the change of velocity in one second.

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Acceleration $=$ change in velocity /Time taken. Its unit is $\mathrm{m} / \mathrm{s} 2$.
11.Define negative acceleration? Give an example?

If the velocity of a moving body decreases, we say that it has negative acceleration or retardation or deceleration. Example : A train slows down to stop at a station.
12. What willhappens when a ball is thrown up vertically?

As the ball rises, its velocity gradually decreases till it becomes zero ie., the body is decelerated. When the ball falls down its velocity gradually increases ie., it is accelerated.
13.What is mean by acceleration due to Gravity?

- The deceleration or acceleration is due to the earth's gravitational force. It is known as acceleration due to gravity.
- It has an average value of $9.8 \mathrm{~m} / \mathrm{s} 2$ on the surface of the earth and is represented as g .
- $\mathrm{g}=9.8 \mathrm{~m} / \mathrm{s} 2$. This means that the velocity of a body decreases by $9.8 \mathrm{~m} / \mathrm{s}$ every second when it is thrown up and the velocity increases by $9.8 \mathrm{~m} / \mathrm{s}$ every second when it falls down


## 14.What is Hang-gliding?

- Hang-gliding is a sport in which a pilot flies a light un-motorized aircraft called a hang glider launched by foot.


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- Most modern hang-gliders are made of aluminium alloy. The pilot is safe when fastened to a harness suspended from the frame of the glider.
15.What is Paragliding?

Paragliding is the latest aero sport. A paraglide is a non-motorized, foot launched inflatable wing, easy to transport, launch and land. It is basically a parachute made of special nylon or polyester fabric. The pilot is clipped to a harness in a comfortable sitting position. A paraglider is much lighter than a hang glider and easier to operate.

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