


NOVEMBER 2019  
EBS 227  
GENERAL PHYSICS  
30 MINUTES

116

GROUP B

CANDIDATE'S INDEX NUMBER:

ABCE|PRI|18|0156

SIGNATURE: 

UNIVERSITY OF CAPE COAST  
COLLEGE OF EDUCATION STUDIES  
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH  
INSTITUTE OF EDUCATION  
FOUR YEAR B.ED - SECOND YEAR FIRST SEMESTER  
ZONAL - BASED QUIZ 1 (EGA)

- 80
- 80
- Which of the following will you **not** use to measure length?  
A. Vernier calipers  
 B. Meter rule  
C. Odometer  
 D. Spring balance
  - The magnitude of an electric current is given as the ratio of the electric charge measured in coulombs to the time measured in seconds. What is the derived unit of electric current?  
 A. Coulomb per second  
B. Second per coulomb  
C. Coulomb  
D. Second
  - A boy travelled from Kofikrom to Amakom by bus. If the distance between the two towns is 8km? What is the distance covered by the man in meters?  
A. 800m  
B. 0.08m  
C. 8m  
 D. 8000m
  - Which of the following measuring instruments will you use to measure the length of a curved straight line?  
 A. Opisometer  
B. Meter rule  
C. Micrometer screw gauge  
D. Vernier calipers
  - Consider the equation,  $a = \beta + \theta\alpha$   
A.  $ML^3$   
B.  $ML^{-2}$   
 C.  $ML^{-3}$   
D.  $ML^2$
- bonus
- 03

6. 20K is equivalent to

- A. -293°C
- B. -253°C
- C. 253°C
- D. 293°C

$$C = K - 273$$

$$C = 20 - 273$$

$$C = -253$$

7. Momentum is the product of mass and velocity. Which of the following then is the dimension of momentum?

- A.  $MLT^{-1}$
- B.  $MLT^{-2}$
- C.  $ML^2T^{-1}$
- D.  $ML^2T^{-2}$

Momentum = mass  $\times$  Velocity

$$m \times LT^{-1}$$

$$MLT^{-1}$$

8. 30.0cm<sup>3</sup> of wood ash has a mass of 90.0g, What is the density in kg/m<sup>3</sup>

- A. 0.33
- B. 3.0
- C. 330.0
- D. 3000.0

$$m = 90.0$$

$$V = 30.0 \text{ cm}^3$$

$$D = \frac{m}{V}$$

$$\frac{90.0}{30.0} = 3 \text{ g/cm}^3$$

9. When a body is in an unstable equilibrium, the centre of gravity lies outside its base and a small displacement causes it to roll over and settle at its new position.

- A. True
- B. False

$$1 \text{ g/cm}^3 = 1000 \text{ kg/m}^3$$

$$3 \text{ g/cm}^3 \times x$$

$$1 \text{ g/cm}^3 \times x = 1000 \times 3$$

$$x = 3000 \text{ kg/m}^3$$

10. One kilometre (1 km) is equivalent to .....

- A. 10<sup>3</sup>mm
- B. 10<sup>6</sup>mm
- C. 10<sup>9</sup>mm
- D. 10<sup>12</sup>mm

11. If a clock measures time, what will be used in measuring the thickness of human hair?

- A. Metric rule
- B. A pair of calipers
- C. Vernier caliper
- D. Micrometer screw gauge

12. The cgs system or metric system measured length in

- A. meters
- B. centimeters
- C. kilometers
- D. millimetres

13. A net force F is required to give an object with mass m and acceleration a. If a net force 6F is applied to an object with mass 2m, what is the acceleration on this object?

- A. a
- B. 2a
- C. 3a
- D. 4a

$$\frac{F}{m} = \frac{6F}{2m}$$

$$a = \frac{6}{2} a = 3a$$

14. Which one of the following terms is used to indicate the natural tendency of an object to remain at rest or in motion at a constant speed along a straight line?

- A. Acceleration
- B. Velocity
- C. Equilibrium
- D. Inertial

15. Which of the following symbols represent the SI unit of work?

- A. A
- B. Jm
- C. Nm
- D. W

16. A cuboid of mass of 120 grams is 2cm wide, 3cm high and 4cm long. What is its density?

- A.  $0.2 \text{ kgm}^{-3}$
- B.  $2 \text{ kgm}^{-3}$
- C.  $0.5 \text{ kgm}^{-3}$
- D.  $5 \text{ kgm}^{-3}$

bonus

17. Convert 450g to kg.

- A. 0.0045kg
- B. 0.45kg
- C. 0.45kg
- D. 4.5kg

$$\begin{array}{r} 450 \text{ g} \\ \hline 1000 \\ \hline 0.45 \text{ kg} \end{array}$$

18. A and B are in thermal equilibrium. This means that

- A. A and B have the same temperature
- B. A has a higher temperature than B
- C. A is transmitting heat to B
- D. B has a higher temperature than A

19. The force in fluids that makes objects weigh less than they do when outside the fluid is called upthrust

20. Differentiate between force of gravity and gravitational force.

Force of gravity is the force exerted on the body  
whiles gravitational force is the gravity exerted on the body.  
Force of gravity is a force that pulls an object  
towards the surface of the earth.

OS