St. Theresa school

Addis Ababa

Physics model examination for grade eight.

I. Choose the correct answer for the following questions given below and encircle your letter of choice.

_____1. The path length of a journey is best described by;
A. Distance B. Displacement C. Velocity D. Acceleration

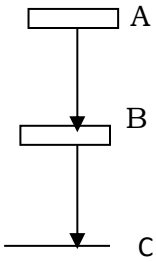
_____2. A box has 0.5m height ;1m length; and 0.6m breadth. This box has a volume of;
A. 3000cm^3 B. 300000cm ^{3} C. 0.03cm^3 D. 0.0003cm^3

_____3. The distance from Bole to Shiromeda is approximately 5km. calculate the average speed of a car that travels from Bole to Shiromeda in 20 minutes.
A. 100m/min B. 250m/sec C. 15km/hr D. 0.2km/sec

_____4. What is the name given to the force of attraction of the earth on objects?
A. Frictional force B. Electrostatic force C. Weight D. Mass

_____5. On which of the following factors does the gravitational potential energy of a body depend?
A. Length B. Volume C. Mass D. Color

_____6. A body is dropped from point "A" to point "C" as shown. At point "B" it possesses;
A. Only kinetic energy
B. Both kinetic and potential energy
C. Only potential energy
D. Zero energy



_____ 7. The height of a building in Addis Ababa is 60m. what is the power developed by a 700N if he climbed to the building in 10 minutes?
A. 70 watt B. 700watt C. 420watt D. 4200watt

_____ 8. Which machine is a speed multiplier?
A. Bottle opener B. Inclined plane C. Spanner D. Fishing machine

_____ 9. Which one does not use atmospheric pressure for its operation?
A. Siphon B. Hydraulic press C. The force pumps D. The lift pump

_____10. The pulley at the top of a flag pole is used to;
A. Multiply force B. Multiply speed
B. Change the direction of force D. Multiply both speed and force

_____11. The temperature of an object is 30 degree in Celsius scale. what is its equivalent in the Fahrenheit scale?
A. 86^{0}F B. 430/9^{0}F C. 54^{0}F D. 22^{0}F

_____12. The current in a copper wire is 0.1A. Determine the amount of charge transferred in 100second.
A. 10000 coulomb C. 100 coulomb

B. 1000 coulomb D. 10 coulomb

_____ 13. The leaves of a negatively charged are seen to diverge when a road is brought close (without contact) to the knob of an electroscope. The net charge on the rod is;

A. Negative C. Zero

B. Positive D. Undetermined

_____ 14. The major source of electricity in Ethiopia is;

A. Dry cell C. Secondary cell

B. Hydroelectric D. Electromagnetic

_____ 15. The light year is a unit of;

A. Length C. Luminous intensity

B. Time D. Temperature

_____ 16. If a 40.8kg boy and a 42.6kg girl are to sit at opposite ends of a see-saw, what additional mass must the boy carry in order to keep the see-saw balanced?

A. 1300g B. 1500g C. 1800g D. 2000g

_____ 17. A mass is hung from a spring whose one end is attached to the ceiling. If the mass is pulled down and released, the type of motion it perform is;

A. Curvilinear motion C. Rotary motion

B. Vibratory motion D. Circular motion

_____ 18. One of the effects of a force that is applied in a spring balance used to measure weight is;

A. Change of speed C. Deformation

B. Change of direction D. Acceleration

_____ 19. By using a simple machine, a load of 350N can be lifted by an effort of 70N .as the effort moves through 8m, it rises by 1m. what is the efficiency of the machine?

A. 35.4% B. 42.6% C. 56.5% D. 63.5%

_____ 20. Which one of the following temperatures cannot be read by an alcohol thermometer?

A. -85^0C B. -60^0C C. 80^0C D. 98^0C

_____ 21. A small cube has a volume of $8cm^3$. How many of these cubes can be placed in a large cubical container of sides 6cm each?

A. 25 B. 27 C. 32 D. 48

_____ 22. The atmospheric pressure at a certain location is 70cmhg. What is this temperature in Pascal(pa)?

A. 95200pa B. 84300pa C. 75200pa D. 72600pa

_____ 23. Which one of the following types of forces cannot exist between two objects if the objects are not in contact with each other?

A. Gravitational force C. Electrostatic force

B. Magnetic force D. Frictional force

_____ 24. The number of electrons that carry one coulomb of charge is;

A. 6.25×10^{15}

B. 1.6×10^{20}

C. 6.25×10^{18}

D. 1.6×10^{19}

_____ 25. Which statement is correct about force?

A. Force causes deformation

B. Force causes acceleration

C. If there is no force there is no motion

D. Force emerges due to interaction

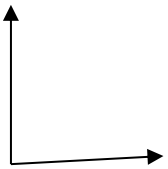
_____ 26. A ship's sonar sent messages and received its reflected sound from the ocean bottom 0.8 seconds after sound was sent down from the ship. How deep is the water beneath the ship? (Take speed of sound in water 1500m/s)

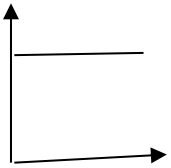
A. 2400m B. 1200m C. 937.5m D. 600m

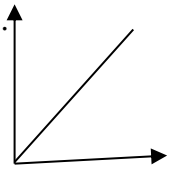
_____ 27. The word "prefix" used in scientific way of writing a number is;

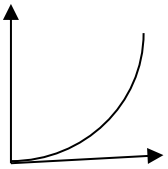
A. A symbol that represents power of ten
B. A symbol that represents SI unit
C. A symbol that represents the physical quantity
D. The dimension of physical quantity

_____ 28. Which one of the following graphs represents uniform rectilinear motion?

A. 

B. 

C. 

D. 

_____ 29. Which one of the following is a good conductor of heat energy?

A. Wool B. Copper C. Wood D. Glass

_____ 30. Which one of the if equals to 10 calorie?

A. 42 joule B. 4.2 joule C. 420 joule D. 10 joule

_____ 31. Which one of the following values of temperature is the smallest?

A. -200 ^{0}F B. -100^{0}C C. 0^{0}C D. 0K

_____ 32. What is the temperature at which all molecular movement assumed to stop?

A. Freezing point C. Room temperature
B. Boiling point D. Absolute zero

_____ 33. A grade seven student performed a bell jar experiment. which of the following may be the conclusion of the student after the experiment?

A. Sound can travel faster in solid than liquids
B. Sound travels through vacuum
C. Sound cannot travel through vacuum
D. Sound wave is a mechanical wave

_____ 34. If the smallest piston of hydraulic machine has an area of 250cm2 and the larger piston has an area of 250cm2 and the force F1applied to the smaller piston is 5000N. what is the force applied on the larger piston?

A. 5000N B. 50N C. 500N D. 50000N

_____ 35. What is the instrument used to measure air pressure?

A. Barometer C. Animometer
B. Manometer D. Spedo meter

_____ 36. A certain container is filled with a water to a depth of 6m. How much pressure is exerted on the base of a container? (take density of water 1000kg/m2)

A. 60000pa C. 60pa

B. 6000pa D. 6pa

_____ 37. The doors of a city bus are operated using;

A. Pressure in in container fluid
B. Forces from compressed spring
C. Atmospheric pressure
D. energy for solar cell

_____ 38. A bird flies at 20m/s due south, the quantity which is described is;

A. speed B. velocity C. acceleration D. displacement

_____ 39. A toy car is moving with a constant speed over a horizontal frictionless surface. What can you say about the motion assuming air friction to be zero?

A. The car experiences a forward force
B. The car is accelerating
C. The car is not changing position with time
D. No unbalanced force is acting on the car

_____ 40. Which of the following Newton's laws explains that forces always exist in pairs?

A. The law of gravity
B. Newton's second law
C. Newton's first law
D. Newton's third law

_____ 41. The inertia of an object can be determined by;

A. Speed B. Velocity C. Mass D. Acceleration

_____ 42. Which of the following is basic SI unit?

A. Newton B. Joule C. Kelvin D. Coulomb

_____ 43. Almaz used 108g of sugar out of 2kg contained in a packet. What percent is left in the packet?

A. 91 B. 80 C. 18 D. 9

_____ 44. The number 300,000,000 can be written scientifically as;

A. $3x10^6$ B. $3x10^7$ C. $3x10^8$ D. $30x10^7$

_____ 45. When an air plane is flying which one of the following is the reaction force?

A. The force exerted by the pilot
B. The force exerted by the ejected gas
C. The force exerted by the engine
D. The weight of the travelers