## MARKING SCHEME

## SAMPLE PAPER 2- 2020-21 CLASS X (SCIENCE)

Qn.No	VALUE POINTS	MARKS	Tot al
1	HCl	1	1
	OR		
	Decomposition reaction.		
2	P and R	$\frac{1}{2} + \frac{1}{2}$	1
3	(c) Potassium and magnesium	1	1
4	$\rho_1 = \rho_2$	1	1
	$\therefore (R_1.A_1)/L_1 = (R_2.A_2)/L_2$		
	$\therefore (R.A)/1 = (0.5R \times A_2)/2.51$		
	$\underline{\mathbf{A}_2 = 5\mathbf{A}}$		
5	There is <b>no atmosphere</b> in space and hence light does not scatter	1	1
6	-0.5D	1	1
	OR		
	A- Refractive index 1.33		
7	A P <sub>2</sub> Screen	1	1
	White		
	White light R light		
	V V		
	P <sub>1</sub> A Recombination of the spectrum of white light		
8		1	1
	P F C		
9	5 Ω 	1	1
	10 Ω		
	+   -		
	GV		
	OR		
	$8\Omega$		
10	Anal sphincter regulates removal of undigested waste through anus.	1/2	1
		1/2	
11	Testes are located outside abdominal cavity as sperms need lower		1
	temperature for development.	1/2	
	OR	1/2	
	Fertilisation in humans takes place in the oviduct in the female body	1,	
	so it is said to be internal1	1/2	
		1/	
12	Fig. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	1/2	1
12	Each step or level in a food chain is called a trophic level.	1/2	1
	OR	1/2	

	Interconnected food cha	ins are called food web.		
1.2	m :		1	1
13	To improve the chances		1	1
14	Assertion is false but the	e reason is true.	1	1
15	A -Assertion is true and	reason is the correct explanation	1	1
	OR	•		
	D-Assertion is false but	R is true.		
16	C- Assertion is true but	reason is false	1	1
17	i. C -Nephron		1	4
	ii. b-Plasma pro	oteins	1	
	iii. C -Nitrogeno		1	
	iv. B- reabsorpt		1	
	v. C-Vein	(any four)		
	v. e vem	(ally lour)	1	
18	(i) (c) Universa	indicator solution	1	4
	(ii) (c) more acid		1	
	$(iii) \qquad (d) B < C < A$		1	
	(iv) (c) A low pH		1 1	
	(v) Lemon juice	(any four)	1	
19	i. a) virtual and	l magnified	1	4
	ii. c) beyond 2f		1	
	<b>iii.</b> c) At infinity	,	1	
	<b>iv.</b> c) 10 cm		1 1	
		lens has 4 dioptre power having a focal length	1	
	0.25 m			
20	i. a) Resistance		1	4
20	,		1	
	ii. d) $400 \Omega$ iii. c) Resistance w	vill become half	1	
	iv. c) ohm	on become nan		
	, , , , , , , , , , , , , , , , , , ,	d, Area doubled	1	
	(any four)	a, Thea doubled	1	
	(unj 10u1)	Section B	1	
	SHORT ANSWER OF	JESTIONS OF 2 MARKS		
	MORI ARWER QU	MOTOTO OF A MINIST		
21	BUDDING	FISSION	1x2(any	2
	i)Offspring arises as	i)Offsprings are	one	
	outgrowth on	formed by division of	difference	
	parental body.	the parental cell.	)	
	ii)Parent survives	ii)Parental cell does		
	after budding.	not exist after fission.		
	OR			
	_	n any plane as it does not have a definite shape		
		vides through a specific plane as it has a		
	definite shape			
			2	
			<u> </u>	

22	a)Salivary amylase helps in digestion of carbohydrates in buccal	1	2
	cavity/mouth		
	b)Lipase-Fat digesting enzyme	1	
23	(a) Chlorine has largest atomic radius because it has 3 shells, 2, 8, 7	1/2 + 1/2	2
	Fluorine is most reactive as it is smallest in size and can gain electrons easily.	1/2 + 1/2	
24	$Al_2O_3 + 6HCl \rightarrow 2AlCl_3 + 3H_2O$	1	2
	$Al_2O_3 + 2NaOH \rightarrow 2NaAlO_2 + H_2O$ Sodium aluminate OR	1	
	Na <sup>.</sup> :Čl:	1/2	
	They form bond by transfer of an electron. Na loses one electron to form Na+ ion whereas Cl gains one electron to form Cl- ion.	1/2	
	The bond formed is ionic or electrovalent bond. $Na \rightarrow Na^+ + e^-$ 2,8,1 2,8 (Sodium cation)	1/2	
	Cl $+e^- \rightarrow Cl^-$ 2,8,7 2,8,8 (Chloride anion)	1/2	
	$ \stackrel{\times}{\text{Na}} + \stackrel{\times}{\overset{\times}{\overset{\times}{\text{Cl}}}} \stackrel{\times}{\overset{\times}{\text{Cl}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}{\text{Cl}}} \stackrel{\times}{\overset{\times}{\text{Cl}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}{\text{Cl}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}{\overset{\times}} \stackrel{\times}} \stackrel{\times} \stackrel{\times}} \stackrel{\times} \stackrel{\times}} \stackrel{\times} \times$		
25	In the attached figure, it shows the combination of resistors $R_1$ , $R_2$ , $R_3$ and $R_4$ . Here, $R_3$ and $R_4$ are in parallel. Let		2
	their equivalent is given by the formula as:		
	$\frac{1}{R} = \frac{1}{R_3} + \frac{1}{R_4}$		
	$R = \frac{R_3 R_4}{R_3 + R_4} \dots (1)$		
	Now, resistors $R_1, R_2$ and $R$ are in series. Their equivalent		
	resistance is given by the formula:	1	
	$R_{eq} = R_1 + R_2 + \frac{R_3 R_4}{R_3 + R_4}$	1	
	$=5+2+\frac{3\times 6}{3+6}$	1/ <sub>2</sub> 1/ <sub>2</sub>	
		72	
26	i. The object should be placed between 0 to 20cm from the	1	2
	pole of the mirror.  ii. The image will be bigger than the object	1	
	SHORT ANSWER QUESTIONS OF 3 MARKS		

27	Three methods of contraception are: -Mechanical method-use any device to prevent entry of sperm into female bodyChemical method-Use of hormonal preparations that can prevent ovulationSurgical method-A portion of sperm duct or oviduct is surgically removed .	1x3	3
	OR  i)  POLLINATION FERTILISATION  It is the transfer of pollen grains to male and female stigma of a flower. gametes to form the	1x2	
	ii)a-Petals b)Sepals	1/2+1/2=1	
28	i)Formation of ozone occurs as follows: $O_{2(g)} \xrightarrow{UV} O_{(g)} + O_{(g)}$ $O_{2(g)} + O_{(g)} \xleftarrow{UV} O_{3(g)}$	1x2	3
	ii)Any two ways of disposal-recycling /reusing	1/2+1/2=1	
29	<ul> <li>i)Respiratory rate in aquatic organisms is higher than in terrestrial organisms. As they have to take oxygen dissolved in water and this is less compared to atmospheric oxygen.</li> <li>ii)Capillaries are the thinnest blood vessels as they are the blood vessels present in cells and help in exchange of materials at cellular level.</li> </ul>	1	3
30	<ul><li>iii)Trachea does not collapse when there is no air in it as it has rings of cartilage around it.</li><li>(i) In displacement reaction, more reactive metal can displace</li></ul>	1 1/2	
- 50	less reactive metal from its salt solution  Eg:- Fe + CuSO <sub>4</sub> → FeSO <sub>4</sub> + Cu(Any one example)  In double displacement reactions, two reactants exchange their ions to form two new compounds.  Eg:- NaOH + HCl → NaCl +H <sub>2</sub> O(any one example)	1/ <sub>2</sub> 1/ <sub>2</sub> 1/ <sub>2</sub> 1/ <sub>2</sub>	
31	(ii) Sunlight  Q-2, 8, 3 Valency-3  R- 2, 8, 5 Valency-3  Molecular formula-PS	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3
32	(a) Cu (b) Fe $3\text{Fe} + 4\text{H}_2\text{O (g)} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$ (c) Mn $Mn + 2\text{HNO}_3 \rightarrow Mn(\text{NO}_3)_2 + \text{H}_2$	1 1/2 1/2 1/2 1/2	3

Scattering of light is the phenomenon by which a beam of light is redirected in many different directions when it interacts with a particle of matter.  i. During Sunrise, the sun's rays have to pass through a larger distance in the atmosphere. Most of the blue and other shorter wavelengths are removed by scattering and only red light of longer wavelength enters our eye. Thus, at sunrise sky appears reddish.  ii. Fine size particles in the atmosphere is more effective in scattering colours of shorter wavelengths.  Long answer type 5 marks  Long answer type 5 marks  34  (i) HCl completely ionise in aqueous solution whereas acetic acid gives orange colour.  HCl gives dark red colour with pH paper whereas acetic acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-(iii) Sodium hydrogen carbonate  NH₁ + CO₂ +H₂ O +NaCl → NaHCO₃ + NH₂Cl  It is used as an antacid(Any one use)  OR  CaCO₃ + 2HCl → CaCl₂ + H₂O + CO₂  Lime water will turn milky.  Ca(OH)₂ + CO₂ → CaCO₃ + H₂O  If excess CO₂ is passed, the solution will become clear due to the formation of Ca(HCO₃)₂ which is soluble in water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  The summand of the complete is the solution of the complete is the solution water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂ which is soluble in water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  The summand of the solution water is the solution water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  The summand of the solution water is the solution water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  The summand of the solution water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  The summand of the solution water.  Solution is in a queous solution water.  The solution water is the solution water is the solution water.  The solution water is				
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red light of longer wavelength enters our eye. Thus, at sumrise sky appears reddish.  ii. Fine size particles in the atmosphere is more effective in scattering colours of shorter wavelengths.  Long answer type 5 marks  34 (i) HCl completely ionise in aqueous solution whereas acetic acid partially ionise in aqueous solution.  HCl gives dark red colour with pH paper whereas acetic acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-  (iii) Sodium hydrogen carbonate  NH3 + CO2 + H2O + NaCl → NaHCO3 + NH4Cl  It is used as an antacid(Any one use)  OR  CaCO3 + 2HCl → CaCl2 + H2O + CO2  Lime water will turn milky.  Ca(OH)2 + CO2 → CaCO3 + H2O  If excess CO2 is passed, the solution will become clear due to the formation of Ca(HCO3)2 which is soluble in water.  CaCO3 + H2O+ CO2 → Ca(O3)2  35  10  Chycologistic Prytuvate → 2 Lactic acid + 2ATP  Introduction of CaCO3 + CaCO		i. During Sunrise, the sun's rays have to pass through a larger	1	
ii. Fine size particles in the atmosphere is more effective in scattering colours of shorter wavelengths.  Long answer type 5 marks  34  (i) HCl completely ionise in aqueous solution whereas acetic acid partially ionise in aqueous solution. HCl gives dark red colour with pH paper whereas acetic acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-(iii) Sodium hydrogen carbonate  NH3 + CO₂ +H₂O +NaCl → NaHCO₃ + NH₄Cl  It is used as an antacid(Any one use)  OR  CaCO₃ + 2HCl → CaCl₂ + H₂O + CO₂  Lime water will turn milky.  Ca(OH)₂ + CO₂ → CaCO₃ + H₂O  If excess CO₂ is passed, the solution will become clear due to the formation of Ca(HCO₃)₂ which is soluble in water.  CaCO₃ + H₂O+ CO₂ → Ca(HCO₃)₂  35  Chrothytis Pyruvate → 2 Lactic acid + 2ATP  Colucose → Pyruvate → 2 Lac		shorter wavelengths are removed by scattering and only red light of longer wavelength enters our eye. Thus, at		
(i) HCl completely ionise in aqueous solution whereas acetic acid partially ionise in aqueous solution.  HCl gives dark red colour with pH paper whereas acetic acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-  (iii) Sodium hydrogen carbonate  NH <sub>3</sub> + CO <sub>2</sub> + H <sub>2</sub> O + NaCl → NaHCO <sub>3</sub> + NH <sub>4</sub> Cl  It is used as an antacid(Any one use)  OR  CaCO <sub>3</sub> + 2HCl → CaCl <sub>2</sub> + H <sub>2</sub> O + CO <sub>2</sub> Lime water will turn milky.  Ca(OH) <sub>2</sub> + CO <sub>2</sub> → CaCO <sub>3</sub> + H <sub>2</sub> O  If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water.  CaCO <sub>3</sub> + H <sub>2</sub> O + CO <sub>2</sub> → Ca(HCO <sub>3</sub> ) <sub>2</sub> 1  35   Carcoptyline  C		ii. Fine size particles in the atmosphere is more effective in	1	
acid partially ionise in aqueous solution.  HCl gives dark red colour with pH paper whereas acetic acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-  (iii) Sodium hydrogen carbonate  NH₃ + CO₂ +H₂O +NaCl → NaHCO₃ + NH₄Cl  It is used as an antacid(Any one use)  OR  CaCO₃ + 2HCl → CaCl₂ + H₂O + CO₂  Lime water will turn milky.  Ca(OH)₂ + CO₂ → CaCO₃ + H₂O  If excess CO₂ is passed, the solution will become clear due to the formation of Ca(HCO₃)₂ which is soluble in water.  CaCO₃ + H₂O + CO₂ → Ca(HCO₃)₂  1  35  Carcoyolysis  Pyrtuvate  Pyrtuv		Long answer type 5 marks		
acid gives orange colour.  (ii) Dry HCl gas does not form ions but HCl gives H+ and Cl-  (iii) Sodium hydrogen carbonate NH <sub>3</sub> + CO <sub>2</sub> + H <sub>2</sub> O + NaCl → NaHCO <sub>3</sub> + NH <sub>4</sub> Cl It is used as an antacid(Any one use)  OR CaCO <sub>3</sub> + 2HCl → CaCl <sub>2</sub> + H <sub>2</sub> O + CO <sub>2</sub> Lime water will turn milky. Ca(OH) <sub>2</sub> + CO <sub>2</sub> → CaCO <sub>3</sub> + H <sub>2</sub> O If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water.  CaCO <sub>3</sub> + H <sub>2</sub> O + CO <sub>2</sub> → Ca(HCO <sub>3</sub> ) <sub>2</sub> 1  35  1/2 x6  36  1/2 x3 +1/2  36	34	acid partially ionise in aqueous solution.	1 1	5
(iii) Sodium hydrogen carbonate NH <sub>3</sub> + CO <sub>2</sub> +H <sub>2</sub> O +NaCl → NaHCO <sub>3</sub> + NH <sub>4</sub> Cl It is used as an antacid(Any one use)  OR CaCO <sub>3</sub> + 2HCl → CaCl <sub>2</sub> + H <sub>2</sub> O + CO <sub>2</sub> Lime water will turn milky. Ca(OH) <sub>2</sub> + CO <sub>2</sub> → CaCO <sub>3</sub> + H <sub>2</sub> O If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water.  CaCO <sub>3</sub> + H <sub>2</sub> O+ CO <sub>2</sub> → Ca(HCO <sub>3</sub> ) <sub>2</sub> 1  35  1/2x6  36  1/2x6  36  1/2 x 3 +1/2  36		acid gives orange colour.	1	
It is used as an antacid(Any one use)  OR $CaCO_3 + 2HCI \rightarrow CaCl_2 + H_2O + CO_2$ Lime water will turn milky. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ If excess $CO_2$ is passed, the solution will become clear due to the formation of $Ca(HCO_3)_2$ which is soluble in water. $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ 1  35  Olycohysis  In a absence of Oxygen  Outside tissue)  Pyrtuyate  Pyrtuyate  Purpose  Purpose  Phase  Phas		(iii) Sodium hydrogen carbonate	1	
OR $CaCO_3 + 2HCI \rightarrow CaCI_2 + H_2O + CO_2$ Lime water will turn milky. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of $Ca(HCO_3)_2$ which is soluble in water. $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ 1  35 $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ 1  1  1  1/2x6  1  1/2x6  1  1/2x6  1  1/2 x3  1/2 x3  1/2 x3  1/2 x3  1/2 x3  1/2 x3				
$CaCO_3 + 2HCI \rightarrow CaCI_2 + H_2O + CO_2$ Lime water will turn milky. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of $Ca(HCO_3)_2$ which is soluble in water. $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ $1$ $Chrophreis In a absence of Oxygen Glucose \rightarrow Pyruvate \rightarrow 2 Lactic acid + 2ATP Energy Chrophreis In cytoplessin (Muscle tissus) Energy 1/2 \times 3 + 1/2 1/2 \times 3 + 1/2 1/2 + 1/2 1/2 + 1/2 1/2 + 1/2 1/2 + 1/2 1/2 + 1/2 1/2 + 1/2$		, , ,		
Lime water will turn milky. $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ If excess $CO_2$ is passed, the solution will become clear due to the formation of $Ca(HCO_3)_2$ which is soluble in water. $CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2$ 1  35  Glycolysis In a absence of Oxygen Glucose Pyruvate $\longrightarrow$ 2 Lactic acid + 2ATP Energy  In cytoplasm (Muscle tissus) Energy  1/2 x3  +1/2  36  11/2+11/2  5				
If excess CO <sub>2</sub> is passed, the solution will become clear due to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water.  CaCO <sub>3</sub> + H <sub>2</sub> O+ CO <sub>2</sub> $\rightarrow$ Ca(HCO <sub>3</sub> ) <sub>2</sub> 1  35  Clycolysis In a absence of Oxygen Clucose $\rightarrow$ Pyruvate $\rightarrow$ 2 Lactic acid + 2ATP Energy  In cytoplasm (Muscle tissue) Energy  1/2 x3 +1/2  36  11/2+11/2  5		Lime water will turn milky.	1	
to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water. $ \begin{array}{c} V_2 + V_2 \\ CaCO_3 + H_2O + CO_2 \rightarrow Ca(HCO_3)_2 \end{array} $ $ \begin{array}{c} 1 \\ \hline 1 \\ \hline 1 \\ \hline 2 \\ \hline 1 \\ \hline 2 \\ \hline 1 \\ \hline 1 \\ \hline 2 \\ \hline 2 \\ \hline 1 \\ \hline 2 \\ \hline 2 \\ \hline 2 \\ \hline 2 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ 3 \\ \hline 3 \\ $			1	
Glucose Pyruvate 2 Lactic acid + 2ATP In cytoplasm (Muscle tissue) Energy  Next  Ribs  Branchus  Lung  1/2 x3  +1/2  1/2+11/2  5		to the formation of Ca(HCO <sub>3</sub> ) <sub>2</sub> which is soluble in water.	$\frac{1}{1/2} + \frac{1}{1/2}$	
Glucose Pyruvate 2 Lactic acid + 2ATP In cytoplasm (Muscle tissue) Energy  Next  Ribs  Branchus  Lung  1/2 x3  +1/2  1/2+11/2  5			1	
Glucose — Pyruvate — 2 Lactic acid + 2ATP In cytoplasm (Muscle tissue)  Pharyny  Laryny  Laryny  Laryny  Laryny  Lung  1/2 x3 +1/2  11/2+11/2  5	35		1/2x6	5
Pharynx Larynx Lung  Pharynx Lung  1/2 x3 +1/2  11/2+11/2  5		Glucose ——→ Pyruvate ——→ 2 Lactic acid + 2ATP		
36 11/2+11/2 5		Pherynx Larynx Trachea  Bronchus  Lung	1/2 x 3	
B C B P B		Alveolus Diaphreg m	+1/2	
Real Virtual	36	B C B P B N P B	1½+1½	5
		Real Virtual		

f =+ 10 cr	n		
u = -10  cm	n		
=> 1/f = (	1/v)+(1/u)		
=> 1/10 =	1/v+ 1/-10	1/2	
=>1/v=(	1/+10) - (1/-10)	1/2	
=>1/v=(	1/10)+(1/10)		
=>1/v=2	/10		
=> v = 10	/2		
=> v = +5	cm		
OR			
i.	a) The power of a lens is defined as the reciprocal of the	1	
	focal length. b) Light rays that are parallel to the principal axis of a		
	concave mirror converge at a specific point on its principal		
	axis after reflecting from the mirror. This point is known	1	
ii. a. 1/f=1	as the principal focus of the concave mirror.		
b. 1/f=1		1/2+1/2	
iii. Given:		/2+/2	
u=-10cm			
f = 15 n	i		
Now the o	distance of the image formed:		
1/f=1/v- 1/	u		
1/15=1/v-	-1/10		
v=-30cm	negative sign denotes that the image is formed on the same		
side of the	e object and is virtual erect and magnified		
	image object f	2	

Prepared by : The Department of Science 2020 -21 Checked by : HOD – SCIENCE