

1. The Element which contains the least percentage in human body based on mass is,

| | |
|------|------|
| 1. O | 2. H |
| 3. C | 4. N |



2. Select the answer which contains only the pair of vector quantities,

| | |
|---------------------------|---------------------------|
| 1. Distance, Displacement | 2. Displacement, Velocity |
| 3. Velocity, Speed | 4. Speed, Acceleration |



3. The nuclear model of the atom was introduced for the first time by,

1. J. J. Thompson

2. Neils Bohr

3. Ernest Rutherford

4. Thales



4. The sugar which is not present in plants,

1. Lactose

2. Fructose

3. Sucrose

4. Glucose



5. The standard unit of acceleration is,

1. m^2s^{-2}

2. ms^{-2}

3. ms^{-1}

4. ms



6. Which of the following element makes an amphoteric oxide?

| | |
|-------|-------|
| 1. P | 2. Al |
| 3. Mg | 4. Si |



7. A deficiency symptom of vitamin 'c' is,

1. Night Blindness.

2. Weakening of gums

3. Deforming of bones

4. Dryness in skin



8. If a certain vehicle travels a distance of 600m in 2 minutes, the mean speed of the vehicle is,

1. 5ms^{-1}

2. 10ms^{-1}

3. 30ms^{-1}

4. 50ms^{-1}



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9. The unit of measuring ionization energy is

1. kJmol^{-1}

2. molkJ^{-1}

3. gmol^{-1}

4. kJmol



10. Fatty acids + → Lipids + water

1. Amino acids

2. Glycogen

3. Galactose

4. Glycerol



11. What is the correct statement regarding the graph given for the motion?

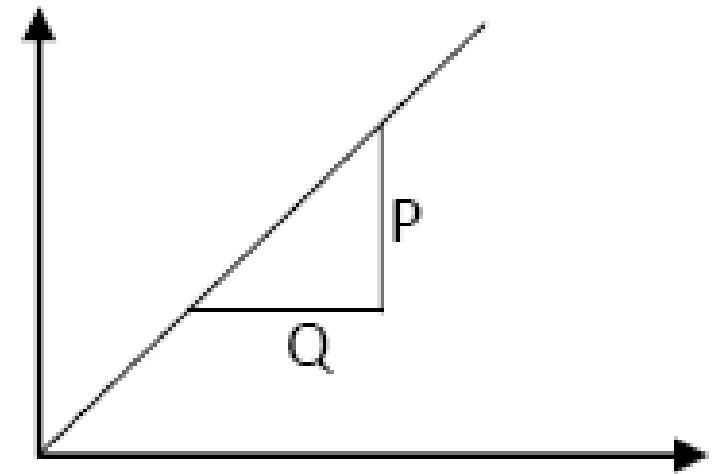
1. The transverse distance of the object is given by P/Q

2. The velocity of the object is given by P/Q

3. The acceleration of the object is given by P/Q

4. The momentum of the object is given by P/Q

Displacement



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12. What is the electronic configuration of an element when the atomic number is 13?

1. 2,3

2. 2,3,8

3. 2,8,3

4. 2,8,13



13. What is the organelle which does not contain a membrane?

1. Mitochondrion

2. Ribosome

3. vacuole

4. Golgi Complex



14. The amount of matter contained in an object is known as,

| | |
|-----------|------------|
| 1. Mass | 2. Weight |
| 3. Volume | 4. Density |



15. Which of the following allotropes of carbon is used for making electrodes of electrochemical cells?

1. Charcoal

2. Diamond

3. Graphite

4. Amorphous carbon



16. Growth of a cell is correctly known as,

1. Changing the shape of the cell

2. The increase of dry mass of the cell

3. The increase of size of vacuole of the cell

4. The increase of the mass of the cell



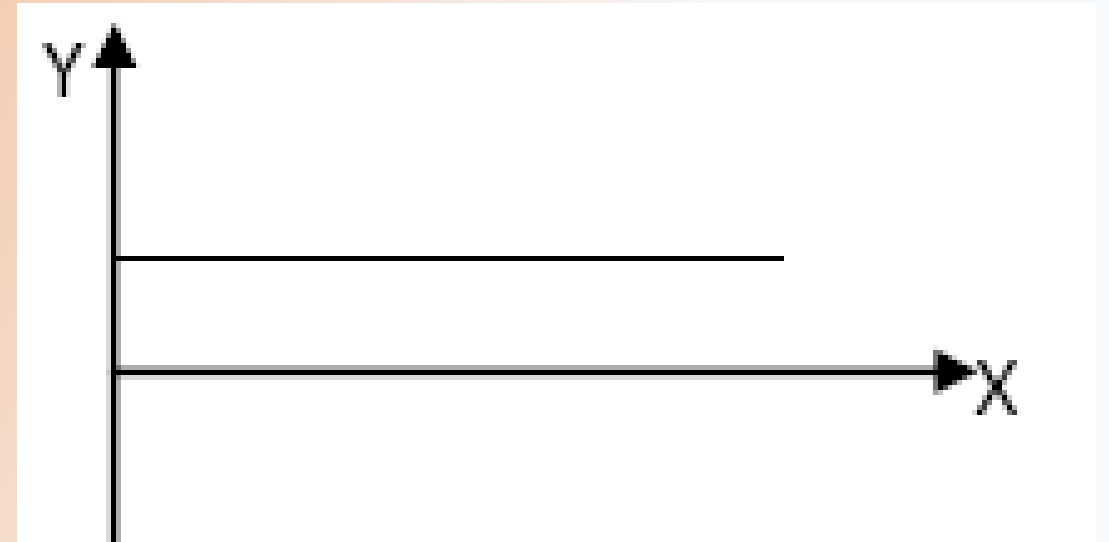
17. A graph for a motion drawn by a student is shown in the following diagram , if it depicts an object in rest what would be the appropriate quantities for **X** and **Y** respectively

1. Time and speed

2. Time and velocity

3. Distance and time

4. Time and displacement



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18. The Formula of nitrate of element Y is $Y(NO_3)_2$, what is the most suitable answer for element Y.

| | |
|-------|-------|
| 1. Na | 2. Mg |
| 3. Al | 4. K |



19. N, K, Fe are needed for growth of plants.
Deficiency of which element/s causes chlorosis

1. N only

2. K only

3. Fe only

4. N, K, Fe



20. According to the 3rd law of Newton, the reaction which acts against a particular action is,

| | |
|-------------------------------|----------------------------|
| 1. Similar in direction | 2. Similar in Magnitude |
| 3. Perpendicular in direction | 4. Dissimilar in Magnitude |



21. Which of the following element is stored in the laboratory under special safety precaution ?

1. Copper

2. Sulphur

3. Sodium

4. Aluminum



22. A significant feature common to all carbohydrates, Proteins and Lipids ,

1. Acts as an energy source

2. Acts as enzymes

3. Acts as hormones

4. Help for conservation of water



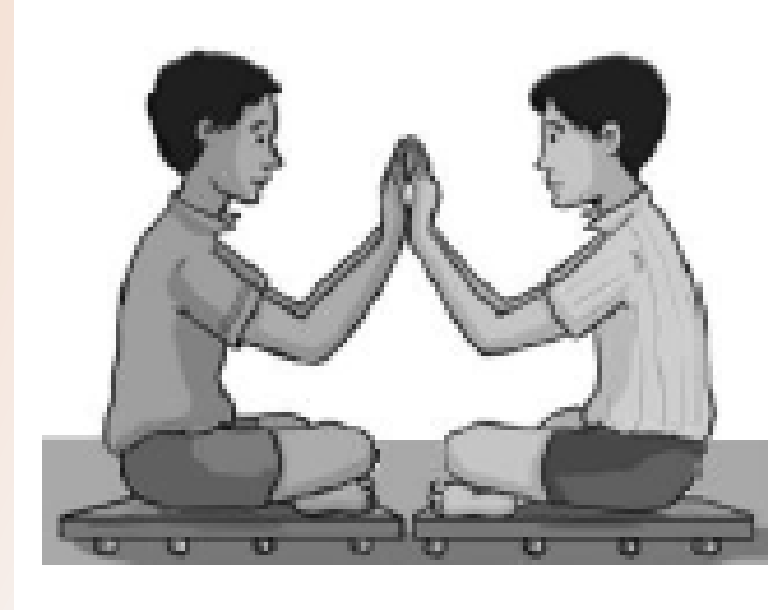
23. Which of the following is demonstrated by the activity shown in the diagram

1. Newton's first law

2. Newton's second law

3. Newton's third law

4. Newton's all 3 laws



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24. What is the incorrect statement regarding the isotopes of the same element?

1. Electronic configuration is equal

2. Number of protons are equal

3. Mass number is equal

4. Number of electrons are equal



25. The specimen used during the first observation of cells under a microscope is

1. A cross section of a bee hive

2. A piece of an onion peel

3. A peel from the lower surface of a plant leaf

4. A section of a cork



26. The mass and weight of an object measured at the sea level is taken to a mountain top in the same condition, therefore ,

1. The mass of the object reduces

2. The Weight of the object reduces

3. The mass of the object increases

4. The Weight of the object increases



27. The element X forms the oxide X_2O with Oxygen.
Then the formula of carbonate of element X is,



28. The cellular organelle which is arranged as a collection of flattened sacs is the

1. Mitochondrion

2. Chloroplast

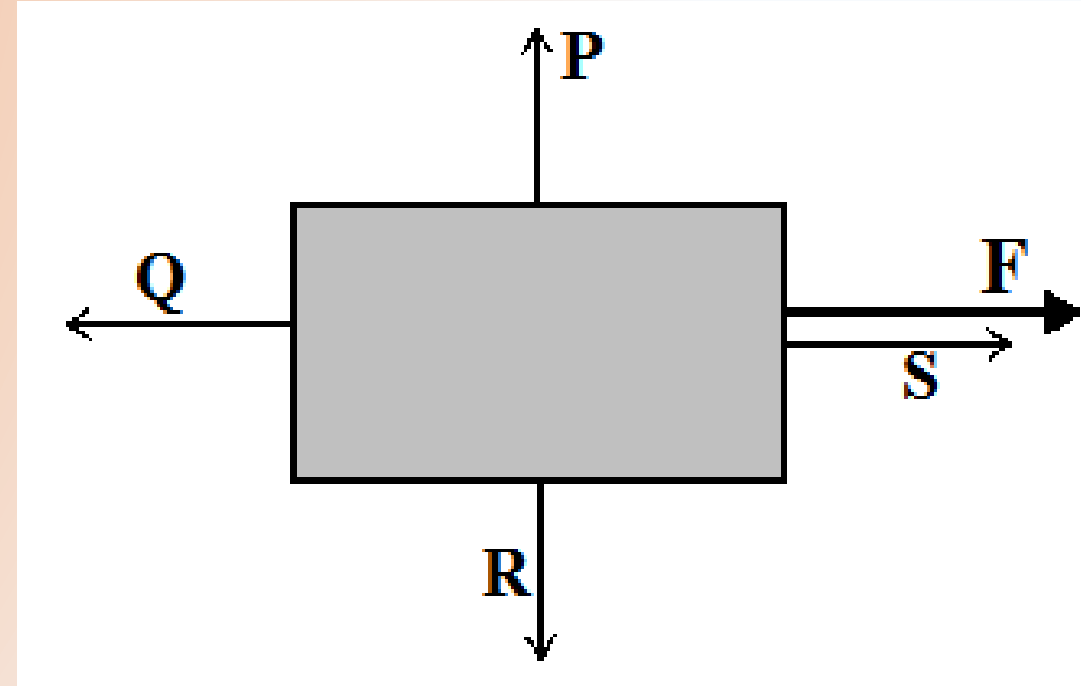
3. Endoplasmic reticulum

4. Golgi complex



29. This diagram shows an object being pulled by force “F” along a horizontal plane as seen from above. The frictional force acts on the object is shown correctly by ,

1. P
2. Q
3. R
4. S



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30. Consider following statements regarding the valency

a) The valency is the combining ability of an atom of an element

b) The combining power is measured relative to H

c) The electrons present in the first shell of an atom of an element are the valency electrons

True statements are,

1. a and b only

2. b and c only

3. a and c only

4. a ,b , c all



31. Facts regarding the plasma membrane are given below

Facts regarding the plasma membrane are given below

a) It is only present in animal cells

b) A semi permeable membrane

c) It is made-up of phospholipids and proteins

True from above,

1. a and b only

2. a and c only

3. b and c only

4. a ,b , c all



32. John uses a pulley to draw water from his well. He experienced a loud noise and noticed that it was difficult to draw up water while using it. A solution for the above problem is,

1. Remove the pulley and fixing it again

2. Apply oil to the axis of the pulley

3. Apply oil to the groove of the pulley

4. Rotate the pulley firmly



33. When studying animal cells, steps of preparing a slide with cheek cells are stated below

- a) Transfer the sample of cheek cells from the cheek to a clean slide
- b) Scrape the cheek cells using a yoghurt spoon
- c) Observe it under the low power through the microscope
- d) put a drop of water on it and cover by a cover slip without trapping air bubbles

The correct sequence of the above activity is,

1. a,c,b,d

2. b,d,a,c

3. b,a,d,c

4. a,b,c,d



34. What is the momentum of a vehicle of mass 200 kg , moving at a velocity of 8 ms⁻¹

1. $200 \times 8 \text{ kgms}^{-1}$

2. $200/8 \text{ kgms}^{-1}$

3. $8/200 \text{ kgms}^{-1}$

4. $200+8 \text{ kgms}^{-1}$



35. Three facts about nucleic acids are stated below

a) Store genetic information of organisms

b) All the diseases caused to organisms transfer from generations to generation

c) Important in protein synthesis

1. a and b only

2. b and c only

3.

4.



36. A barrel of mass 25 kg is placed on a horizontal plane. When a force of 350 N is applied on it, the acceleration of the barrel is

1. $350/25 \text{ ms}^{-2}$

2. $25/350 \text{ ms}^{-2}$

3. $350 \times 25 \text{ ms}^{-2}$

4. $350 \times 25 / 1000 \text{ ms}^{-2}$



37. Regarding the following facts about proteins, Protein is,

1. A simple molecule made up of amino acids

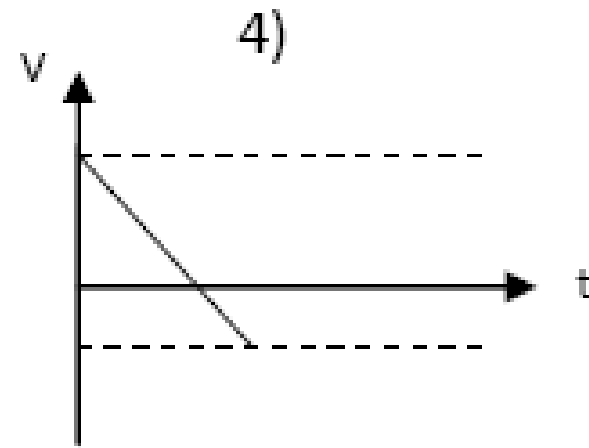
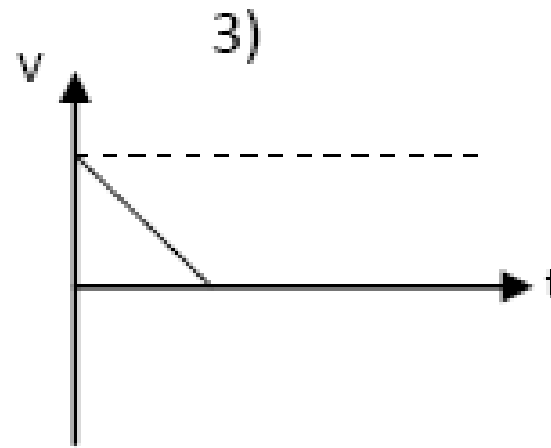
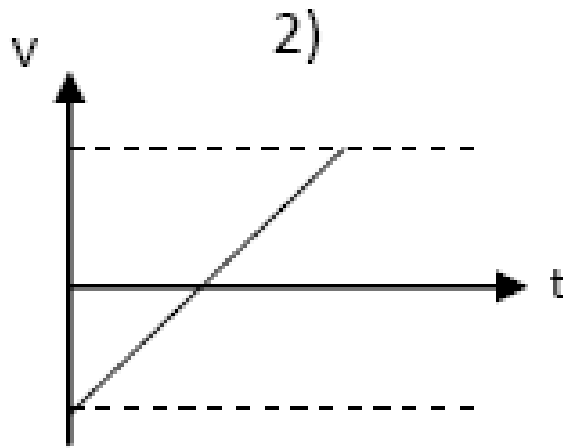
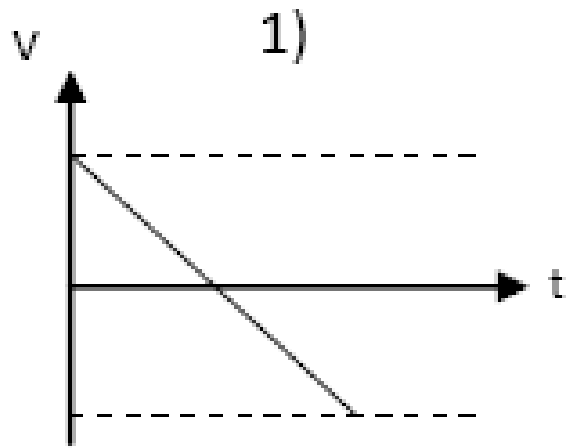
2. A simple molecule made up of fatty acids

3. A complex molecule made up of amino acids

4. A complex molecule made up of fatty acids



38. A ball projected upwards from the school ground got stuck on the roof of a building while falling down. What is the most suitable velocity time graph from the following to illustrate this incident?




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39. Accident faced by 3 students in a laboratory and the first aid treatments given to them are mentioned below (they are not in the correct order)

| accident | First aid treatment |
|----------------------------|--|
| a) Burning caused by acids | a) Cool the relevant place as much as possible with cool water |
| b) Burning caused by bases | b) Wash with water and sprinkle with NaHCO_3 |
| c) Burning caused by fire | c) Wash under running water / apply 1% acetic acid |

Select the accident with the correct treatment in order

| | |
|----------|----------|
| 1. b,c,a | 2. c,a,b |
| 3. a,b,c | 4. b,a,c |



40. What would you do if an instrument is damaged by you while you are doing activities in the laboratory?

1. Inform the principle

2. Inform the disciplinary committee

3. Hide the instrument

4. Inform the teacher in charge of science

