සියලුම හිමිකම් ඇවිරිණි/ முழுப் பதிப்புரிமையுடையது / All Rights reserved

වයඹ පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
வடமேல் மாகாணக் கல்வித் திணைக்களம்
Provincial Department of Education - NWP

Grade 10 | **Second Term Test 2024** | **34 T I**

Science I

Index no ..... **Time : 01 hours**

- Underline the correct or the most appropriate answer.

01. The process to obtain energy and matter for the maintenance of life is,
1. Cellular respiration 2. Nutrition 3. Growth 4. Excretion

02. The number of protons present in the nucleus of an atom of an element is,
1. Atomic number 2. Mass number
3. Relative atomic mass 4. Relative molecular maass

03. What is the SI unit measuring the distance and displacement?
1. KM 2.M 3. m 4. ms^{-1}

04. Which is not an ionic compound from the following?
1. Li_2O 2. $CaCl_2$ 3. KF 4. CCl_4

05. The group of organisms which can produce food by photosynthesis is,
1. Protozoa 2. Fungi 3. Algae 4. Bacteria

06. Not a method of increasing friction,
1. Making the surface rough 2. increasing the area of contact surface
3. Etching grooves 4. Increasing the perpendicular reaction

07. What is the sexually transmitted disease spread by a virus.
1. syphillis 2. Gonorrhoea 3. White sports 4. AIDS

08. An example for a natural propagation method,
1. production of new plants by leaves of Bryophyllum
2. obtaining new mango plants by grafting
3. obtaining croton plants by stem cuttings
4. obtaining promaganate plants by layering

09. A nitrogen molecule is formed by,
1. sharing a pair of electrons 2. sharing two pairs of electrons
3. sharing 3 pairs of electrons 4. Awarding 6 electrons

10. An inorganic compound contained in living matter is,
1. Carbohydrates 2. Lipids 3. Proteins 4. Water

11. A single force that can be used instead of more than one force is,
1. equillibrium of forces 2. couple of forces
3. resultant force 4. turning effect of forces

12. A covelent compound in which the octect of the central atom is not completed is,
1. PCl_5 2. $AlCl_3$ 3. NH_3 4. CH_4

13. The answer which expresses the correct binomial nomenclature of human is,
1. *Homo Sapience* 2. *Homo sapience*
3. HOMO SAPIENCE 4. Homo Sapience

14. The three domain system of classification was introduced by,
1. Carl woose 2. Robert 3. Carrolus Linnaeus 4. Aristotle

15. When observing cells in an onion peel in the laboratory using low power of microscope,
1. chlorplasts could be identified 2. all orangelles could be identified
3. cell wall and nucleus could be identified 4. any organelle couldn't be identified clearly

16. When running a motor car, the speedometer shows its,
1. mean speed 2. acceleration 3. mean velocity 4. speed of that instance

17. There are 12 electrons in the neutral atom of the element X. The ion formed by that atom is,
1. x^{+} 2. x^{+2} 3. x^{-} 4. x^{-2}

18. A deficiency symptoms of vitamin A is,
1. bleeding gum 2. bitots spots in the eye
3. wound at the ends of mouth 4. rickets

19. Select the answer containing the four elements which contribute more to build up the life in order
1. Carbon, Hydrogen, Oxygen, Nitrogen 2. Carbon, Hydrogen, Oxygen, Sulphur
3. Hydrogen, sulphur, oxygen, Nitrogen 4. Carbon, Sulphur, oxygen, phosphorus

20. Red and purple colour patches were observed in a plant in a cultivation land. What is the mineral deficiency of that plant
1. N 2. K 3. P 4.Ca

21. The pair of metalloids is,
1. B and Al 2. Mg and B 3. C and P 4. Si and As

22. Not a fact contained in the cell theory,
1. All organisms are made up of a single cell
2. The structural and functional unit of organism is the cell
3. All organisms are made up of a single cell or group of cells
4. New cells are formed by exiting cells

23. The chemical formula of phosphoric acid is H_3PO_4. The combining power of calcium is two. What should be the chemical formula of calcium phosphate?
1. Ca_3PO_4 2. $Ca_3(PO_4)_2$ 3. $Ca_2(PO_4)_3$ 4. $CaPO_4$

24. Select the instance where a couple of forces not be seen.
1. rotating the padel of the bicycle 2. opening a door by a key
3. Cutting cloths by a scissors 4. rotating the steering wheel of a vehicle

25. The density of water is greater than ice. What is the reason for that?
1. Presence of inter - molecular bonds between water molecules.
2. Presence of bonds between O and H in water molecules
3. Water being a covalent compound
4. Water being an ionic compound

26. The factors affecting the momentum of a moving objects,
1. mass and displacement 2. velocity and displacement
3. mass and acceleration 4. mass and velocity

27. The person who introduced first, that the smallest particle in mater was the atom,
1. Antoine Lavoisior 2. John Dalton
3. Democritus 4. Earnest Rutherford

28. Select the correct statement regarding sexual and asexual reproductive methods.
    1. Mitosis occurs in sexual reproduction while meiosis occurs in asexual reproduction.
    2. New varieties are formed during both sexual and asexual reproductions
    3. Gametes are formed in sexual reproduction while gametes are not formed during asexual reproduction
    4. Offsprings from sexual reproduction are identical to the mother plant.

29. When an unbalanced force is acting on an object, it showed an acceleration of $2ms^{-2}$. If the mass of the object is 2kg, find the force exerted?
    1. 1N 2. 2N 3. 4N 4. 6N

30. Select the correct statement regarding viruses.
    1. Can be observed through the light microscope
    2. Shows only living characteristics
    3. generates energy by respiration
    4. multiplied only in host cells.

31. Select the suitable element for the following statements.
    a} Present in different natural allotrophic forms
    b} Forms an acidic oxide when burning in air
    c} Burns with a blue flame

    1. Sulphur 2. Carbon 3. Sodium 4. Magnesium

32. Two forces of mass M are acting on a solid block as shown in the figure. Select the instance in which the highest acceleration occurs.



33. The correct statement regarding the classification of organisms is,
    A. Due to classification, it is easy to study.
    B. The evolutionary relationships can be revealed by natural classification.
    C. In natural classification, organisms are arranged in a hierachial order.

    1. A and B 2. A and C 3. B and C 4. A,B,C all

Consider following figure to answer the questions 34 and 35



The figure shows an instants of an equilibrium of a plastic ring, by exerting two opposite forces by two spring balances

34. What is the reading of B balance?
    1. 10N 2. 12N 3. 20N 4. 40N

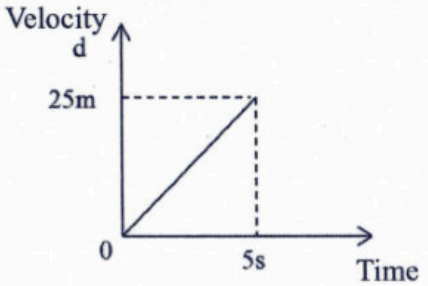
35. The resultant force on the plastic ring is,
    1. 40N 2. 20N 3. 10N 4. 0N

36. Select the correct organ and function from the following.

	Organelle	Function
1.	Nucleus	Giving shape to the cell
2.	Mitochondrian	Controlling cell activities
3.	Chloroplasts	Production of food by photosynthesis
4.	Golgi complex	Transportation of proteins

37. The graph represents data related to the motion on a straight line. The displacement and velocity of the objects is,

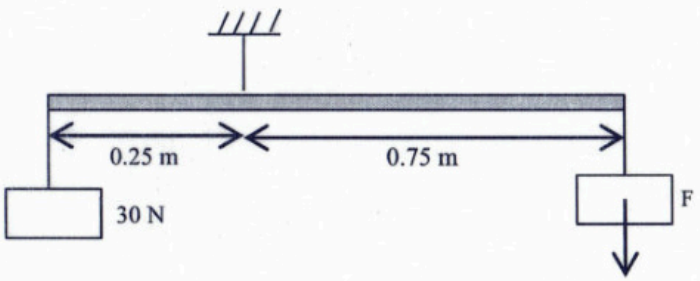
1. 125m, $5ms^{-1}$
2. 25m, $5ms^{-1}$
3. 5m, $25ms^{-1}$
4. $5ms^{-1}$, 25m



38. The factor that consider when placing an elements in a period is,

1. Electronic configuration
2. The number of electrons in the last energy shell
3. The energy levels in the atom
4. The number of protons in the nucleus

39.



The above rod is in equillibrium. What is the force F?

1. 10N
2. 30N
3. 40N
4. 50N

40 The long term environmental damage due to discharge of mobile phone batteries to the environment carelessly is,

1. Breaking down of equillibrium in natural bio-systems
2. Pollution of water sources with heavy metals.
3. Acidifying the soil environment
4. Depletion of plant nutrient elements.

සියලුම හිමිකම් ඇවිරිණි/ முழுப் பதிப்புரிமையுடையது / All Rights reserved

Grade 10	Second Term Test 2024	34 T II

Science II

Index no ..... **Time : 03 hours**

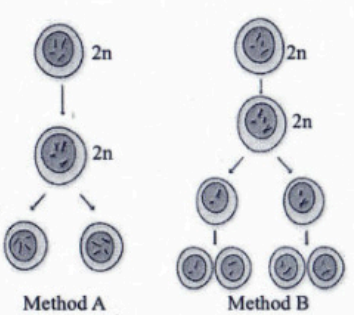
- Answer the 04 questions in part A in this paper itself

Part A

01. A) A table regarding the contribution water for the maintenance is given below. Complete this table. (4 marks)

Contribution for the maintenance of life	Special property of water
(i) Removal of excretory materials	.....
(ii) Regulation of body temperature	.....
(iii) Transportation of water through the stem	.....
(iv) Survival of organisms in water during rainy seasons	.....

B) (i) Name the two methods of cell division
Method A :.....
Method B:.....
(2 marks)



(ii) State one difference between A and B
.....
(1 mark)

(iii) Mention the method of division in following instances.
a} Production of gametes : .....
b} Regeneration : .....
(2 marks)

C) Two set ups arranges to test two characteristics of organisms are given below.

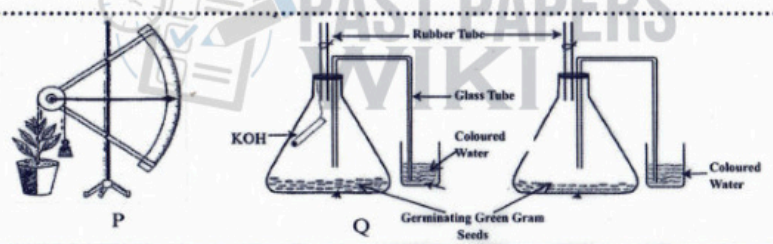
(i) State the two characteristics tested in P and Q set - ups
a} P : ..... (1 mark)
b} Q : ..... (1 mark)

(ii) What is the name of the set-up P
.....(1 mark)

(iii) State one advantage of observing the characteristic tested by P set - up than observing that characteristic using the naked eye? (1 mark)
.....

(iv) What is the function performed by KOH on set - up Q? (1 mark)
.....

(v) State one assumption made in Q test (1 mark)
.....

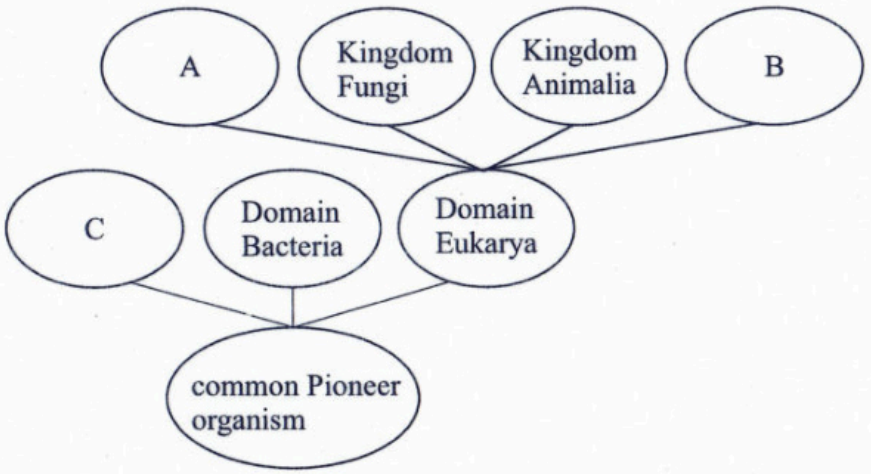


PAST PAPERS WIKI

02. A) Complete the following table considering biological molecules. (5 marks)

Biological molecule	Compusition of elements	Building unit	Examples	Function
Carbohydrates	(a)	monosacchorids	Starch	(v).....
Protein	C,H,O,N	(iii)	Albumin	Builds up structure components of cells
(i).....	C,H,O	Glycerol, fatty acids	Coconut oil	Builds up structural component of cells
Nucleic acid	C,H,O,N,P	Neucleotide	(iv).....	genetic materials of organisms

B)



(i) Complete A,B, and C using suitable words (3 marks)

a} .....

b} .....

c} .....

(ii) State the plant relevant for following features. (3 marks)
(coconut, cycas, mango, ferns)

a} non - flowering seeded plant : .....

b} Flowering plant with a tap root : .....

c} non - flowering seedless plant : .....

C) (i) Complete the following table considering the changes in the menstrual cycle (2 marks)

	First 14 days	Second 14 days
Ovary	..... stage	Luteal stage
uterus	Secretory stage Proliferation stage	b).....stage

(ii) State the hormone responsible for following incidents (2 marks)
a} Growth of a primary follicle into a graffian follicle : .....
b} Ovulation : .....

03. A) The tendency of an atom to attract electrons to come to the noble gas configuration is known as electronegativity.

(i) State using an equation of forming uninegative iron by attracting one electron by a chlorine atom. (1 mark)
.....

(ii) How the electronegativity changes across a period from left to right (1 mark)
.....

(iii) Define "the electronegativity of an element" (1 mark)
.....

(iv) Among the first 20 elements,
a} the highest electronegativity shown by the element ..... (1 mark)
b} the element which shows minimum first ionization energy is .....(1 mark)

B) A table arranged based on periodic characteristics of elements are given below. Symbols are not standard symbols.

A							B
C			D			E	
	F				G		
I							

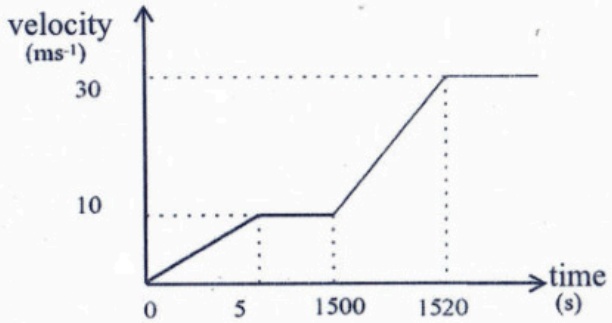
(i) Name two elements belongs to the same group (1 mark)
.....

(ii) Name the element which shows following properties using the above table (5 marks)

Property	symbol given in the table
(a) Form compounds which have strong acidic properties	
(b) Possess noble gas configuration	
(c) The hydroxide of it is a weak base used to relive from acidity in the stomach	
(d) the metal with highest reactivity	
(e) valency is 4, shows allotropy	

(iii) The element x is used to produce domestic equipment. The oxide of it acts as a protective layer and prevents the reaction with air. Identify the element x and answer following questions.
1. Name the element x : ..... (1 mark)
2. Valency : ..... (1 mark)
3. Chemical formula of oxide : ..... (2 marks)

04. A) A car starts from rest, travels 25 minutes (1500s) in an ordinary road and enter a high way. The velocity time graph for the motion is given below.



(i) State the time ranges of which the motor car travelled with an acceleration. (2 marks)

.....

(ii) What is the maximum velocity did the car travel in the highway ? (1 mark)

.....

(iii) Calculate the acceleration between 0-5 seconds (1 mark)

.....

(iv) What is the data that can be obtained by calculating the area of a velocity time graph ? (1 mark)

.....

B) Friction should be properly maintained when travelling vehicles on roads.

(i) What is the strategy used in vehicles to maintain friction properly, that can be seen from outside ? (1 mark)

.....

(ii) State 2 instances where the friction force is important when travelling vehicle on roads. (2 Marks)

.....

(iii) What is the frictional force acting on a vehicle in motion ? (1 mark)

.....

(iv) State the factor that is not affected the friction (1 mark)

.....

C) A rough sketch to demonstrate moment of force is given below.



(i) Name the two factors that affect moment of force (2 marks)

.....

.....

(ii) What is the anti-clockwise moment in above diagram ? (1 mark)

.....

(iii) Calculate the distance x, if the rod is in equillibrium (2 marks)

.....

.....

Part B

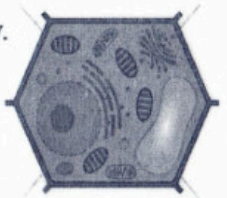
- Answer only 3 questions from the questions 5,6,7,8 and 9

05. A) Two millilites of amylaze solution was added 2ml of an aqueous solution of starch. One drop from that mixture was taken out at a time and a drop of iodine was added to it by keeping it on a white colour tile. The observations of that experiment are given below.

Time	in the 1st minute	in the 10th minute	in the 20th minute
Colour change	A	somewhat red brown colour	B

(i) Mention the color changes in A and B (2 marks)
(ii) State one method to prepare the amylase solution for this experiment (1 mark)
(iii) What is the substance formed after 20 minutes, in the mixture (1 mark)
(iv) What is the function of amylase enzyme in the above experiment? (1 mark)

B) A figure of a typical cell exhibited on a wall of the laboratory is given below.



(i) What is "a typical cell?" (1 mark)
(ii) Is this cell a plant cell or an animal call (1 mark)
(iii) State one observation to select the answer for (ii) (1 mark)

C) The sexual reproductive structure of a plant is the flower
(i) Mention the terms to introduce male part and the female part of the flower (2 marks)
(ii) a) What is " pollination" (1 mark)
b) Mention the two methods of pollination (2 marks)
c) Which method from the above two methods, affects for the formation of new varieties (1 mark)

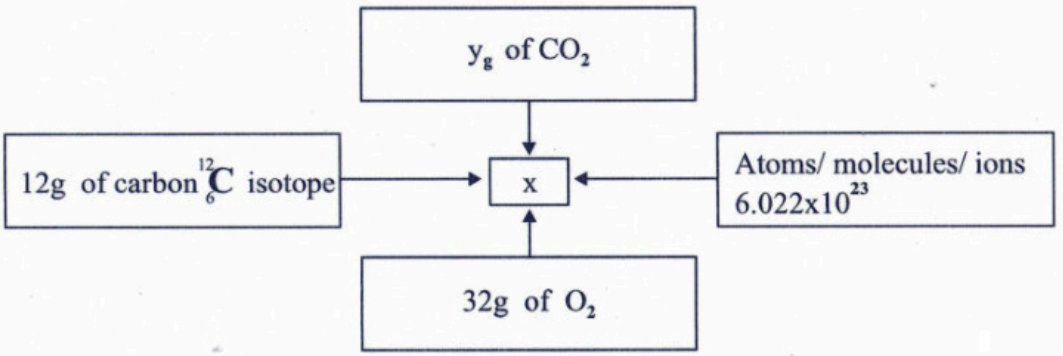


(iii) a) State the disposal method of the fruit shown here. (1 mark)
b) State one adaptation of this seed to disperse by the above method (1 mark)

D) Tissue culture is an artificial vegetative propagation method of plants.
(i) Mention one substance present in the culture medium used for tissue culture (1 mark)
(ii) State one environmental factor that should be controlled to do tissue culture successfully (1 mark)
(iii) State one advantage of tissue culture (1 mark)
(iv) Name another artificial vegetative method except tissue culture (1 mark)

06. A) The ammonia molecule is formed by forming a covalent bond between one nitrogen atom and 3 hydrogen atoms
(i) Show the bonds on ammonia molecule by dot - cross diagram (2 marks)
(ii) What is the term used to introduce the electrons which do not contribute to form bonds in the nitrogen atom? (1 mark)
(iii) What is the nature of bond between NH_3 and H^+ in NH^+_4? (1 mark)
(iv) SO^{2-}_4 is present as ions. Write the chemical formula of ammonium sulphate (1 mark)
(v) Mention the reason for the high boiling point in NaCl crystal lattice (1 mark)
(vi) What is the nature of bond in diamond crystal lattice (1 mark)
(vii) The mass of water molecule is 2.99×100^{-29} g and the atomic mass unit is 1.67×10^{-24} g. Calculate the relative molecular mass of water (2 marks)

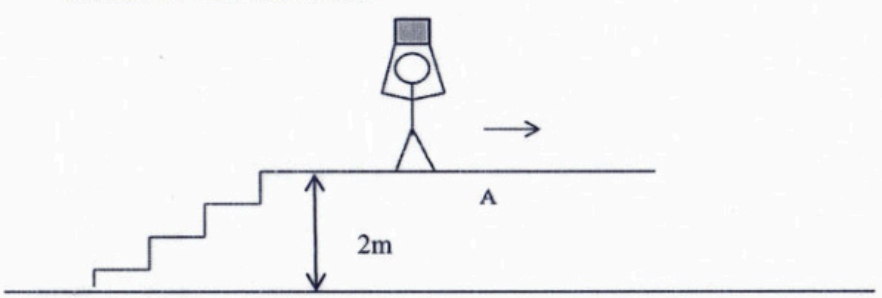
B)



(i) Name the concept introduced as x? (1 mark)
(ii) Write the value for y in the figure (1 mark)
(iii) Calculate the amount of mass that should be taken from glucose, to use it as an example in the above figure
(C= 12, O=16, H=1) (2 marks)
(iv) If the motor mass of NaOH is 40g, find the mass of 0.25 mol of NaOH (1 mark)

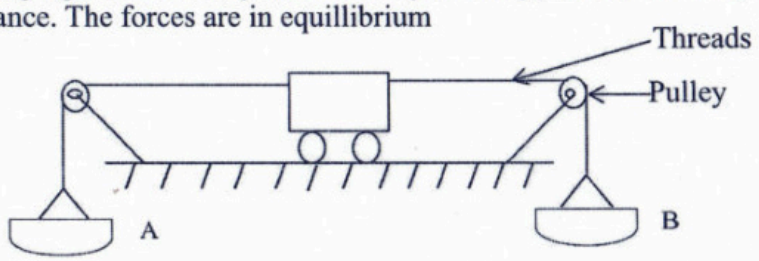
C) Hydrogen molecule is non-polar where as hydrogen chloride is polar
(i) Why, is the hydrogen molecule non-polar? (2 marks)
(ii) Explain why hydrogen chloride molecule is considered as polar (2 marks)
(iii) Mention 2 specific properties possessed by water due to presence of inter molecular bonds between water molecules (2 marks)

07. A)



The figure shows a person at rest, after climbing up a stair case. The mass of him is 40kg. He is lifting mass of 8kg. (Gravitational acceleration. $10ms^{-2}$)
(i) What is the weight of the person? (1 mark)
(ii) What is the perpendicular reaction exerted by the surface A on the feet of the man? (2 marks)
(iii) The person acquires a velocity of $2ms^{-1}$ within 2 seconds
a) What is the momentum during the 2 seconds travel? (3 marks)
b) Calculate the force exerted by the man during 2 seconds (2 mark)
c) Based on which law of newton did you take the above answer? (1 mark)
(iv) a) To which type of simple machine machine does the stair case belong? (1 mark)
b) Give another example for the above type of simple machines (1 mark)

B) The following figure shows a system made by a trolley, smooth threads, 2 pulleys and two pans of balance. The forces are in equillibrium

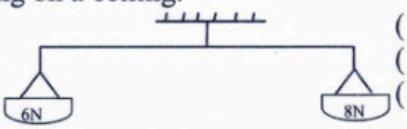


(i) What should be done to the pan B, to keep the system without motion, if a mass of 100g is exerted on pan A? (1 mark)

(ii) a) Explain the motion in the above system, when exerting 100g on pan A and 250g on pan B (2 marks)
b) Calculate the resultant force (2 marks)

(iii) What can you say about the direction of the resultant force, when two inclined forces are acting on an object? (1 mark)

(iv) The figure shows two pans balanced by hanging on a celling.
a) What is the tension exerted on the string (1 mark)
b) What is the direction of the resultant force? (1 mark)
c) What is the value of it? (1 mark)



08. A) Following specimens were collected by a group of students in a field visit. The unidentified animals were named as A, B, C and their body features are mentioned. Answer followsing questions using it.

Fish, frog, A - has muscular foot, B- has a large number of joined appendages, C - has a vermiform, body with a wet skin.

(i) a) Name the vertebrate groups to which the fish and frog belong (2 marks)
b) Mention one common feature of each of above two groups (2 marks)

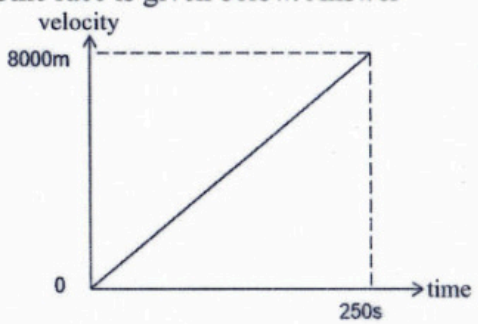
(ii) a) State another common feature in the group into which C belongs (1 mark)
b) Name an organism that can be seen in the environment of which A belongs (1 mark)
c) Name a parasitic organism belong to the group that B belongs (1 mark)

(iii) Name 2 respiratory surfaces of frog (2 marks)

(iv) Name the group that all organisms are marine (1 mark)

B) The displacement time graph of a motorbike on a motorbike race is given below. Answer questions using it.

(i) a} What is the nature of motion of the motor bike? (1mark)
b} What is the length of the path the motorbike travelled? (1mark)
c} What is the velocity of the motorbike ? (1mark)



(ii) As the path ahead is with bends, the velocity of the bike had to be reduced to $16ms^{-1}$ within 8 seconds. Write an expression to calculate the deceleration of the motorbike in that instance (2 marks)

(iii) Calculate the deceleration of the motor- bike (2 marks)

(iv) Draw the velocity time graph for the time that the motorbike travelled with deceleration (3 marks)

09. A) (i) The following table shows information about subatomic particles. Write answer for the blanks a and b. (2 marks)

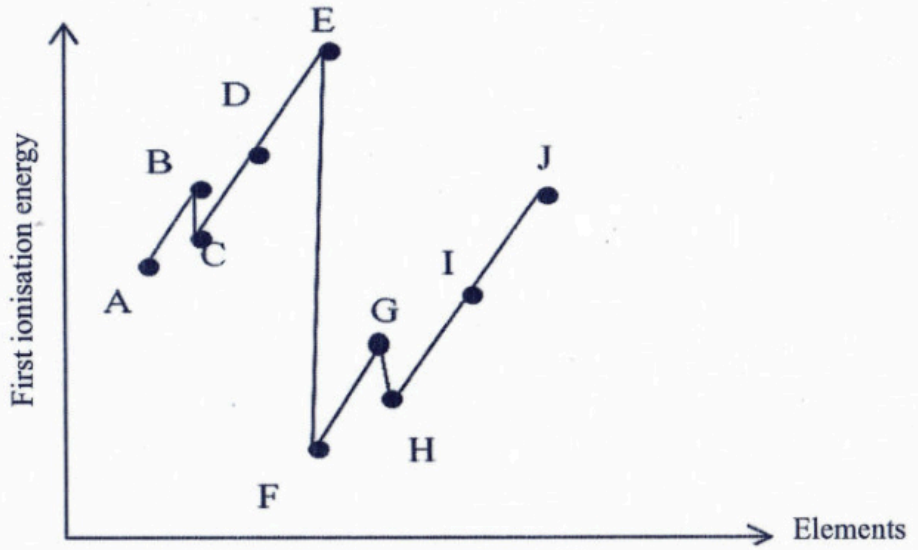
Subatomic particle	Charge	Mass	Location
proton	a)	1 unit (R.A.M)	in the nucleus
neutron	no charge	1 unit (R.A.M)	in the nucleus
electron	negative	neglegible	b) .....

(ii) What can you understand by atomic number ? (1 mark)

(iii) What is the term used to introduce the atoms which have different mass numbers of the same atom? (1 mark)

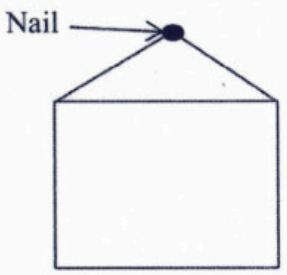
(iv) What is the reason for changing the mass number in atoms of same element? (1 mark)

B) The variation of the first ionization energy of 10 consecutive elements in the 3rd and 4th periods of the periodic table is given in the figure. The symbols are not standard symbols. Answer the questions using them.



(i) State the unit used to measure the ionization energy? (1 mark)
(ii) State 2 elements belong to the same group (1 mark)
(iii) a) What is the element which has the noble gas configuration? (1 mark)
b) Write the element which shows the highest electronegativity (1 mark)
c) Which element shows allotrophic forms? (1 mark)
(iv) a) Draw the structure of atom D with energy shells (2 marks)
b) Write the chemical formula of the compound formed by the combination of elements E and G? (2 marks)

C) A framed picture hung on the wall is given below



(i) State 2 conditions that should be fulfilled to remain equillibrium in an instance like this? (2 marks)
(ii) Copy this figure in your answer script, show the forces acting with arrow needs.(2 marks)
(iii) If the weight of the picture is 10N, what is the resultant of tension forces of strings. (1 mark)
(iv) State 2 conditions that should be fulfilled for the equillibrium of two collinear forces (1 mark)

Science Answer Sheet (Grade 10)

Part I

01	-	2	06	-	2	11	-	2	16	-	4	21	-	4	26	-	4	31	-	1	36	-	3
02	-	1	07	-	4	12	-	1	17	-	2	22	-	1	27	-	2	32	-	4	37	-	1
03	-	3	08	-	1	13	-	2	18	-	2	23	-	2	28	-	3	33	-	4	38	-	3
04	-	4	09	-	3	14	-	1	19	-	1	24	-	3	29	-	3	34	-	1	39	-	1
05	-	3	10	-	4	15	-	3	20	-	3	25	-	1	30	-	4	35	-	4	40	-	2

Part II

01.A (i) Solving property — 01
(ii) Coolent property — 01
(iii) Cohesive and adhesive forces — 01
(iv) Dif ferential expansion in freezing — 01

B (i) a. A-mitosis — 01
b. B- meiosis — 01
(ii) — 01

- Meiosis takes place in two divisions. mitosis only one division
- Meiosis occurs in diploid cells. Mitosis occurs in both diploid and hoploid cells.
- Four daugher cells are resulted in meiosis and I daugher cells are resulted in mitosis
- Daughter cells received half of the chromosomal number of mother cell.
- Same chromosomal number as mother cell mitosis

(iii) a. meiosis — 01
b. mitosis — 01

C (i) a. P - growth — 01
b. Q- Respiration — 01
(ii) Auxanometer — 01
(iii) Although the amount of growth is small, it magnifies it — 01
(iv) -To absorb CO_2 released in respiration — 01
(v) -The volume of CO_2 present in flasks at the begining the experiment is negligible
-The volume of CO_2 released is equal to the volume of O_2 absorbed — 01

15

02. A (i) Lipids — 01
(ii) C_nH_nO — 01
(iii) Amino acids — 01
(iv) DNA/ RNA — 01
(v) As an energy source — 01

B (i) a. Protista — 01
b. Plantae — 01
c. Archea — 01
(ii) a. Cycas — 01
b. mango — 01
c. ferns — 01

C (i) a. Follicular phase — 01
b. Secretory phase — 01
(ii) a. Folicle stimulating hormone (FSH) — 01
b. Lutenizing hormone(LH) — 01

15

03. A (i) $Cl + e \rightarrow Cl^-$ — 01
(ii) Gradually increases — 01
(iii) Ability of an atom of an element to attract the electrons of a bond toward itself when it is bonded to an atom of another element — 01
(iv) F (Flourine) — 01
K (potassium) — 01

B (i) A and C, A and I or C and I (For one answer) — 01
(ii) a. E — 01
b. B — 01
c. F — 01
d. I — 01
e. D — 01
(iii) a. Aluminum — 01

		b. 3		01
		c. Al_2O_3		02
				15
04.	A	(i)	From 0s to 5s	01
			1500s- 1520s	01
		(ii)	$30ms^{-1}$	01
		(iii)	$10 \div 5 = 2ms^{-2}$(only the answer is enough)	01
		(iv)	Displacement, distance the motor car travelled	01
	B	(i)	Etching groves in tyres	01
		(ii)	When vehicles start running	01
			when stopping vehicles start running	01
		(iii)	Dynamic friction	01
		(iv)	Area of the contact surface	01
	C	(i)	Force exerted and prependicular distance from the rotation axis	02
		(ii)	50cm x 10N = $500Ncm^{-1}$(answer is enough)	01
		(iii)	$500=25x$ x	01
			$x = 20cm$	01
				15
05.	A	(i)	A- Drak blue/ purplish blue	01
			B - Red brown colour	01
		(ii)	Germinating green gram / cowpea extraction.	01
		(iii)	Maltose	01
		(iv)	Increase the rate of the reaction of converting strach into maltose	01
	B	(i)	The cell created by including all organelles in cells	01
		(ii)	Plant cells	01
		(iii)	Cell wall/ Chloroplast/ large central vacuole	01
	C	(i)	Androecium and gynoecium	02
		(ii) a	Deposition of matured potten on the strigma of flower of same speces	01
		b	Self polination	01
			cross polination	01
		c	cross pollination	01
		(iii) a	by wind	01
		b	Having wing like structures to float/ presence of fruits and seeds at the apex	01
	D	(i)	Sacrose / mineral salts/ vitamin/ growth substance	01
		(ii)	Temperature/ light	01
		(iii)	Obtaining plants which are idential to the mother plant/ obtaining a large number of plants in a short time	01
		(iv)	Budding/ grafting / layering/ planting stem cuttings	01
				20
06.	A	(I)	H:N:H H	02
		(ii)	lone pair of elections	01
		(iii)	Covalent bonds	01
		(iv)	$(NH_4)_2SO_4$	01
		(v)	Presence of strong inoic bonds between Na^{+1} and Cl^{-1}	01
		(vi)	covalent bonds	01
		(vii)	$\frac{2.99x10^{-23}g}{1.67x10^{-24}g}$	01
			= 18	01
	B	(i)	Mole	01
		(ii)	44	01
		(iii)	(12x6)+(1x2)+(16x6) = 180g	02
		(iv)	40x0.25=10g	01
	C	(i)	Not showing tendency to one side of bond elections due to equal electro negativity in H-H	02
		(ii)	Showing tendency of bond electrons towards chlorine due to dif ference in electro negativity, showing slight H^+ Cl^- charge	02
		(iii)	high boiling point, high specific heat capacity, being a good solvent	02
				20

සියලුම විෂයන්ට අදාල ප්‍රශ්න පත්‍ර/පිළිතුරු පත්‍ර/සටහන් ලබා ගැනීමට Past Papers Wiki වෙත පිවිසෙන්න

(07) A (i) 400N 01

(ii) 40kg + 8kg =480N 02

(iii) a. Homentum = mass x velocity 03
$48kgx2ms^{-1} = 96kgms^{-1}$

b. force = $\frac{\text{dif ference of momentum}}{\text{time}}$ 02
$= \frac{(96-0)kgms^{-1}}{2} = 48$

c. Newton's second law 01

(iv) a. Inclined plane 01

b. Axe/ screw nail 01

B (i) Using 100g mass for pan B 01

(ii) a The system moves towards B under a force of 150N 02

b 250g-100g=150g 02

(iii) Acting through the two forces 01

(iv) a. 14N 01

b. downwards 01

c. 14N 01

20

08 A. (i) a. Pisces, Amphibia 02

b. Pisces : being warm blooded, presence of fins, presence of gills 01
Amphibia : being cold blooded, spending one stage of life cycle in water, using skin, lungs, mouth for respiration 01

(ii) a. Presence of vermiform body with segments 01

b. snail or other organism of Mollusca 01

c. Naming a parasite belong to Arthropoda 01

(iii) Skin, mouth, lungs 02

(iv) Echinodermata 01

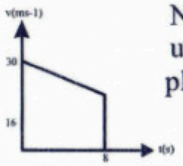
B. (i) a. Uniform velocity 01

b. 8000m 01

c. 800m 25s=$32ms^{-1}$ 01

(ii) Dif ference of velocity divide by time, (v-u) t 02

(iii) $32ms^{-1}$-$16ms^{-1}$=$16ms^{-1}$ ÷ 02
$16ms^{-1} \div 5s = 2ms^{-2}$

(iv) 

Naming two axis 01
units 01
plotting the graph 01

20

09. A. (i) a. No charge (0) 01

b. in energy shells 01

(ii) No of protons in the atom 01

(iii) Isotopes 01

(iv) Change in neutron number 01

B. (i) $kJmol^{-1}$ or moles per kilo joule 01

(ii) A, I or B, J 01

(iii) a. E 01

b. D 01

c. A 01

(iv) a. 

02

b. GD_2 02

C. (i) Coplanar forces, resultant of 2 forces becomes equal to the third force 02

(ii) Drawing the figure and mark forces with arrows 02

(iii) 10N 01

(iv) Forces are collinear, forces become opposite, resultant of 2 forces becomes equal to the third force 01

20

PAST PAPERS WIKI
www.Pastpapers.Wiki

Downloaded From Past Papers WiKi - Sri Lanka's Largest Past Paper Bank