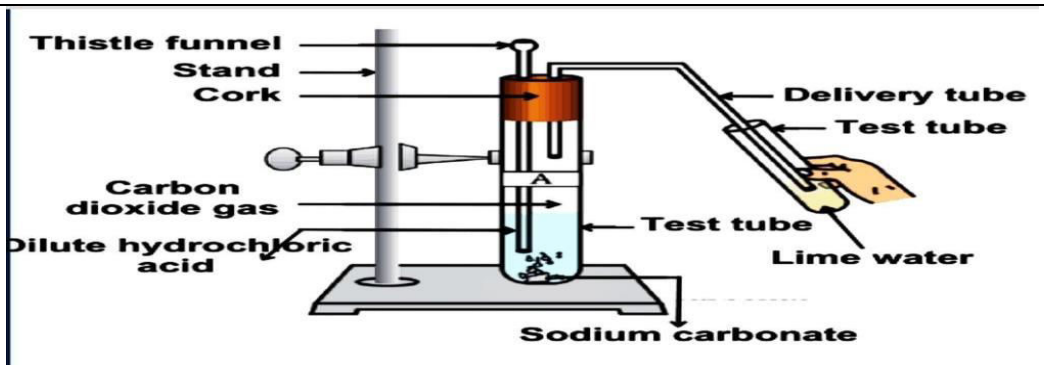
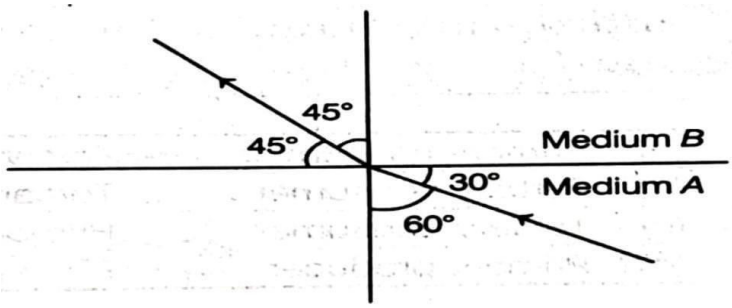
OSDAV Public School, Kaithal
Pre Board Test (2024-25)
Class :X **Set- A**
Subject : Science

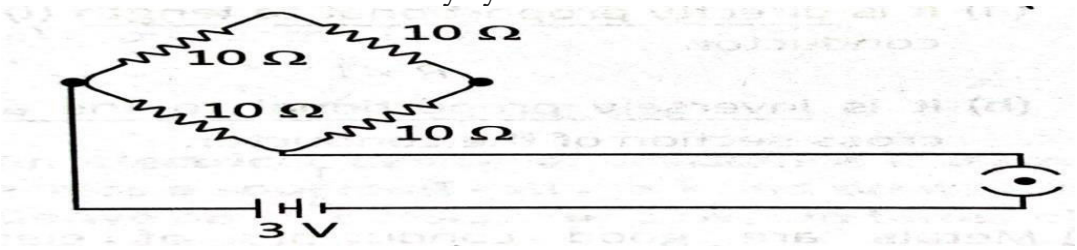
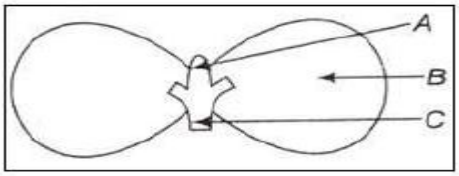
Time: 3 hour **M.M. : 80**

General Instructions:-

All questions are compulsory.

Q. No	Physics/Chemistry	Marks
1	On burning magnesium ribbon in air it is observed that it burns brightly leaving behind a _____ powder. a. Green b. yellow c. white d. black	1
2	 Identify the colour of the gas evolved in the above experiment:- a blue b.green c. Yellow d. Colourless	1
3	When zinc reacts with sodium hydroxide, the product formed is a. Sodium oxide b. Sodium zincate c. Zinc hydroxide d. Zinc oxide	1
4	Metals are refined by using different methods.Which of the following metals are refined by electrolytic refining (a) K (b) Ca (c) Na (d) Cu	1
5	The soap molecule has a (a)hydrophilic head and hydrophilic tail (b) hydrophilic head and hydrophobic tail (c) hydrophobic head and hydrophilic til (d) hydrophobic head and hydrophobic tail	1
6	Figure shows a ray of light as it travels from medium A to medium B. Refractive index of the medium B relative to medium A is  a. $\sqrt{3}/\sqrt{2}$ b. $\sqrt{2}/\sqrt{3}$ c. $1/\sqrt{2}$ d. $\sqrt{2}$	1
7	When ciliary muscles are relaxed, focal length of eye lens is (a)maximum (b) minimum (c) neither maximum nor minimum (d) can not say	1
8	In the formation of rainbow the role of water droplet present in water fountain is act as a	1

	(a)glass slab (b)convex lens (c) concave lens (d)prism	
9	What is the maximum resistance which can be made using five resistors each of 1/2Ω? (a)2.5Ω (b) 2Ω (c) 5 Ω (d)1Ω	1
10	An electric fan runs from the 220V mains.The current flowing through it is 0.5 A. How much energy is transformed in 1 minutes? (a)13200J (b)110J (c)6600J (d)1500J	1
11	In a bar magnet magnetic field is (a) strong at ends (b) weak at centre (c) strong at center (d) none	1
	In the following Questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion. (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion. (c) Assertion is true but the Reason false. (d)Assertion is false but the Reason is true.	
12	Assertion(A):sodium oxide is an amphoteric oxide. Reason(R): metal oxides which react with acids and bases are called amphoteric oxides.	1
13	Assertion(A):1.33 is the absolute refractive index of water. Reason(R):Air is optically denser than water.	1
14	On heating lead nitrate in boiling tube,lead oxide, oxygen gas and a brown gas X is formed. (a)Write the balance chemical equation of the reaction. (b)Identify the brown gas X and type of reaction.	2
15	An aldehyde as well as a ketone can be represented by the same molecular formula ,say C_3H_6O.Write their structures and name them.state the relation between the two in the language of science.	2
16	The refractive index of medium x with respect to y is 2/3and the refractive index of y with respect to z is 4/3.calculate the refractive index of medium z with respect to x.	2
17	a)An object 5 cm in length is held 25 cm away from the converging lens of focal length 10 cm.Draw the ray diagram and find its power.	2
18	It is established that an electric current through a matellic conductor produces a magnetic field around it.Is there a similar magnetic field produced around a thin beam of moving (i) alpha particles (ii)neutrons?	2
19	An ore on treatment with dil HCl produces brisk effervescence.name the type of ore with one example what step would be required to obtain the metal from the enriched ore?also write the chemical equations of the reactions involved in the process.	3
20	A Write the reaction when ethanol heated in the presence of sulphuric acid. B Differentiate between Ethanol and Ethanoic acid.	3
21	a)What is the usual current rating of the fuse wire in the line to feed(i)lights and fans (ii) heater of power 2 kw. b)Draw the diagram of domestic electric circuit.	3
22	(a) Explain with the help of flow chart how metals of different reactivity extracted. (b) Explain with the help of activity that non metal oxide are acidic in nature .	5

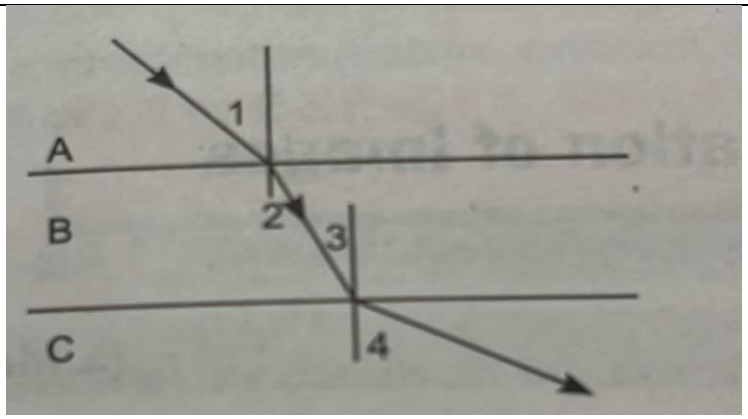
23	(a)Find the current drawn from the battery by the netwok of four resistor as shown in the figure:  (b)Calculate the resistance of the metal wire of length 2m and area of cross section $1.55\times10^{-6}m^2$, if the resistivity of the metal be $2.8\times10^{-8}\Omega m$	5
24	Case Study Metals react with water and produces a metal oxide and hydrogen gas.Metal oxides that are soluble in water dissolve in it to further form metal hydroxide .but all metals do not react with water. (a) Name a metal which react with only steam. (b) Write a reaction of sodium with hot water. (c) Why sodium catches fire when react with water. (d) Explain why Mg floats on water.	4
25	Case Study When light goes from one medium to another medium having different optical densities, then refraction of light rays takes place. All the air in the atmosphere is not at the same temperature. Some of the air layers of the atmosphere are cold (optically denser) whereas other layers of the atmosphere are comparatively warm (optically rarer). So, in the atmosphere we have air layers having different optical densities. Atmospheric refraction is the deviation of light from a straight line as it passes through the atmosphere due to the variation in air density, such refraction can raise or lower, or stretch or shorten the images of distant objects and can also make distant objects appear to twinkle or shimmer. Read the above passage carefully and give the answer of the following questions: 1. What is atmospheric refraction? 2. What causes atmospheric refraction? 3. Name the effects produced by atmospheric refraction. 4. Which has more refractive index hot air or cold air? OR How much time from sunrise to sunset is lengthened because of atmospheric refraction?	4
	Biology	
1	Proteins after digestion are converted into (a) Carbohydrate. (b) Small globules. © Amino acids. (d) starch	1
2	Respiratory pigment in human body is (a) Chlorophyll (b)Water. (c) Blood. (d)haemoglobin	1
3	Identify which of the following statements about thyroxin is incorrect? (a) Thyroid gland requires iodine to synthesize thyroxin. (b) Thyroxin is also called thyroid hormone. (c) It regulates protein, carbohydrates and fat metabolism in the body. (d) Iron is essential for the synthesis of thyroxin.	1
4	In the below figure, parts A, B and C are, sequentially,  (a) Cotyledon, plumule and radicle. (b) Plumule, radicle and cotyledon (c) Plumule, cotyledon and radicle. (d) Radicle, cotyledon and plumule	1

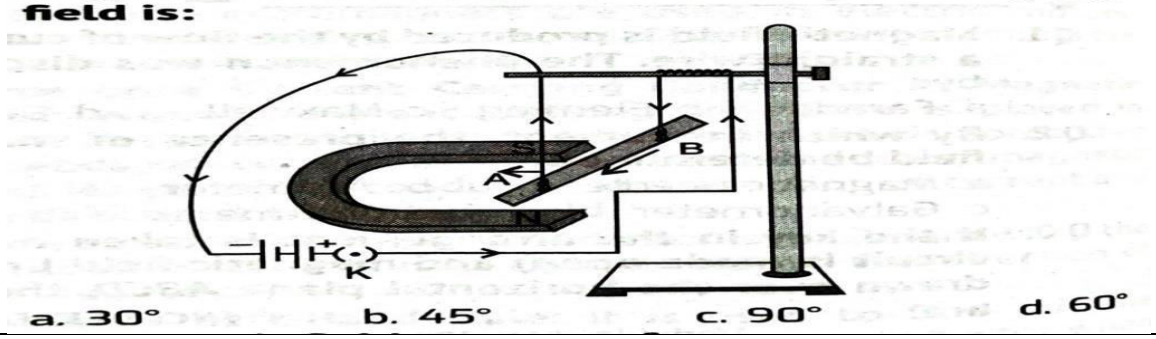
5	In peas, a pure tall (TT) is crossed with a pure short plant(tt). The ratio of pure tall plants to hybrid tall plants in the F2 generation is: (a) 1:2 (b) 3:1. (c) 1:1. (d) 2:1	1
6	Following questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true. **Assertion**: Abscisic acid is responsible for wilting of leaves. **Reason**: It is a growth inhibitor.	1
7	**Assertion:** The large intestine is the largest part of the alimentary canal. **Reason:** Tiger has a shorter small intestine, than herbivores.	1
8	Which organ secretes a hormone when blood sugar rises in our body? Name the hormone and name one enzyme released by this organ.	2
9	Some unicellular organisms such as Plasmodium and Leishmania differ in the manner in which they reproduce. Name and explain the reproductive process taking place in them.	2
10	(a) How is the amount of urine produced regulated? (b) Name any two human excretory organs other than kidney.	2
11	Why is the maximum concentration of pesticides found in human beings?	2
12	(a)Consider the following food chain which occurs in a forest: Grass → Deer → Lion If 20,000 J of solar energy is available to the grass, how much energy would be available to the deer to transfer it to the lion? (b) Name two man made ecosystems.	3
13	Give reasons: (a) Ventricles have thicker muscular walls than atria. (b)Circulation of blood in aquatic vertebrates differs from that in terrestrial vertebrates. (c)During the daytime, water and minerals travel faster through xylem as compared to the night.	3
14	(a) Give one example each of unisexual and bisexual flower. (b) Mention the changes a flower undergoes after fertilisation. (c) How does the amount of DNA remain constant though each new generation is a combination of DNA copies of two individuals	5
15	Sex of an individual is determined by different factors in various species. Some animals rely entirely on the environmental cues, while in some other animals the individuals scan change their sex during their life time indicating that sex of some species is not genetically determined. However, in human beings, the sex of an individual is largely determined genetically. (a) In what way are the sex chromosomes 'X' and 'Y different in size? Name the mismatched pair of sex chromosome in humans. (b) Write the number of pair/pairs of sex chromosomes present in human beings. In which one of the parent (male/female) perfect pair/pairs of sex chromosomes are present? (c) Citing two examples, justify the statement "Sex of an individual is not always determined genetically".	4

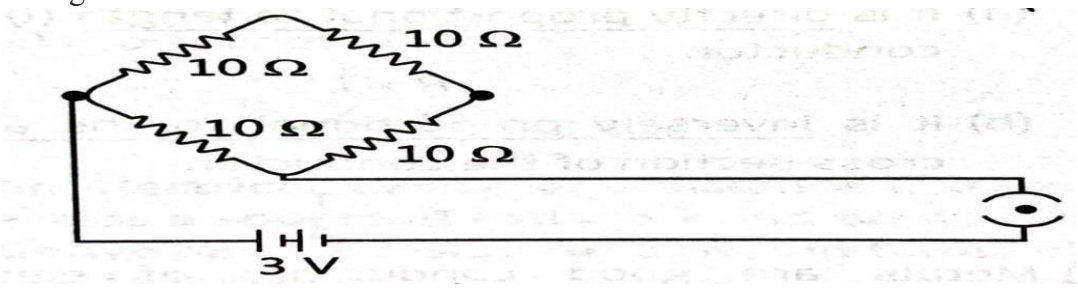
OSDAV Public School, Kaithal
Pre Board Test (2024-25)
Class :X **Set- B**
Subject : Science

Time: 3 hour **M.M. : 80**

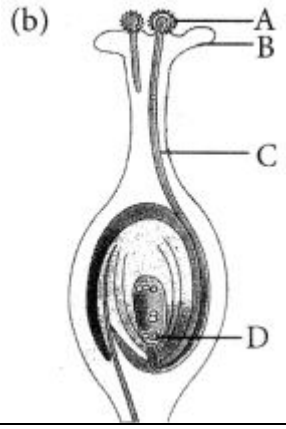
General Instructions:-
All questions are compulsory.

Q. No.		Marks
1	When a piece of granulated zinc was dropped into copper sulphate solution ,aftersome time ,the colour of solution changed from blue to (a) green (b) orange (c) black (d) colourless	1
2	Select the washing soda from the following (a) $NaHCO_3$ (b)$Na_2CO_3.5H_2O$ (c) $Na_2CO_3.10H_2O$ (d)NaOH	1
3	An element X with atomic number 11 form the compound with element Y with atomic number 8.The formula of compound formed is (A) XY (B) X2Y (C) XY_2 (D) X_2Y_3	1
4	Galvanisation is a method of protecting iron from rusting by coating it with a thin layer of (a)Ga (b) K (c) Al (d) Zn	1
5	When ethanol react with sodium two products are formed these products are (a) Sodium ethanoate and oxygen (b) Sodium ethanoate and hydrogen (c) Sodium ethoxide and oxygen (d) Sodium ethoxide and hydrogen	1
6	 A ray of light is incident as shown. If A, B and C are three different transparent media, then which among the following options is true for the given diagram? (a) $\angle 1 > \angle 4$ (b) $\angle 1 < \angle 2$ (c) $\angle 3 = \angle 2$ (d) $\angle 3 > \angle 4$	1
7	Which of the following phenomena of light are involved in the formation of rainbow? (a) Reflection, scattering, dispersion (b) Dispersion ,scattering , refraction (c)Total internal reflection , refraction , dispersion (d) Reflection , refraction , dispersion	1
8	Which colour has the maximum angle of deviation when white light pass form glass prism ? (a)Red (b) Yellow (c) Green (d) violet	1
9	If four identical resistor 8ohm are first connected in series to give an effective resistance Rs and then connected in parallel so as to give an effective resistance Rp then ratio of RS/RP is (a) 32 (b) 12 (c) 0.5 (d) 16	1
10	When a 4V battery is connected across an unknown resistor there is a current of 100 mA in the circuit .The value of the resistance of the resistor is : (a)4Ω (b)40 Ω (c) 400Ω (d)0.4Ω	1

11	**The displacement of the rod is larger when the angle between direction of current and magnetic field is:**  a. 30° b. 45° c. 90° d. 60°	1
	In the following Questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion. (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion. (c) Assertion is true but the Reason false. (d)Assertion is false but the Reason is true.	
12	Assertion(A):The aqueous solution of glucose and alcohol do not show acidic character. Reason(R): Aqueous solution of glucose and alcohol do not give H^+ ions.	1
13	Assertion(A):A ray incident along normal to the mirror retrace its its path. Reason(R): In reflection angle of incidence is equal to angle of reflection.	1
14	A substance X is used as a building material and is insoluble in water .when it react with dil. HCl it produces a gas which turns lime water milky. Predict the substance and write the chemical equation involved.	2
15	Write a reaction for (i) esterification (ii) saponification	2
16	Draw the ray diagram for concave mirror when image is formed (1) real inverted and enlarged (2)virtual erect and enlarged	2
17	Rishi went to a palmist to show his palm .The palmist used a special lens for this purpose. a) State the nature of lens and reason for its use. b)Where should the palmist place the lens so as to have a realand magnified image of an object?	2
18	Draw the diagram of domestic electric circuit.	2
19	What happens when (a) Copper is heated? b) Zinc react with calcium sulphate. (c) Lime stone is heated.	3
20	An organic compound A on heating with conc. Sulphuric acid forms a compound B which on addition of one mole of hydrogen in the presence of Ni form a compound C.one mole of compound C on combustion form two mole of CO_2 and three mole H_2O.Identify the compound A,B,C. Write the chemical equation of the reaction involved.	3
21	a) What are the factors on which the direction of force depend when a current carrying conductor placed perpendicular to magnetic field. b) What is the function of earth wire? c) What do you mean by short circuit?	3
22	(a) Explain with the help of flow chart how metals of different reactivity extracted. (b)Explain with the help of activity that metal oxide are basic in nature .	5
23	Case Study The common salt thus obtained is an important raw material for various materials of daily use, such as sodium hydroxide, baking soda washing soda, bleaching powder and many more. a)What are the uses of bleaching powder? b)How baking soda is formed? c)Name the salt used in supporting the fractured bone. d)Write the ingredient of baking powder.	4

24	(a)Find the current drawn from the battery by the netwok of four resistor as shown in the figure:  (b)Calculate the resistance of the metal wire of length 2m and area of cross section $1.55\times10^{-6}m^2$, if the resistivity of the metal be $2.8\times10^{-8}\Omega m$	5
25	Case Study When light goes from one medium to another medium having different optical densities, then refraction of light rays takes place. All the air in the atmosphere is not at the same temperature. Some of the air layers of the atmosphere are cold (optically denser) whereas other layers of the atmosphere are comparatively warm (optically rarer). So, in the atmosphere we have air layers having different optical densities. Atmospheric refraction is the deviation of light from a straight line as it passes through the atmosphere due to the variation in air density, such refraction can raise or lower, or stretch or shorten the images of distant objects and can also make distant objects appear to twinkle or shimmer. Read the above passage carefully and give the answer of the following questions: 1. What is atmospheric refraction? 2. What causes atmospheric refraction? 3. Name the effects produced by atmospheric refraction. 4. Which has more refractive index hot air or cold air? OR How much time from sunrise to sunset is lengthened because of atmospheric refraction?	4

	Biology	
1	Plants store food in the form of (a) Chloroplast (b) glycogen (c) starch (d) ATP	1
2	The windpipe is also called the _____. (a) Larynx. (b) Lungs. (c) Trachea. (d) Oesophagus	1
3	The secretion of which hormone leads to physical changes in the body when you are 10-12 years of age? (a) Oestrogen from testes and testosterone from ovar. (b) Estrogen from adrenal gland and testosterone from pituitary gland. (c) Testosterone from testes and estrogen from ovary. (d) Testosterone from thyroid gland and estrogen from pituitary gland	1
4	The seed that contains the future plant is called the (a) cotyledons. (b) seed coat. (c) germ cells. (d) embryo	1
5	In peas, Yellow coloured seeds (YY) is crossed with green coloured seeds (yy). The ratio of yellow coloured seeds plants to green coloured seeds plants in the F2 generation is: (a) 1:3. (b) 3:1. (c) 1:1. (d) 2:1	1

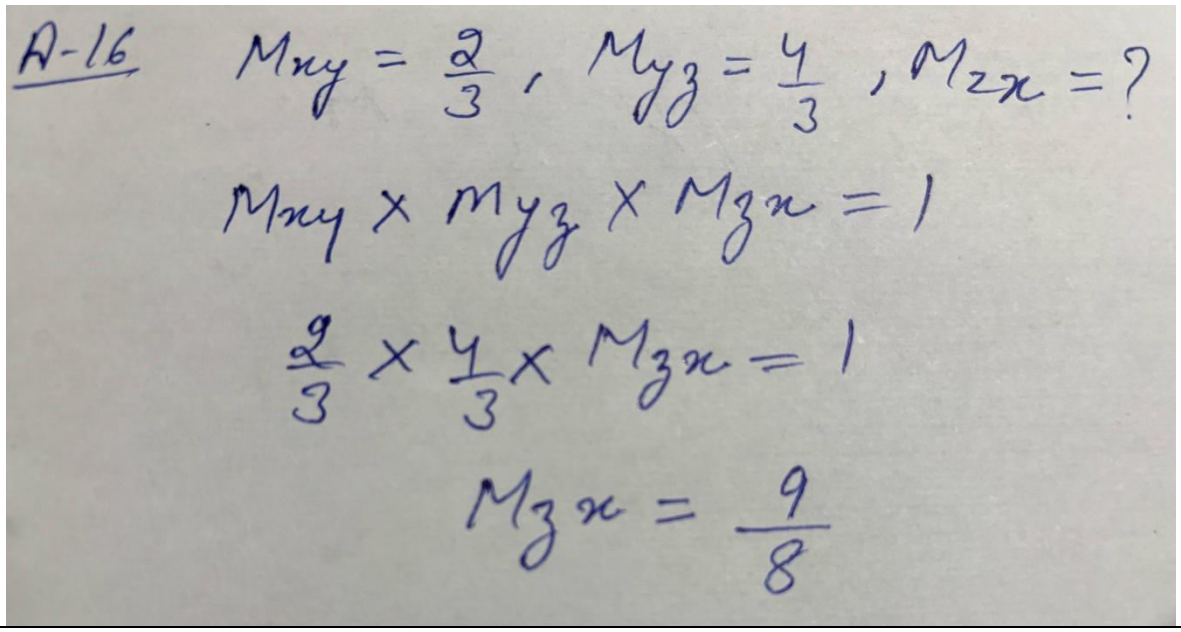
6	Following questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true. Assertion: Auxins help in cell enlargement and cell differentiation. Reason: It is a growth inhibitor.	1
7	Assertion: Energy is required to carry out different life processes. Reason: Energy is obtained in the form of ATP in mitochondria.	1
8	Give reasons: (a) Pancreas has dual nature. (b) It is advised to intake iodised salt.	2
9	(a) Name two types of metabolic wastes produced by humans. (b) Name any two human excretory organs other than kidney.	2
8.	"Blood circulation in fishes is different from the blood circulation in human beings". Justify the statement.	2
10	Which type of nervous system provides communication between central nervous system and other body parts? Write components of this nervous system.	2
11	(a) A Consider the following food chain which occurs in a forest: Grass → Deer → Lion If 50000 J of solar energy is available to the grass, how much energy would be available to the deer to transfer it to the lion (b) Decomposers are important for maintaining ecosystem . Justify.	3
12	List two reasons for the appearance of variations among the progeny formed by sexual reproduction.  (i) Name the part marked A in the diagram. (ii) How does A reaches part B? (iii) State the importance of the part C. (iv) What happens to the part marked D after fertilisation is over?	3
13	a)What is regeneration ? Which types of cells are used by such multicellular organisms to regenerate ? Name the organism which exhibits this process. b)State one function of each of the following parts of the human male reproductive system (i) Vas deferens (ii) Testes (iii) Prostate glands	5
14	Sex of an individual is determined by different factors in various species. Some animals rely entirely on the environmental cues, while in some other animals the individuals scan change their sex during their life time indicating that sex of some species is not genetically determined. However, in human beings, the sex of an individual is largely determined genetically. (a) In what way are the sex chromosomes 'X' and 'Y different in size? Name the mismatched pair of sex chromosome in humans. (b) Write the number of pair/pairs of sex chromosomes present in human beings. In which one of the parent (male/female) perfect pair/pairs of sex chromosomes are present? (c) Citing two examples, justify the statement "Sex of an individual is not always determined genetically".	4

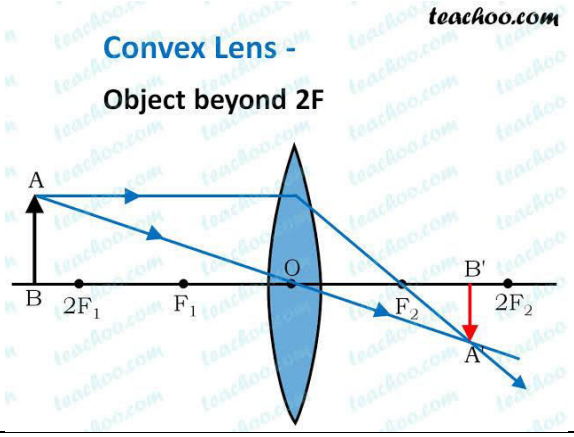
Subject : Science **Pre-Board Exam Set-A**

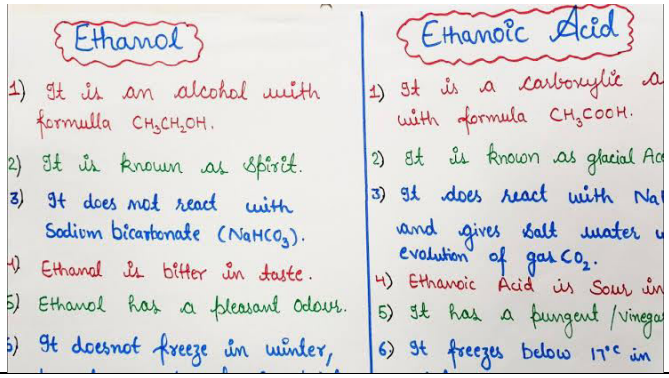
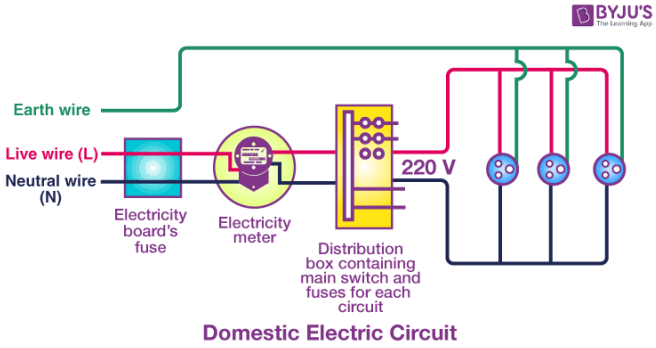
Time: 3 hour M.M. : 80

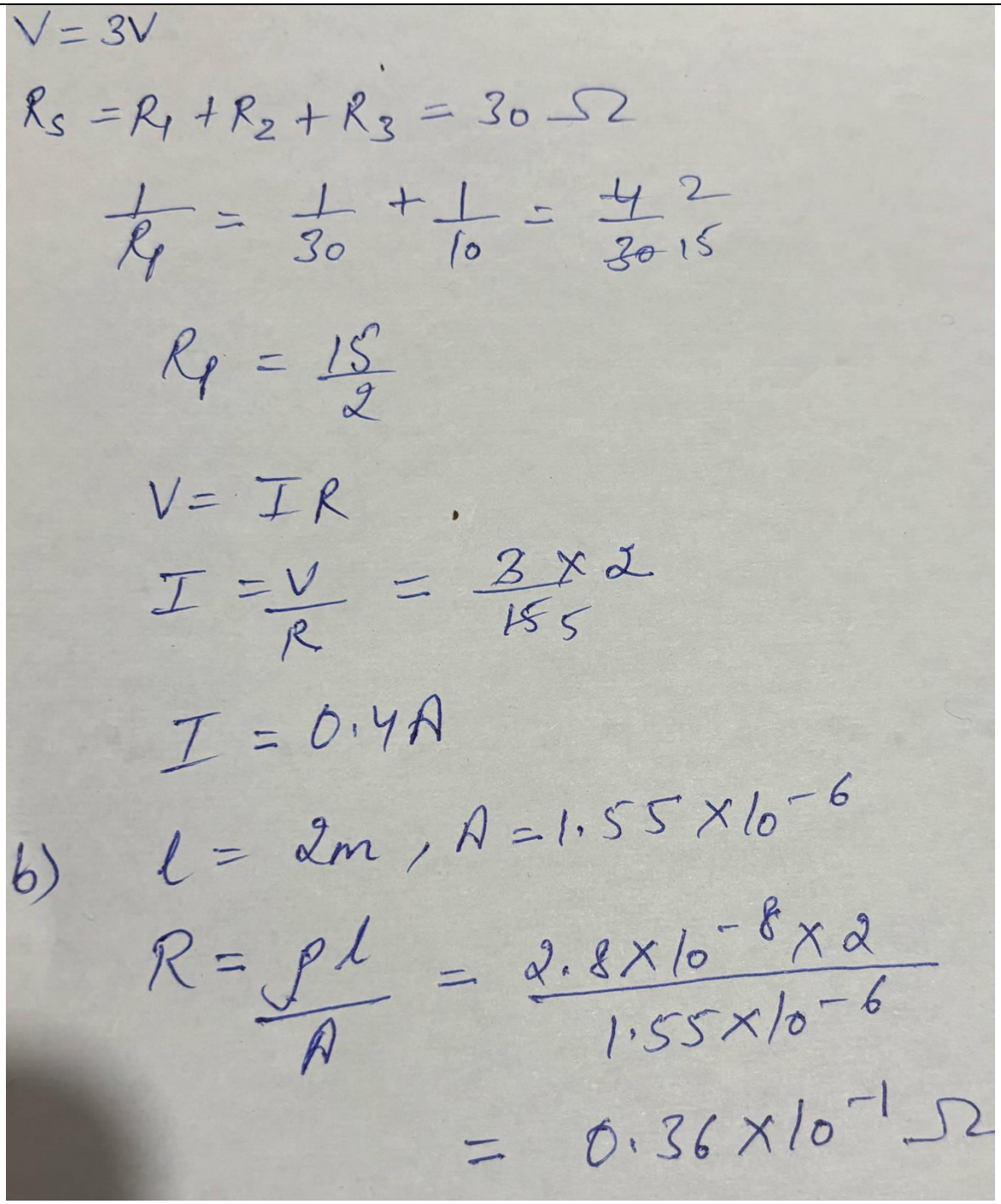
General Instructions:-

All questions are compulsory.

Q. No.	**Physics/Chemistry**	Marks
1	c. white	1
2	d. Colourless	1
3	b. Sodium zincate	1
4	d) Cu	1
5	b) hydrophilic head and hydrophobic tail	1
6	$a\sqrt{3}/\sqrt{2}$	1
7	(a)maximum	1
8	(d)prism	1
9	(a)2.5Ω	1
10	c)6600J	1
11	a) strong at ends	1
12	D	1
13	C	1
14	(a) $2Pb(NO3)2 \rightarrow 2PbO+4NO2+O2$ (b) Brown gas N2	2
15	Aldehyde= C2H5CHO Propanal Ketone = CH3COCH3 Propanone Both are isomers	2
16		2

17	A-17. $h = 5\,cm$ $u = -25\,cm$ $f = 10\,cm.$ $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$ $\frac{1}{v} = \frac{1}{10} - \frac{1}{25}$ $= 16.66\,cm$ $P = \frac{1}{f(m)} = \frac{100}{10} = 10D$  	2
18	(i) Yes (ii) No	2
19	Carbonate ore, eg. Zinc Carbonate Steps to obtain metal from carbonate: 1)Calcination 2) oxide of metal 3) Reduction	3

	4) Refining of metal $ZnCO_3(s) \longrightarrow ZnO(s) + CO_2(g)$ $ZnO + C \longrightarrow Zn + CO2$	
20	A) $CH_3CH_2OH \xrightarrow[443\ K]{H_2SO_4} CH_2{=}CH_2 + H_2O$ Ethanol → Ethene  	3
21	a) (i) 5A (ii) 15A  Domestic Electric Circuit b)	3
22	A)  B) To demonstrate that non-metal oxides are acidic in nature, take some sulphur powder and heat it on burner, collect the gas in inverted test tube, dissolve sulphur dioxide (SO2) in water and test the resulting solution with blue litmus paper; if the solution turns red, it indicates an acidic nature, proving that the non-metal oxide is acidic when dissolved in water.	5

23		5

$V = 3V$

$R_S = R_1 + R_2 + R_3 = 30\ \Omega$

$\frac{1}{R_p} = \frac{1}{30} + \frac{1}{10} = \frac{4}{30}\ ^{2}15$

$R_p = \frac{15}{2}$

$V = IR$

$I = \frac{V}{R} = \frac{3 \times 2}{15}$

$I = 0.4A$

b) $l = 2m, A = 1.55 \times 10^{-6}$

$R = \frac{\rho l}{A} = \frac{2.8 \times 10^{-8} \times 2}{1.55 \times 10^{-6}}$

$= 0.36 \times 10^{-1}\ \Omega$

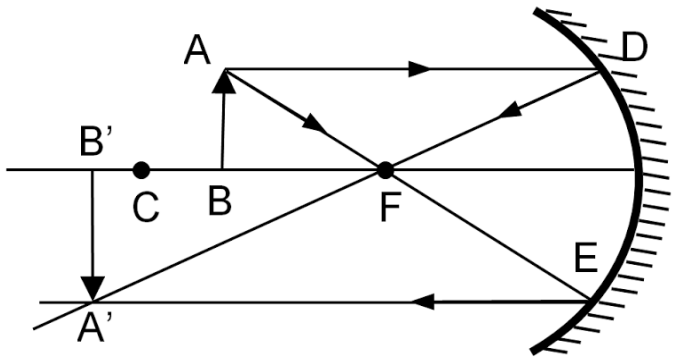
(a)

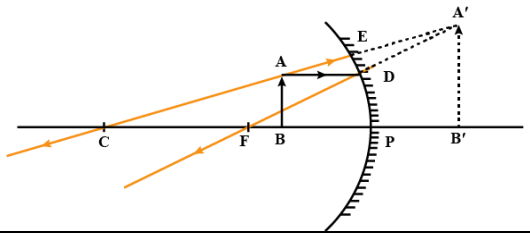
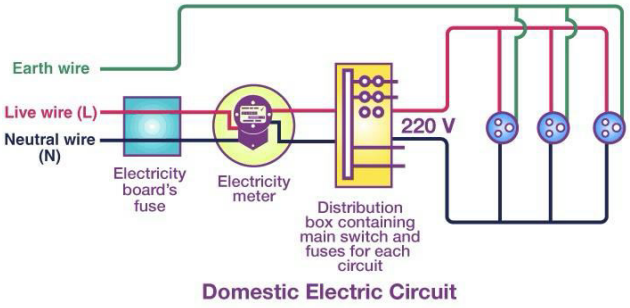
24	(a) Aluminium (b) $2Na + 2H_2O \rightarrow 2NaOH + H_2$ (c) When sodium reacts with water, the reaction is highly exothermic and heat is produced in large amounts. (d) When Mg reacts with water, H2 is produced along with the formation of Mg(OH)2 This hydrogen sticks to the surface of magnesium and helps it to float.	4
25	1. Refraction caused due to atmospheric layers having different densities of air. 2. Due to density variations of air pressure in it 3. Twinkling of stars, Sun appearing 2 mins before sunrise. 4. Cold air OR 2 minutes	4

	Biology	
1	c amino acids	1
2	(d)haemoglobin	1
3	(d) Iron is essential for the synthesis of thyroxin.	1
4	(c) Plumule, cotyledon and radicle.	1
5	(a) 1:2	1
6	(a) Both A and R are true and R is the correct explanation of A.	1
7	(b) A is false R is true.	1
8	Pancreas , insulin, Trypsin	2
9	**Plasmodium (Multiple Fission):** In this process, the nucleus of the parent cell undergoes multiple divisions, creating numerous nuclei which are then each surrounded by a portion of cytoplasm, resulting in the formation of many daughter cells simultaneously. **Leishmania (Binary Fission):** Here, the parent cell simply divides into two equal halves, with each half developing into a new individual cells	2
10	(a) presence of diuretics, infections (b) skin lungs liver.	2
11	Why is the maximum concentration of pesticides found in human beings?	2
12	(a) 20j 2j (b) Aquarium and garden	3
13	Give reasons: (a) because they need to pump blood out of the heart to the body. (b)fishes are cold blooded mammals are warm blooded (c)due to transpiration pull	3
14	(a) unisexual - papaya bisexual flower.- hibiscus (b) ovary- fruit. Ovule seed (c) because of a process called DNA replication and a specialized type of cell division called meiosis	5
15	(a)X is larger Y is smaller. (b) 1 pair XX is perfect pair (c) lizards and snails	4

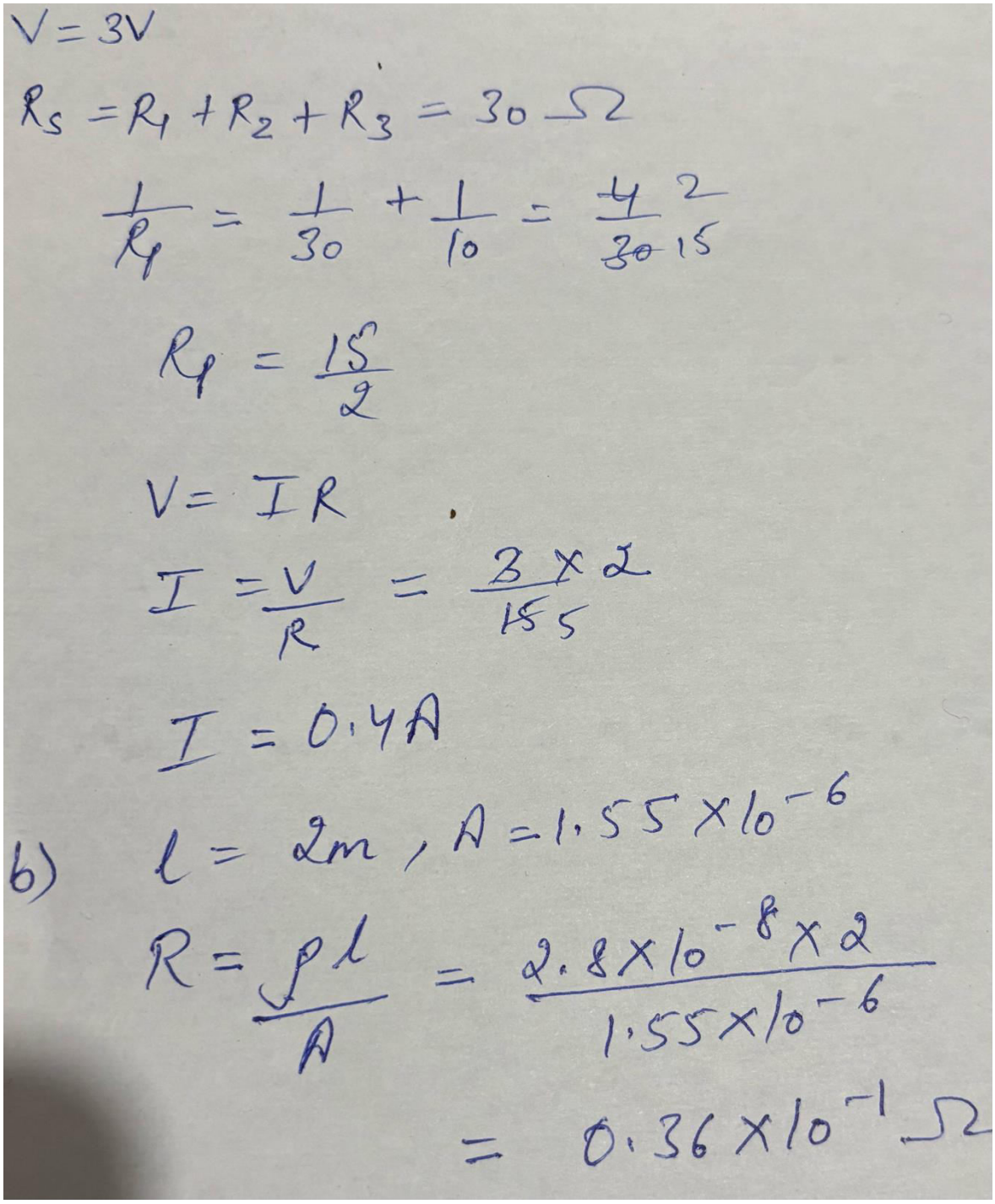
OSDAV Public School,kaithal
Pre Board Test (2024-25)
Class :X Set- B
Subject : Science
Time: 3 hour

M.M. : 80
General Instructions:-
All questions are compulsory.

Q. No.	**Physics/Chemistry**	Marks
1	d) colourless	1
2	c) $Na_2CO_3.10H_2O$	1
3	(B) X_2Y	1
4	(d)Zn	1
5	D) Sodium ethoxide and hydrogen	1
6	(c) $\angle 3 = \angle 2$	1
7	D) Reflection , refraction , dispersion	1
8	(d) violet	1
9	(d) 16	1
10	b)40 Ω	1
11	C) 90	1
12	A	1
13	B	1
14	Limestone $CaCO3 + 2HCl \rightarrow CaCl2 + CO2 + H2O$	2
15	I) Esterification $C_2H_5OH+CH_3COOH \rightarrow CH_3COOC_2H_5$ II) (ii) saponification $CH_3COOH + NaOH \rightarrow CH_3COONa + H_2O$	2
16	a)  b)	2

		
17	. a) Convex, converging lens to get virtual, errect and enlarged image b) between principal focus and centre of curvature	2
18	 Domestic Electric Circuit	2
19	(a) Forms Copper oxide, black in color, Combination Reaction b) No reaction c) decomposition reaction, quick lime and Carbon dioxide	3
20	A= Ethanol B= Ethene C= Ethane $CH3CH2OH+H2SO4 \rightarrow CH2=CH2+H2O$ CH2=CH2 (g) + H2 (g) → Ni (catalyst) CH3-CH3 (g). $2C_2H_6+7O_2 \rightarrow 4CO_2+6H_2O$	3
21	a) 1 Direction of current 2 Direction of magnetic field b) Provides low resistance path and draws out excess current into earth c) When live wire and neutral wire comes in direct contact with each other without any insulation the current in the circuit abruptly increases. This is called short circuit.	3
22	 (a) .	5

	(b) Take any metal and burn it to form it's oxide. Now, dissolve the oxide in water and perform litmus test the colour of litmus will change from red to blue showing metal oxides are basic in nature.	

23	(a) Bleaching of cotton Used as oxidising agent (b) $NaCl + H_2O + CO_2 + NH_3 \rightarrow NH_4Cl + NaHCO_3$ (c) Plaster of Paris d) Baking Soda and mild edible acid	4
24		5

25	1. Refraction caused due to atmospheric layers having different densities of air. 2. Due to density variations of air pressure in it 3. Twinkling of stars, Sun appearing 2 mins before sunrise. 4. Cold air OR 2 minutes	4
	Biology	

1	c. starch	1
2	c. trachea	1
3	(c) Testosterone from testes and estrogen from ovary.	1
4	(d) embryo	1
5	(b) 3:1.	1
6	(c) A is true but R is false.	1
7	b. Both true but not correct explanation	1
8	a. Yes, the pancreas has a dual nature because it has both exocrine and endocrine functions B. To prevent from goitre	2
9	(a) Urea uric acid carbon dioxide (b) skin. Liver lungs	2
8.	In fishes, blood circulation is called single circulation due to presence of two-chambered heart whereas double circulation is seen in birds due to the presence of four-chambered heart	2
10	peripheral nervous system Cranial and spinal nervea.	2
11	(a) deer 50 j lion 5 j (b) Clean the earth and recycle nutrients	3
12	a Variation is seen among progeny formed by sexual reproduction because of:i Involvement of two different individuals. ii Creation of new combination of variants. (i) pollen grains (ii) pollination (iii) help on transfer male gamete to ovary (iv) if ovary ripen fruit form if ovule ripen seed form	3
13	a) Regeneration is the ability of organisms to give rise to a new organism or individual from their body parts. Due to presence of regenerative cells eg planaria (i) transfer sperms from testes to urethra (ii) release sperms and testosterone (iii) provide fluidity and nourishment to spems	5
14	(a)X is larger Y is smaller. (b) 1 pair XX is perfect pair (c) lizards and snails	4