**The City School**

North Nazimabad Boys Branch

Grade 9

**Subject: Physics**

**Topic: Genaral Physics**

**Mr. Faisal Sarfaraz**

1. A toy car A moving with a speed of 30 m/s has a kinetic energy of 900J. Another toy car B has twice the mass of toy car A. If toy car B moves with a speed of 15 m/s, what is the kinetic energy of toy car B?

**a. 450J b. 900J**

**c. 1800J d. 3600J**

2. A trolley of mass 1.5kg is placed on a smooth table. If a constant force of 6N acts on the trolley, the acceleration produced by the force will be

**a. 0.25 ms-2 b. 4 ms-2**

**c. 4.5 ms-2 d. 7.5 ms-2**

3 The weight of a rocket in outer space is zero because

**a. its mass becomes zero b. there is no frictional force**

**c. there is no gravitational force d. the rocket is stationery**

4 A ball of mass 0.2kg is thrown to a height of 15m. What is the change in its gravitational potential energy? (g=10N/kg)

**a. 0.3 J b. 3.0 J c. 7.5 J d. 30 J**

5 . A boy pushes a toy cart along a level road and then lets it go. As the cart is slowing down, the biggest energy change is from

**a. chemical to kinetic b. heat to kinetic**

**c. kinetic to chemical d. kinetic to heat**

6. A girl weighing 400N takes 4s to run up the stairs 3m high. What is her average speed?

**a. 0.75 m/s b. 0.8 m/s c. 1.25 m/s d. 1.33 m/s**

7 . A block of mass 2kg slides from rest through a distance of 20m down a frictionless slope 10m high. What is the kinetic energy of the block at the bottom of the slope? (g = 10ms-2)

**a. 20 J b. 40 J c. 200 J d. 400 J**

8. What are the main energy changes in a hydroelectric power station?

**a. electrical -> kinetic -> heat b. heat -> electrical -> kinetic c. kinetic -> light -> electrical d. potential -> kinetic -> electrical**

9. No work is done by an object at rest because

**a. no force is acting on the object b. no distance is moved**

**c. heat is not produced d. friction is acting on the object**

10. A mass of 40g is raised vertically from the ground to a height of 50cm, the work done in lifting the mass is

**a. 0.02J b. 20J**

**c. 0.2J d. 2000J**

11. Stiletto heels can exert great pressure mainly due to

 **a. the large force acting on it b. the small force acting on it**

 **c. its large surface area d. its small surface area**

12. Which of the following places has the highest atmospheric pressure?

 **a. on the top of a hill b. in a cable car**

 **c. on the roof top of a tall building d. at the bottom of the sea**

13. Wind blows

 **a. from areas of high atmospheric pressure to low pressure areas**

 **b. from areas of low atmospheric pressure to high pressure areas**

 **c. only at areas above normal atmospheric pressure**

 **d. only at areas below normal atmospheric pressure**

14. The pressure in a liquid decreases with

 **a. increase in surface area b. decrease in surface area**

 **c. increase in depth d. decrease in depth**

15.In which of the following examples is the greatest pressure exerted?

**a. a barefooted person standing on the beach b. a brick resting on the ground**

**c. a book resting on a table d. an elephant standing on the ground**

 **e. a knife cutting a piece of meat**

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