Name : _____ Grade/Year : _____ Subject : Physics

School's Name : _____ Date : _____ Marks obtained : _____

Choose the correct answer from 4 options and circle the correct one.

1. Newton's second law of motion can be defined as.

   A. Relationships between mass and gravity.
   B. Relationships between force, mass, and acceleration.
   C. To every action, there is an equal and opposite reaction
   D. Law of Inertia is called Newton's second law

2. A tow car pulls a 1500 kg jeep, giving it an acceleration 2.0m/s^c. What force does the tow car exert on the jeep?

   A. 1500 N
   B. 18,000 N
   C. 20,000
   D. 30,000

3. A force of 18 N is applied to the toy car of a mass of 2.0 kg which is placed on a frictionless table. What will be the acceleration of the car?

   A. 10.0 m/s^2
   B. 8.8 m/s^2
   C. 9.0 m/s^2
   D. 6.5 m/s^2

4. If you pull on a door, the door pulls you with equal.

   A. Energy
   B. Friction
   C. Force
   D. Push

5. What is the Upthrust acting on a wooden plank of weight 2200 N if it is floating on the water?

   A. 220N
   B. 22N
   C. 2200N
   D. 22000N

6. The magnitude of the acceleration is directly proportional to the magnitude of the resultant force and inversely proportional to the mass of the body. This statement refers to

   A. Newton's first and second law of motion
   B. Newton's first law of motion
   C. Newton's third law of motion
   D. Newton's second law of motion

7. In which situation is the acceleration on an object equal to zero?

   A. An object is at rest or moving with constant velocity
   B. An object is falling freely on earth.
   C. A car accelerating on a straight road.
   D. An object is moving along a circle at a constant speed.

8. Which of the following effects cannot occur when a force is applied to an object.

   A. the mass of the object remains the same
   B. the speed of the object increases or decreases.
   C. the direction of motion might change.
   D. the size of the object will not change.

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9. When two objects push on each other and none of them move, the forces acting on each other are

   A. add up
   B. equal and opposite
   C. balanced and different
   D. unbalanced and same

10. What is the relation between force, mass, and acceleration?

   A. $F = m \div a$
   B. $m = F \times a$
   C. $F = m \times a$
   D. $a = F \times m$

11. To perform Hooke's law which of the following list of the apparatus needed

   A. measuring cylinder, pan balance
   B. spring, ruler, loads, retort stand
   C. newton-meter, mass
   D. pivot, metre rule, stopwatch

12. Which force is responsible for the circular motion of planets orbiting the Sun?

   A. Electromagnetic force
   B. Gravitational force
   C. Tensional force
   D. Nuclear force

13. Which force causes the centripetal force responsible for a car travelling around a bend?

   A. Friction between tyres and roads
   B. Electrostatic force
   C. Gravitational pull
   D. Contact force

14. An object moving in a circle with constant speed always accelerates towards

   A. Normal to the ground
   B. The centre of the circle
   C. Away from the centre
   D. The force of engine

15. If the gravitational force acting on the Earth by the Sun stops suddenly, what would happen to the Earth?

   A. It would continue to rotate in the orbit
   B. It would fall on the Sun
   C. It would go away from the Sun tangentially
   D. It would move with centripetal force

16. What happens to the magnitude of the centripetal force needed to keep the car going around the bend if a person drives around a bend faster than normal?

   A. Centripetal force decreases
   B. Centripetal force remains the same
   C. Centripetal force increases
   D. The car will go tangentially

17. Which of the following is an example of uniform circular motion?

   A. The motion of space station
   B. Rotation of the moon
   C. The motion of bus on the road
   D. None of the above