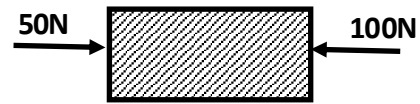


9. 50 N and 200 N forces are acting on a 20 kg wooden block as shown in the diagram. Calculate the acceleration of this wooden block during the action of these 2 forces ?

- 1) 0.5 m s^{-2} 2) 1 m s^{-2}
 3) 1.5 m s^{-2} 4) 2.5 m s^{-2}



10. Which of the following answer respectively shows the dispersal methods of seeds A and B ?

- 1) Wind , Water 2) Animal , Wind
 3) Animal , Water 4) Wind , Animal



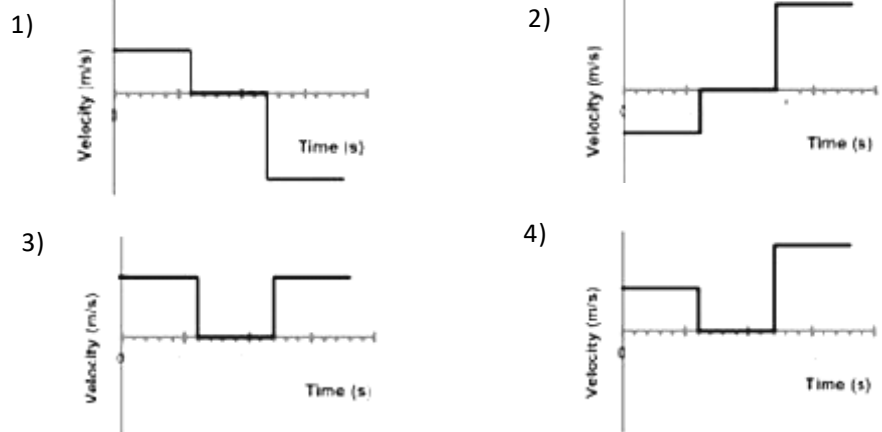
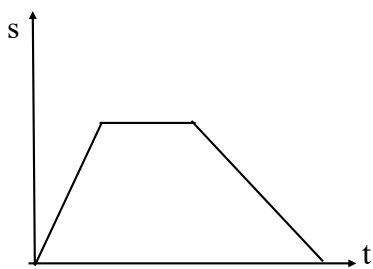
11. The mass of a Sodium atom is $3.819 \times 10^{-23} \text{ g}$. The atomic mass unit is $1.67 \times 10^{-24} \text{ g}$. Find out the relative atomic mass of Sodium ?

- 1) $\frac{3.819 \times 10^{-23}}{1.67 \times 10^{-24}}$ 2) $\frac{3.819 \times 10^{-23} \times 12}{1.67 \times 10^{-24}}$ 3) $\frac{3.819 \times 10^{-23}}{1.67 \times 10^{-24} \times 12}$ 4) $\frac{1.67 \times 10^{-24}}{3.819 \times 10^{-23}}$

12. Which of the following answer correctly shows the scientific name of our national bird Jungle Fowl ?

- 1) *Gallus Lafayetti* 2) Gallus lafayetti 3) *Gallus lafayetti* 4) Gallus Lafayetti

13. The motion of an object is shown by the following displacement - time graph . Select the equivalent velocity - time graph for this given displacement - time graph ?



14. The chemical formula for the phosphate of an element M is $M_3(PO_4)_2$. What is the chemical formula for the nitrate of that element M ?

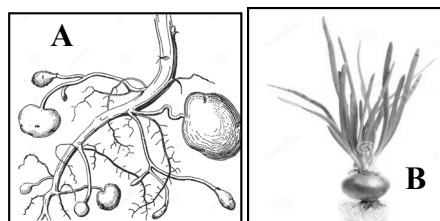
- 1) $M_3(NO_3)_2$ 2) MNO_3 3) $M(NO_3)_2$ 4) M_3NO_3

15. Mitosis is one of the type of cell division. Mitosis ,

- 1) Takes place in two divisions. 2) Takes place only in diploid cells.
 3) Occurs during the formation of gametes 4) Two daughter cells results at the end.

16. The following figures shows the underground stem of two plants A and B grown in the home garden.

- 1) Stem tuber , bulb
- 2) Stem bulb , Stem tuber
- 3) Stem bulb, Corm
- 4) Rhizome , Corm



17. Which of the following condition / conditions must be satisfied for an object to maintain equilibrium under the action of three parallel forces ?

- A) The three forces must be coplanar.
- B) The resultant of any two forces must be in the same direction to the third force.
- C) One force must have a direction opposite to the other two forces.

- 1) A only
- 2) B only
- 3) B,A only
- 4) A,C only

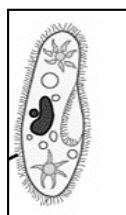
18. The ionization energy values of the consecutive elements in the second and third periods of the periodic table are given below. (The given symbols are not in the standard form)

Elements	R	S	T	U
1st ionization energy(kJmol^{-1})	1682	2080	495	738

Which of the above element can be seen as monoatomic gas at room temperature ?

- 1) T
- 2) S
- 3) U
- 4) R

19. Which of the following is the false statement regarding with the shown microorganism ?



- 1) Multicellular organism
- 2) locomote by cilia
- 3) It belongs to the kingdom Protista
- 4) Non-photosynthetic

20. The disease symptoms dryness in skin, anemia, reduction in antibody production and also beri beri symptoms are reported in the medical report of a patient. Which vitamin deficiency caused these symptoms?

- 1) Vitamin A
- 2) Vitamin B
- 3) Vitamin C
- 4) Vitamin D

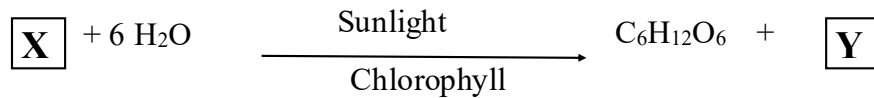
21. The characteristic features of some compounds are given by the statements A,B and C.

- A - Conduct electricity in aqueous solutions B - Some compounds are soluble in water
 C - Mostly exists as molecules composed of several atoms.

Which of the above features depicts the characters of covalent compounds?

- 1) A
- 2) B
- 3) A,B
- 4) B,C

22. Photosynthesis is very important one in the biological processes of the plants. Consider the following chemical equation of photosynthesis.



In the above equation X and Y are respectively ,

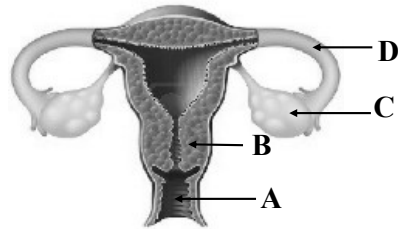
- 1) CO_2 , O_2 2) 6CO_2 , 6O_2 3) O_2 , CO_2 4) 6O_2 , 6CO_2

23. Which of the following answer having the molecules with equal number of atoms ?

- 1) CH_3CHO , CH_3COOH 2) CH_3COOH , H_2SO_4
 3) CH_3CHO , H_2SO_4 4) H_2SO_4 , CCl_4

24. The structure of a female reproductive system is shown in the below diagram. In which of the following part, fertilization process will occur?

- 1) A 2) B
 3) C 4) D



25. Which pair of ions having the same number of electrons as the element Argon (Ar) ?

- 1) K^+ , F^- 2) Na^+ , O^{2-} 3) Ca^{2+} , Cl^- 4) Mg^{2+} , Cl^-

26. The mass of an astronaut is 60 kg. If the gravitational acceleration on the moon is 1/6 th that of the earth, What would be the weight of the astronaut on the surface of the moon ?

(Gravitational acceleration is 10ms^{-2})

- 1) $1/6 \text{ N}$ 2) 10N 3) 100N 4) $1000/6 \text{ N}$

27. Which is the **false statement** regarding with the virus?

- 1) No cellular organization.
 2) Nucleic acid is only present.
 3) Having both nucleic acid and protein capsid.
 4) Can live only in the living cells.

28. Calculate the magnitude of force acting on an object with mass 10 kg moving with an acceleration of 4 m s^{-2} ?

- 1) 10 N 2) 20 N 3) 30 N 4) 40 N

29. The plant leaves of a plant in the school garden shows the symptoms of chlorosis in leaf margin and yellow or brown patches in leaves. Which mineral deficiency is shown by the plant leaves ?

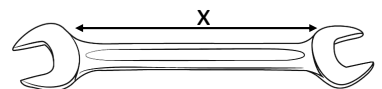
- 1) Phosphorous 2) Iron 3) Nitrogen 4) Potassium

30. Which one of the following activity is related with Newton's first law ?
- 1) A ball thrown at a wall hits the wall and comes back towards us.
 - 2) The object with less mass moves faster than the object with high mass.
 - 3) Seat belts were born when riding motor vehicles to prevent from falling forward upon applying brakes.
 - 4) When rowing the oars of boat in backward direction, the boat moves in forward direction.
31. What adaptation is present in the coconut flowers to avoid self pollination ?
- 1) Dichogamy
 - 2) Having unisexual flowers
 - 3) Hercogamy
 - 4) Self - sterility
32. The mass of an object is 50 g. Find its momentum when it is moving at a velocity of 10 ms^{-1} ?
- 1) 500 kgms^{-1}
 - 2) 50 kgms^{-1}
 - 3) 5 kgms^{-1}
 - 4) 0.5 kgms^{-1}
33. The number of plants found in a small area of Peradeniya botanical garden of Sri Lanka are given below.

Names of plants	<i>Drynaria</i>	<i>Cycas</i>	Blue lotus	Cannonball tree (Naga tree)
Numbers	20	5	15	10

What is the number of non - flowering plants found among them ?

- 1) 25
 - 2) 40
 - 3) 35
 - 4) 20
34. Select the false statement regarding with the momentum acting on an object ?
- 1) Momentum is equal to the multiple of mass and velocity .
 - 2) Among the 2 objects moving with the same velocity, the object with less mass needs maximum amount force to stop its motion.
 - 3) Momentum acts in the same direction as the force acts.
 - 4) Momentum is zero , when the object is at rest.
35. The number of chromosomes in a rabbit is 44. Among this how many number of chromosomes is present in the ovum produced during the gamete formation ?
- 1) 44
 - 2) 22 Pairs
 - 3) 22
 - 4) 11 Pairs
36. The spanner with length x is used to detach a nut by applying a force 200 N . The moment of force acts during this instance is 20 Nm . Find out the length of this spanner ?
- 1) 0.1 m
 - 2) 0.2 m
 - 3) 0.3 m
 - 4) 0.4 m



37. Consider the given statements regarding with the features of phylum Cnidaria.

A -Body is build up of two germinal layers.

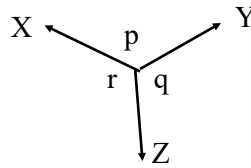
B - Having the structure tube feet.

C - Nematoblasts are present

Select the correct statements among A,B,C and D

- 1) A, B only
- 2) B,D only
- 3) A,C only
- 4) B, C only

38. The following line diagram shows the equilibrium of 3 forces X,Y and Z acting on a point. The correct statement regarding with this diagram is ,



- 1) When the angles $p = q = r = 120^\circ$, The magnitude of the forces X,Y and Z are equal..
 - 2) When the angles $p = q = r \neq 120^\circ$, The magnitude of the forces X,Y and Z are equal..
 - 3) When an object is in equilibrium under the action of 3 forces, the magnitudes of the angles are never become equal
 - 4) The sum of the forces X and Y is equal to the force Z.
39. Which specific property of water is used in the transport of water to the upper parts of the plant through xylem tissues ?
- 1) Flowing property
 - 2) High specific heat capacity
 - 3) Liquid nature
 - 4) Cohesive and adhesive forces of water molecules
40. When there was a shortage of fuel in our country, awareness was created among the people to use bicycles. Which of the following is not an advantage of this alternate way of transport vehicle ?
- 1) Reducing the impact of non - infectious diseases.
 - 2) Reducing the amount of carbon dioxide release.
 - 3) Increasing of daily fuel cost..
 - 4) Reducing the consuming rate of fuels.