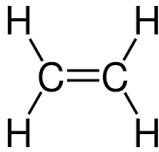
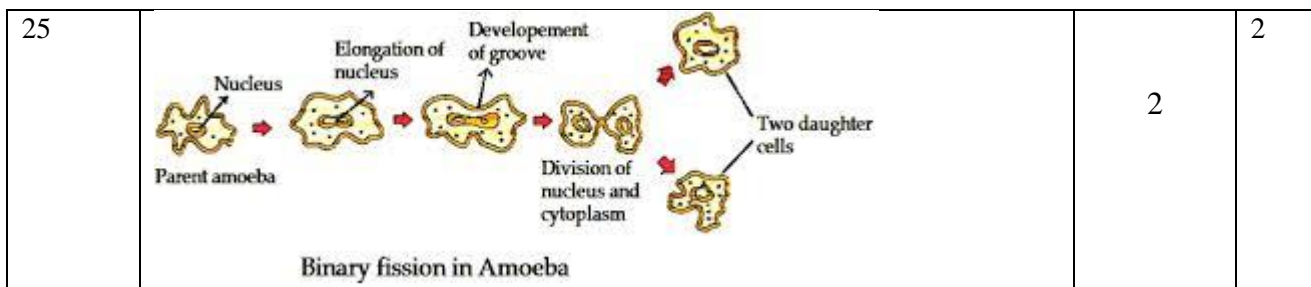


**MARKING SCHEME**  
**SAMPLE PAPER 3- 2020-21**  
**CLASS X (SCIENCE)**

Qn.No	VALUE POINTS	MARKS	Total
1	C <sub>4</sub> H <sub>10</sub> , C <sub>6</sub> H <sub>14</sub> OR The self-linking capability of atoms is known as catenation	1	1
2	(i)increases (ii) decreases	½ + ½	1
3	(a) Change in chemical properties	1	1
4	Red colour having longest wavelength can travel through longer distance without getting scattered away.	1	1
5	Convex mirror	1	1
6	A- 0.5m OR f = - 15 cm	1	1
7	Deflection decreases	1	1
8	Uniform magnetic field	1	1
9	10 Ω	1	1
10	Grass, Rabbit, Snake, Hawk	½ ½	1
11	Gene is the functional part of the DNA which encodes the instructions that allow a cell to produce a specific protein or enzyme. (any relevant definition)	½ ½ ½ ½	1
12	Chloroplast OR Chlorophyll	½ ½ 1	1
13	Because lower temperature is required for the production and maturation of sperms	1	1
14	Assertion and reason both are true and the reason is the correct explanation of Assertion	1	1
15	Correct option (d)	1	1
16	Correct option (d) OR Correct option (c)	1	1
17	i. a) Cs ii. d) Group 1 iii. a) F iv. c) remains the same v. d) F	1 1 1 1 1	4
18	i. A Between 1995 and 2000 the number of people infected with HIV increased by 67%. ii. C	1 1 1	4

	iii. B iv. D v. D	1 1	
19	(i) a (diamond) (ii) b (decreased velocity) (iii) b (water) (iv) d (1.1) (v) b (1.41)	1 1 1 1 1	4
20	(i). d (ii). c (iii). d (iv). a (v) . c	1 1 1 1 1	4
<b>Section B</b> <b>SHORT ANSWER QUESTIONS OF 2 MARKS</b>			
21	Rainbow is a natural spectrum of sunlight formed by the dispersion of sunlight by tiny water droplets present in the atmosphere which acts like prisms. Tiny water droplets refract, disperses, total internally reflects and again refracts the sunlight to form the rainbow.	2	2
22	Length of A and B is same. A is thicker than B. Hence $R_A < R_B \left[ \because R \propto \frac{1}{A} \right]$ Current in $A_1$ is more than current in $A_2$ i.e., reading in $A_1$ is higher than reading in $A_2$ .	1  1	2
23	$C_2H_4$  OR Carbon has a higher catenation ability than Silicon reason being the smaller size of Carbon making stronger bond.	2  2	2
24	a. B and C b. $B_2O$ c. B d. D	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2



26

During transpiration, pressure in the internal roots develop known as root pressure. This root pressure helps in ascent of sap. Thus, transpiration helps in ascent of sap.

OR

	Parasite	Saprotroph
1.	The organism that lives inside the body of another organism (host) and derives the food from it.	The organism that feeds on dead and decaying organic matter. They do not require any host.
2.	They harm the body of host.	They are cleaning agents.
3.	Cuscuta plant is a parasite.	Fungi is a saprotroph.

(any two relevant difference s) 1 mark for each correct difference

**SHORT ANSWER QUESTIONS OF 3 MARKS**

27

$f = -15 \text{ cm}, h_o = 2 \text{ cm}, u = -30 \text{ cm}.$

Using,  $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$ , we get

$$\frac{1}{v} = \frac{1}{f} - \frac{1}{u} = \frac{1}{-15} - \frac{1}{-30}$$

$$= \frac{2-1}{-30} = \frac{1}{-30}$$

$\Rightarrow v = -30 \text{ cm}$

28

a. Q as it gives displacement reaction with both P and Q

b. R as it is being displaced by both P and Q

c. Displacement reactions.

29

(a) Na

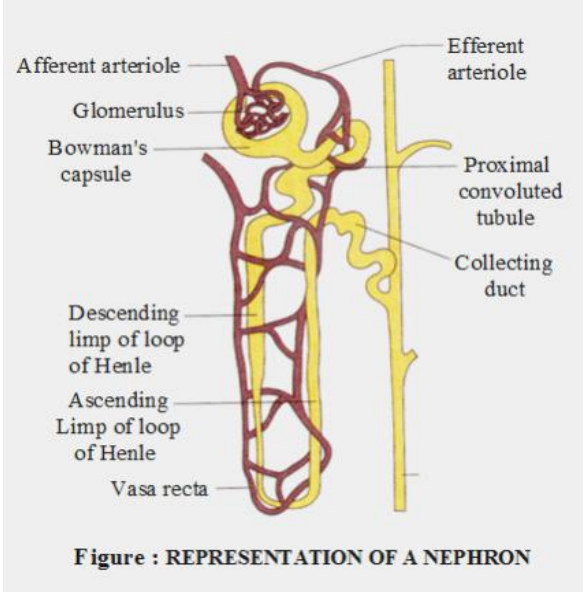

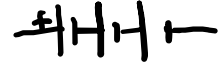
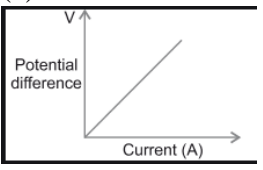
(b) Ne

(c) Al

30

(a) Sodium, Magnesium, Zinc, Iron,

(b) Magnesium and Copper

	(i) (c) Copper and Gold	1	
31	 <p>Figure : REPRESENTATION OF A NEPHRON</p>	$\frac{1}{2} \times 6 = 3$	3
32	<p><b>Inherited traits</b> are coded in our DNA and hence can be passed on to the next generation. <b>Example:</b> eye colour, height, complexion, hair colour, a) Free and (b) attached earlobes.</p>	3	3
33	<p>The male gonads in human beings are a pair of testes. The function of testis is to regulate the production of sperms and secretion of male hormone, testosterone. The female gonads in human beings are pair of ovaries. The ovaries perform dual functions: production of female hormones oestrogen and progesterone. production of female gamete ovum/ova.</p> <p>OR</p> <p><b>Absorption</b> of UV radiation by ozone</p> <p>CFCs are the <b>main cause</b> of <b>ozone layer depletion</b>. These are released by solvents, spray aerosols, refrigerators, air-conditioners, etc.</p> <p>i. (i) Skin cancer. (ii) Damage to eyes, also increase incidence of cataract <b>disease</b> in eyes.</p>	3  OR 1  1  1	3
<b>Long answer type 5 marks</b>			
34	<p>(a) Statement of Ohm's law</p> <p>(b) </p> <p>(c) </p> <p></p> <p>(d) R2 and R3 are in series so <math>R_{23} = R_2 + R_3 = 3 + 3 = 6\text{ohm}</math></p>	1 $\frac{1}{2} + \frac{1}{2}$   1   1	5

35	<p>(a)(i) decreases; When considering Na and Cl which belong to the same period, Na is more metallic than Cl indicating that the metallic property decreases</p> <p>(ii) increases; When considering Na and K along the same group, K has more metallic nature than Na</p> <p>(b) Covalent bond; <math>XCl_4</math></p> <p>(c) 17;2,8,7 ;1</p> <p style="text-align: center;">OR</p> <p>(a) The distance between the center of the nucleus to the outermost shell of the atom</p> <p>(b) Atomic radius increases along a group as the shell number increases and atomic radius decreases along a period as the shell number remains the same and the effective nuclear charge increases</p> <p>(c) The metallic property increases along the group as the atomic radius increases, effective nuclear charge decreases and the tendency to lose electrons or the metallic property increases</p>	5	5
36	<p>(a) A. Fallopian tube B. Ovary C. Uterus D. Cervix E. Vagina</p> <p>(b)</p> <p>(i) Production of an of an egg. Ovary</p> <p>(ii) Fertilisation. Fallopian tube</p> <p>(iii) Implantation of zygote. Uterus</p> <p>(c)</p> <p>(i) The inner lining of the uterus becomes thick and soft with lot of blood capillaries before release of a fertilized egg. The uterus has to keep this fertilised egg for further development and supply it with food, oxygen etc.</p> <p>(ii) If no fertilization occurs then the thick uterus lining breaks down along with its blood vessels in the form of vaginal bleeding called menstrual flow.</p>	5	5

Prepared by : The Department of Science 2020 -21

Checked by :HOD – SCIENCE