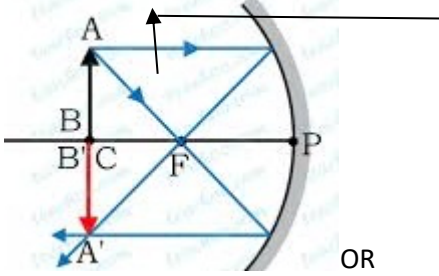
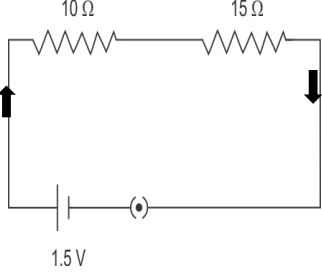
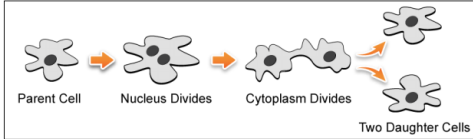




MARKING SCHEME
PRACTICE PAPER 2020-2021
CLASS X SCIENCE

No	Value points	Marks
1	SO_2, SO_3 OR <ul style="list-style-type: none"> ● Heat ● Black and White Photography 	$\frac{1}{2}$ $\frac{1}{2}$
\2	<ul style="list-style-type: none"> ● Bleaching Powder ● CaOCl_2 	$\frac{1}{2}$ $\frac{1}{2}$
3	<ul style="list-style-type: none"> ● Carbon ● Ability of forming covalent bond 	$\frac{1}{2}$ $\frac{1}{2}$
4	Scattering of light	1
5	This means that the speed of light in diamond will reduce by a factor of 2.42 as compared to its speed in air.	1
6	 <p>1 dioptre is SI unit of the power of a lens whose focal length is 1 metre.</p>	1
7		1
8	Perpendicular to plane of paper in outwards direction	1
9	The resistance of a conductor decreases with increase in cross-sectional area. OR If 1 J of work is required to move a charge of amount 1 C from one point to another, then it is said that the potential difference between the two points is 1 V.	1
10	If more stomata are on the upper surface of a leaf, then excessive transpiration would occur, resulting in quick wilting of the plant.	1

11	The trachea is covered by incomplete C- shaped cartilaginous rings. This ring prevents trachea from collapsing when there is less air in it. OR Saliva contains the enzyme amylase, also called ptyalin, which is capable of breaking down starch into simpler sugars.	1
12	The excessive use of cfc's (chlorofluorocarbons) is a cause of concern because cfc's cause the depletion of Ozone layer by decomposing Ozone to oxygen. OR Green plants always occupy the first trophic level because they are the producers. They convert the energy of the Sun into a usable form of energy for the next trophic level.	1
13	The movement of sucrose and other substances like amino acids around a plant is called translocation.	1
14	a) Both A and R are true, and R is correct explanation of the assertion	1
15	a) Both A and R are true, and R is correct explanation of the assertion. OR d) A is false, but R is true	1
16	a) Both A and R are true, and R is correct explanation of the assertion.	1
17	(I) Diabetes. (II) C both a and b (III) d) Low sugar and high fibre (IV) a) 180 mg/dL (V) Two hours after meal	1 1 1 1 1
18	(i) b (ii) b (iii) Weak metallic bond (iv) b Sodium, potassium (v) b	1 1 1 $\frac{1}{2} + \frac{1}{2}$ 1
19	(i) c (ii) a (iii) d (iv) a (v) c	1 1 1 1 1
20	(i)c (ii)a (iii)a (iv)a (v)c	1 1 1 1 1
SECTION B		
21	Two substances which are selectively reabsorbed are amino acids and glucose. amino acids and glucose are important for the body, During this process the	2

	<p>essential substances are taken back by the blood plasma from the tubule of the nephron.</p> <p style="text-align: center;">OR</p> 	
22	<p>The opening and closing of stomata are controlled by the guard cells. When water flows into the guard cells, they swell up and the curved surface causes the stomata to open. When the guard cells lose water, they shrink and become flaccid and straight thus closing the stomata</p>	2
23	<p>Carbon does not form C⁴⁺ cation, as the removal of four valence electrons will require a huge amount of energy. The cation formed will have six protons and two electrons. This makes it highly unstable. Carbon is unable to form C⁴⁻ anion as its nucleus with six protons will not be able to hold ten electrons. it forms covalent compounds.</p> <p>(i) Covalent compounds are bad conductors of electricity due to lack of free electrons.</p> <p>(ii) Covalent compounds are formed by covalent bonds and it has been found that the intermolecular forces of attraction in covalent compounds are weak. Thus, their melting and boiling points are quite low.</p> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> ● A homologous series is a sequence of compounds with the same functional group and similar chemical properties, differ by -CH₂. ● C₂H₆O, CH₄O 	<p>1</p> <p>½</p> <p>½</p> <p>1</p> <p>1</p>
24	<ul style="list-style-type: none"> ● Blue to colourless ● Ca>Al>Zn>Fe>Cu 	<p>1</p> <p>1</p>
25	<ul style="list-style-type: none"> ● B-Violet, A- red ● dispersion of white light 	<p>1</p> <p>1</p>
26	<p>The total energy consumed= 2kW x 2(Time given 2hrs) x 30(september has 30 days.) =120kW</p> <p>So total cost=4 x 120=Rs480</p>	<p>1</p> <p>1</p>
Section C		
27	<ul style="list-style-type: none"> ● green ● 25% ● 1:2:1 <p style="text-align: center;">OR</p> <p>Yes, it is possible that a trait is inherited but may not be expressed. For example, when pure tall pea plants are crossed with pure dwarf pea plants, only tall pea plants are obtained in F₁ generation. On selfing tall plants of F₁; both tall and dwarf plants are obtained in F₂ generation in the ratio 3:1.</p>	<p>1</p> <p>1</p> <p>1</p>
28	<ul style="list-style-type: none"> ● Source of pesticides in these food are rough agricultural practices.,adding 	1

	<p>additives and rough packaging(any one).</p> <ul style="list-style-type: none"> We should take organic food and buy organic food as far as possible. We should clean the vegetables and fruits by soaking it into baking soda. 	1 1
29	<ul style="list-style-type: none"> Lymph is a clear to pale-white fluid which circulates throughout the lymphatic system It transports oxygen, hormones and nutrients to different parts of the body and removes metabolic waste from the cells. Arm pit,neck 	1 1 1
30	<ul style="list-style-type: none"> The black coloured substance is formed due to the reaction of Cu with air. The black substance is the copper oxide. $2\text{Cu} + \text{O}_2 \rightarrow 2\text{CuO}$ 	1 1 1
31	<ul style="list-style-type: none"> B and C elements belong to the same group of the Modern Periodic table. Decreasing order of atomic size: $B > C > D > A$ Element D is a metalloid. 	1 1 1
32	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">Sodium Chlorine</p> <p style="text-align: center;">$\text{Na} \cdot \text{:}\ddot{\text{Cl}}\text{:}$</p> <ul style="list-style-type: none"> Sodium have one electron in its valence shell and chlorine have 7 electrons in its valence shell and it requires only one electron to complete its octet that electron is donated by sodium and thus a bond is formed between the two atoms. Ionic bond. Ionic compounds are held together by electrostatic forces between the oppositely charged ions, a lot of energy is needed to overcome this ionic bonding so ionic compounds have high melting and boiling points. 	1 1 $\frac{1}{2}$ $\frac{1}{2}$
33	<p>$m = -3, u = -10 \text{ cm}$ As $m = -v/u$ or $-3 = -v/-10$</p> <ul style="list-style-type: none"> $v = -30 \text{ cm}$ By mirror formula, $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$ $= \frac{1}{-30} + \frac{1}{-10}$ $= -\frac{4}{30}$ or $f = -\frac{30}{4} = -7.5 \text{ cm}$ 	1 1

	<ul style="list-style-type: none"> Radius of curvature, $R = 2f = 2 \times (-7.5) = 15\text{cm}$ 	1
	Section D	
34	<ul style="list-style-type: none"> Hydrochloric acid (HCl) is a stronger acid than acetic acid (CH₃COOH) because it releases H⁺ ions in aqueous solution more easily and completely, whereas acetic acid ionizes partially. is because acid ionizes in aqueous solution and these ions conduct electricity. (a) 'A' is most acidic and 'C' is most basic. C>B>D>A pH paper will become blue in 'C' and green in 'D'. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> A is copper sulphate pentahydrate, CuSO₄.5H₂O. B is water, H₂O. C is anhydrous copper sulphate, CuSO₄ D is water, H₂O On Heating: $\text{CuSO}_4 \cdot 5\text{H}_2\text{O} \rightarrow \text{CuSO}_4 + 5\text{H}_2\text{O}$ On adding few drops of water: $\text{CuSO}_4 + 5\text{H}_2\text{O} \rightarrow \text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ washing soda (Na₂CO₃ · 10H₂O) or Gypsum CaSO₄ · 2H₂O.(any one) 	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1</p> <p>1</p> <p>1</p>
35	<ul style="list-style-type: none"> Seminal vesicles produce seminal plasma which is in the form of fluid makes the transport of sperms smooth. ii Prostate gland secretes prostatic fluid that keeps the sperms alive and helps them to swim vigorously. The testes have two functions – to produce sperm and to produce hormones, particularly testosterone. Barrier method or mechanical method (Condom/Diaphragm): Prevents the meeting of sperms and ova. Chemical method (Oral pills): Changes the hormonal balance of the female partner so that the eggs are not released. Surgical method: The vas deferens in males is blocked (vasectomy) or the fallopian tube (oviduct) in females (tubectomy) is blocked to prevent the transfer of sperms or egg and hence no fertilisation takes place 	<p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1</p> <p>1</p> <p>1</p>
36	<ul style="list-style-type: none"> (i) Total resistance of two resistors that are connected in parallel is $1/R' = 1/3 + 1/6$ $1/R' = 3/6$ $R' = 2\text{ohms}$ Total resistance of the circuit = 2+4ohms=6ohms (ii) Total current flowing through the circuit = V / total resistance $I = 12/6 = 2\text{amps}$ (iii) Potential difference across R₁ 	<p>1/2</p> <p>1/2</p> <p>1</p> <p>1</p>

