Revision 1st Mid. Phys 101   PNU

Question 1 : Choose the correct answer

1. The following quantities are scalar quantities except for

A	mass	B	distance
C	displacement	D	time

2. the vector sum of all forces acting on the object is ………………

A	resultant force	B	Field force
C	Contact force	D	velocity

3. …………………..is a pull or a push.

A	Force	B	Gravity
C	Friction	D	Speed

4. If the velocity of an object is constant, the acceleration equals to:

A	gravity acceleration	B	Zero
C	Negative value	D	v^2

5. When the object's velocity and acceleration are in the same directions, the speed of the object:

A	Decreases with time.	B	Equals zero
C	Increases with time.	D	Doesn't change.

6. According to third Newton's law, when two bodies interact:

A	$\vec{F}_{AB} = -\vec{F}_{BA}$	B	$\vec{F}_{AB} = \dfrac{1}{2}\vec{F}_{BA}$
C	$\vec{F}_{AB} = -\dfrac{1}{2}\vec{F}_{BA}$	D	$2\vec{F}_{AB} = -\vec{F}_{BA}$

7. When the velocity of an object is constant (including when the object is at rest), the object is said to be in

A   equilibrium.   B   accelerating motion

C   unbalanced   D

8. "An object at rest will stay at rest, and an object in motion will stay in motion at constant velocity, unless acted upon by an unbalanced force"

A   Newton's 1st law   C   Newton's 3rd law

B   Newton's 2nd law   D   Newton's 4th law

9. the tendency of an object to resist changes in its velocity

A   Inertia   B   Resultant

C   acceleration   D   Tension

10. When the velocity of object is increase, its kinetic energy is.

A   increase   B   decrease

C   zero   D   Remain constant

11. If the mass of car is 5 kg and its momentum is 24 kg.m/s, what is velocity?

A   4.8 m/s   B   4 m/s

C   0.48 m/s   D   19m/s

12. the total momentum before the collision .... the total momentum after the collision

A	More than	B	Less than
C	Equal	D	Not related

13. The total mechanical energy is equal.

A	KE + PE	B	KE – PE
C	KE X PE	D	All of above

14. what is the work exerting by the force 15 N directed at an angle of 20 for pulling the body by displacement 12m?

A	166 J	B	169.14J
C	196.14 J	D	61.6J

15. A spring while compressed has :

A	Gravitation Potential Energy	B	Heat Energy.
C	Elastic Potential Energy.	D	Kinetic Energy.

16. Friction is always :

A opposite to the motion of a body
B in the same direction
C Does not affect the motion
D non of the answers are correct

17. Mass and weight are:

A	both measuring the same thing.	B	exactly equal.
C	two different quantities.	D	both measured in kilograms.

18. The dimensional formula of velocity (v) is

A $\quad LT^{-1}$
B $\quad LT^{-2}$

C $\quad LT$
D $\quad LT^2$

19. Momentum is equal to :

C $\quad$ mass times weight.
B $\quad$ velocity times distance.

C $\quad$ mass times velocity.
D $\quad$ time times work.

20. How many significant figures are in the following numbers 3.780×10^9

B $\quad$ 1
B $\quad$ 2

D $\quad$ 3
D $\quad$ 4

21. A car travels 30 km in 0.75 hour on a straight highway, what is its average velocity?

22. Car is moving with initial velocity 22 m/s what is the time needed for a car to reach the velocity 44m/s if $a = 22 \ m/s^2$

23. A stone is dropped from rest from the top of a building, as shown in Figure. After 3s of free fall, what is the displacement y of the stone?
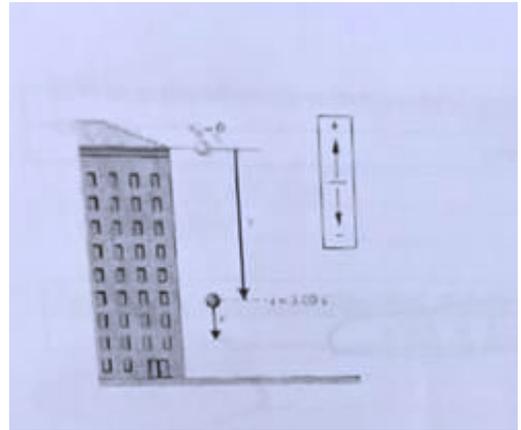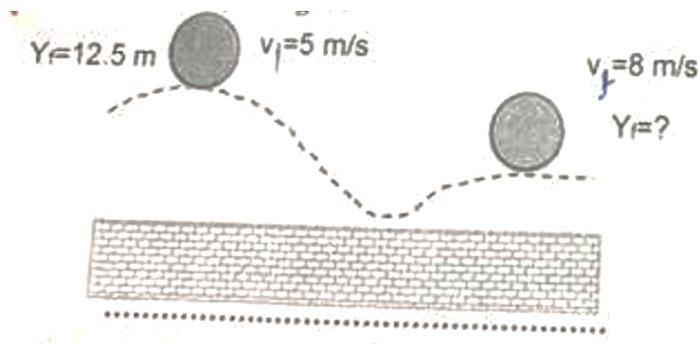

24. An object 2.5 kg, find its momentum and its kinetic energy if its velocity is 8 m/s.

25. A force equal to 120 N applied on an object at 120° with the horizontal, so the work is 250J, find the displacement?

26. A ball with 1.25 kg slides from 12.5 m in 5 m/s, find the ball height when it reaches it at 8 m/s, see figure

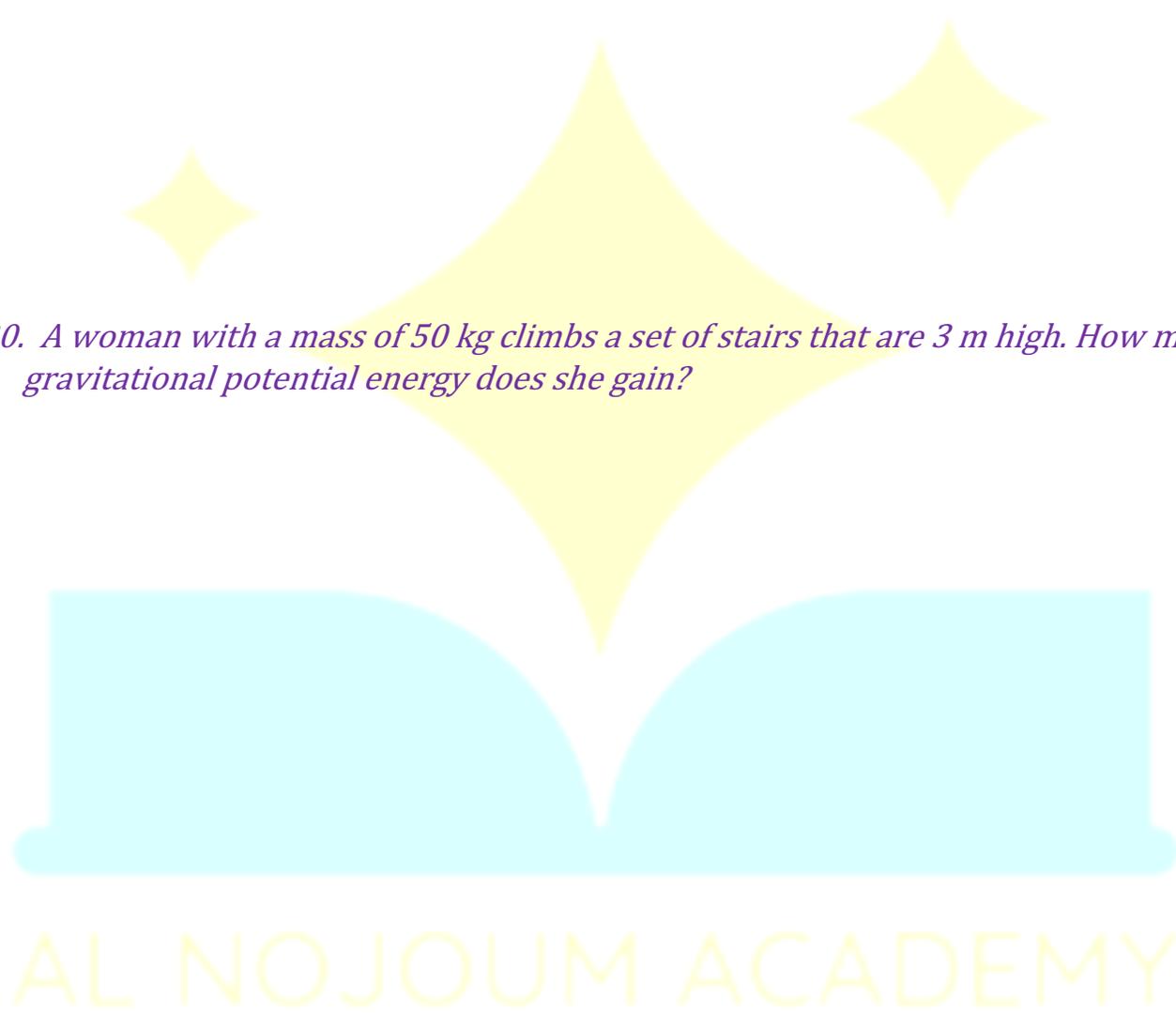$Y_f=12.5$ m $v_i=5$ m/s $v_f=8$ m/s $Y_f=?$

27.   An object 2.5 kg, with the momentum is 15 kg m/s, find the kinetic energy.

28. A 200-kg load is hung on a wire of length 4.00 m, cross- sectional area $0.200 \times 10^{24} m^2$, and Young's modulus $8.00 \times 10^{10} N/m^2$ What is its increase in length?

29. An object has a kinetic energy of 275 J and a momentum of magnitude 25.0 kg ? m/s. Find the speed and mass of the object.

30. A woman with a mass of 50 kg climbs a set of stairs that are 3 m high. How much gravitational potential energy does she gain?

دعواتـي للـجمـيـع بالتـفـوق والنــجــاح

عبدالله محمد