

TSINSETA LEMARIAM SENIOR SECONDARY SCHOOL

PHYSICS GRADE 10 SECOND SEMISTER MID EXAM 2016 E.C TIME - 45min

NAME.....GRADE & SECTION Roll No.....

PART I SAY TRUE OR FALSE.

- 1. A body can have zero velocity and still be accelerated.**
- 2. Instantaneous velocity describes how fast the speed of a moving body changes with instant time in specified direction.**
- 3. Triangle law is used to add two or more Non-parallel and Non-perpendicular vectors**
- 4. The acceleration is uniform if the Velocity changes equally for equal time interval.**

PART II CHOOSE THE BEST ANSWER FROM THE GIVEN ALTERNATIVE.

- 5. A boy runs for 10sec at 16m/s & he walks for 12sec at 5m/s what is its average speed? A. 220m/s B. 10m/s C. 20m/s
D. 0.95m/s**
- 6. Three students, HAGOS, CHALTU & CHALLA pull an object. If chaltu pulls an object 4N force due east, HAGOS by a 15N force due west & challa pulls two times of chaltu due east, in what direction will the object move? A. Due west B. Due east
C. challa direction D. To both direction 8N**
- 7. A body starting from rest accelerated at the rate of 6m/s^2 How far traveled a body after 5sec? A. 30m B. 75m C. 150m
D. 70m**
- 8. A base ball is thrown vertically in to the air with a speed of 20m/s, How high does it go? A. -2m B. 2m C. 0
D. 20m**
- 9. When a ball is thrown vertically upward the velocity of the ball;
A. remains constant C. Decreases at the rate of 9.81m/s^2
B. Will be zero at the maximum height D. B & C**
- 10. Which one is not equation of falling objects starting from rest position? A. $V=gt$ B. $h=1/2gt^2$ C. $V^2=2gh$
D. none**

11. What are the components F_x & F_y respectively if a resultant force of 100N acting at an angle of 37° . ($\sin 37^\circ = 0.6$ $\cos 37^\circ = 0.8$)
A. 60N & 80N B. 50N & 50N C. 80N & 60N D. 8N & 6N

12. If the acceleration of a body starting from rest is 10m/s^2 , How long will it take to

travel 45m? A. 5sec B. 4.5sec C. 3sec D. 450sec

13. Which one of the following is not correct about vector vectors?

A. Vectors can be added graphically

B. The sum of two or more is always vector

C. Two vectors are said to be equal If they have the same magnitude

D. the resultant of two vector having different magnitude cannot be zero

14. A stone is thrown downward with a speed of 30m/s find the height through which a body falls? A. 135m B. 300m C.

4m D. 45m 15. A car is travelling at 10m/s It accelerates uniformly

and covers a distance of 500m in 10sec, what is the acceleration of the car. A.

4m/s^2 B. 12.5m/s^2 C. 8m/s^2 D. 3m/s^2

16. A car starting from rest accelerates at 5m/s^2 for 6seconds, what is the average velocity of the car? A. 0 B. 30m/s C. 15m/s

D. 150m/s

17. A bus starts from rest with a uniform acceleration of 2m/s^2 and reaches a velocity of 16m/s how far it travels? A. 356m B. 89m

C. 128m D. 64m

18. A boy running at a constant rate of 0.5m/s^2 each second covered a distance of 400m starting from rest. How fast was the boy running at the end? A. 10m/s B.

200m/s C. 2m/s D. 20m/s PART III WORK OUT THE FOLLOWING

QUESTIONS

19. A ball thrown vertically upward and return to its starting point in 10sec, what is the maximum height reached by the ball?

20. If $V_x = 4\text{m/s}$ and $V_y = 3\text{m/s}$, determine the magnitude and direction of v ?

21. A stone and a ball fall at equal acceleration in _____?

SET BY T.NEGASI