



**VIDYA BHARATI SCHOOL**

**OLYMPIAD WORKSHEET (JULY2017)**

**SUBJECT:SCIENCE**

**GRADE : IX**

**1 There will be a change in the speed or in the direction of motion of a body when it is acted upon by**

- a. Uniform force c. Zero Force  
b. An Unbalanced force d. Balanced Force

**2 Force required in accelerating a 2 kg mass at 5 m/s<sup>2</sup> and a 4 kg mass at 2 m/s<sup>2</sup>**

- a. Same in both the cases  
than 4 kg mass at 2 m/s<sup>2</sup>  
b. 2kg mass at 5m/s<sup>2</sup> is less than 4  
kg mass at 2 m/s<sup>2</sup>  
c. 2kg mass at 5m/s<sup>2</sup> is greater  
d. Zero in both the case

**3 Formula to find the Force is**

- a.  $F = ma$  c.  $F = m/a$   
b.  $F = a/m$  d.  $a = Fm$

**4 Inertia is a measure of**

- a. Force c. acceleration  
b. Mass d. velocity

**5. An object of mass 2 kg is sliding with a constant velocity of 4 m/s on a frictionless horizontal table. The force required to keep the object moving with the same velocity is**

- a. 32N c. 8N  
b. 0 N d. 2N

**6. Rocket works on the principle of conservation of**

- a. Mass c. momentum  
b. Energy d. velocity

**7. A passenger in a moving train tosses a coin which falls**

- a. In front of him c. Behind him  
b. Falls outside the train d. Will not move

**8. In the following example, try to identify the number of times the velocity of ball changes:**

**“A football player kicks a football to another player of his team who kicks the football towards the goal. The goalkeeper of the opposite team collects the football and kicks it towards a player of his own team.”**

- a. Five times c. Four times  
b. Three times d. Six times

**9. A bullet of mass 20gm is fired from a gun of mass 8kg with a velocity of 400 m/s, calculate the recoil velocity of gun**

- a. 1m/s c. -1m/s

b. 2m/sd. -2m/s

**10. Type of inertia that tends to resist the change in case of an “Athlete often jumps before taking a long jump “**

- a. Inertia of rest c. Inertia of motion
- b. Inertia of direction d. Uniformly accelerated motion

**11. The object shown above moves with constant velocity. Two forces are acting on the object. Considering negligible friction , the resultant force will be**

- a. 17 N leftwards c. 10 N leftwards
- b. 3 N leftwards d. 7N rightwards

**12. Qualitative definition of Force is given by**

- a. Newton’s first law of motion c. Newton’s Second law of motion
- b. Newton’s third law of motion d. Newton’s law of gravitation

**13. An object will continue to accelerate until the**

- a. Resultant force begins to decrease
- b. Resultant force on it is zero
- c. The velocity changes direction d. Resultant force on it is increased continuously

**14. The action and reaction forces referred to in the third law**

- a. Must act on the same object c. Must act on different objects
- b. May act on different objects d. Need not be equal in magnitude but act in the same direction

**15. A hammer of mass 500 g, moving at 50m/s, strikes a nail. The nail stops the hammer in a very short time of 0.01 s. The force of the nail on the hammer is**

- a. 3500N c. 500N
- b. 2500N d. 1000N

**16 The girth of stem or root increases due to growth of**

- a) Lateral meristem b) Apical meristem
- c) Intercalary meristem d) Girth meristem

**17 Cells of Schlerenchyma tissue is dead and hard due to deposits of**

- a) pectin b) lignin
- c) cellulose d) sucrose

**18 Xylem consists of \_\_\_\_\_, \_\_\_\_\_, Xylem parenchyma and Xylem fibres**

- a) Sieve tube, Companion cell b) Tracheid, Sieve tube
- c) Tracheid, vessel d) Vessel, Companion cell

**19 Phloem contains**

- a) Sieve tube b) tracheid
- c) vessel d) All of these

**20 Inner lining of the mouth and oesophagus are covered with**

- a) Ciliated columnar epithelium b) Cuboidal epithelium
- c) Stratified squamous epithelium d) Squamous epithelium

**\*For more practice material please click: [www.brilliant.org](http://www.brilliant.org); [www.sofolympiadtrainer.com](http://www.sofolympiadtrainer.com); [www.olympiadhelper.com](http://www.olympiadhelper.com)**