परीक्षक, निम्न तालिका में प्रत्येक प्रश्न तथा उसके खण्डों के प्राप्तांकों का विवरण यथास्थान भरें

Rep

प्रश्न संख्या	क	ख	ग	घ	ङ	च	छ	ज	झ	ञ	योग
01											
02											
03											
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27	32										
28											
29											
30											

DHE 24/0183

a. (ii)   7

b. (i) $CuO(s)$

c (iii)   Antacid.

d (i)   Transport of water.

e (ii)   Gallbladder.

f (iv)   Electric current.

g (iii)   50 cm

h (ii)   Grass, Goat, Lion.

Name of non - metal :- Bromine

Symbol :- Br

QUES - 3

Hydrochloric gas is an acid and for showing its acidic behaviour it must be in its aquous (aq) solution. Scien Since both gas and litmus paper are dry that's why there is no change in the colour of litmus paper.

QUES - 4

Given,

$R = 20cm$

$\therefore \quad R = 2f$

$\therefore \quad f = \dfrac{R}{2}$
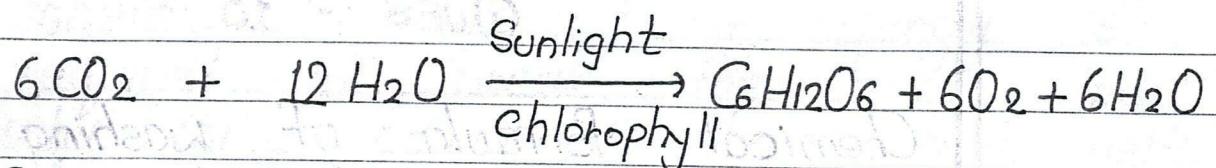
$\qquad = \dfrac{20}{2}$

$\qquad = 10\ cm$

$\therefore$ Its focal length will be $\boxed{10cm}$

Concave mirror gives an erect and enlarged

QUES - '6'

$$6CO_2 + 12H_2O \xrightarrow[\text{chlorophyll}]{\text{Sunlight}} C_6H_{12}O_6 + 6O_2 + 6H_2O$$

Carbon dioxide + Water $\longrightarrow$ Glucose + Oxygen + Water

QUES - '7'

Tungston is a metal having high melting point and appears shiny when electric current is passed through it that's why tungston almost used as a filament of electric bulb.

QUES - '8'

Voltmeter is connected in parallel in the electric circuit to measure the potential difference between two points.

Chlorofloro carbon (CFC) is the chemical which is mainly responsible for the depletion of ozone layer.

QUES - '10'

Chemical formula of washing soda - $Na_2CO_3 \cdot 10H_2O$ (Sodium Carbonate Decahydrate).

Two uses of washing soda :-

1. It is used to remove permanent hardness of water.

2. It is also used in ~~ehen~~ cement industry.

3. Used for making borax.

QUES -' 11'

a. When non - metals combine with oxygen they form acidic oxides.

Carbon + Oxygen ⟶ Carbon dioxide.

b. Ionic compounds are formed by the attraction of two different ions (cation (+) & anion (-)) and a considerable amount of energy is required to break the force. That's why ionic compounds have high melting point.

## QUES - '12'

Given,
P pH value of solution A = 6
pH value of solution B = 8

Solution A has more hydrogen ion concentration.

Solution A is acidic.
Solution B is basic.

[P.T.O

S.No	Basis Of Difference	BINARY FISSION	MULTIPLE FISSION
1.	Process	In this type of fission, mother cell divides its nucleus and cytoplasm and forms two daughter cells	In this type of fission, mother cell divides many times and share the mnucleous
2.	Done by which animals	Amoeba, Paramecium	Plasmodium.
3.	Diagram.		
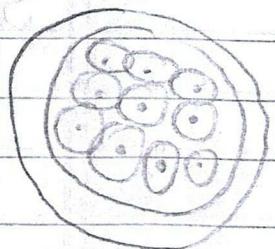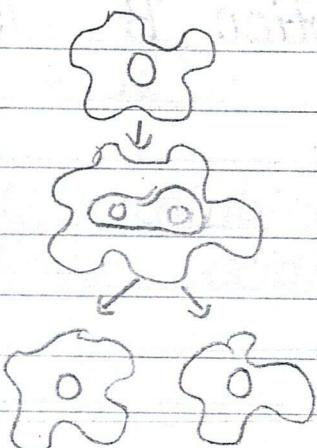
1. SELF - POLLINATION -
2. CROSS - POLLINATION -

(1). SELF POLLINATION :- In this type of pollit pollination , pollen grains from anther of flower It reaches to the stigma of the same flower.

(i) It is done by bisexual flowers.

(ii) Examples:- Pea flower, tulip , rose etc

(2) Cross- pollination :- In this type of pollination pto pollen grains a from anther of flower reaches to the stigma of anothe flower.

(i) The condition here is that flower must be of same species.
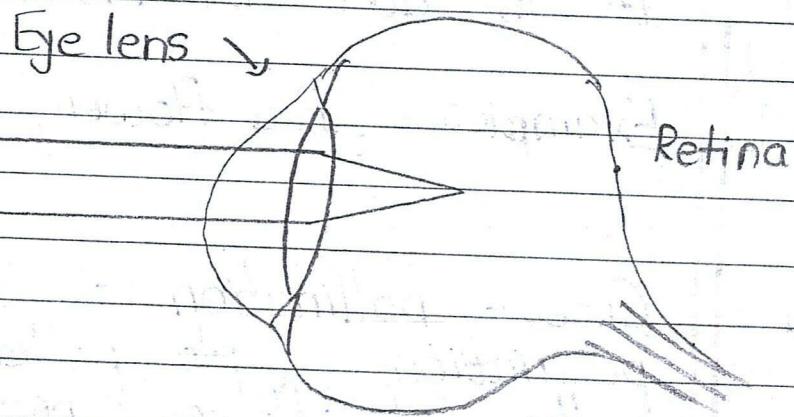
(ii) This is done by unisexual flowers.

(iii) For Example:- Cucumber, pumpkin etc.
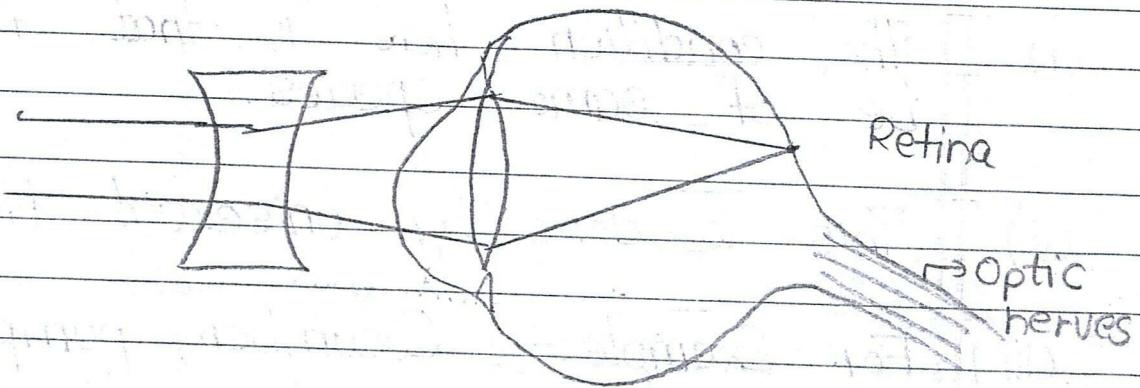
C.P.T.O

Myopia also known as (near-sightness) is the situation in which person is able to see near objects but not able to see far objects clearly.

Concave lens is used for correcting it.

Eye lens ↘

Retina

Myopic eye

Retina

→ Optic herves

Corrected eye
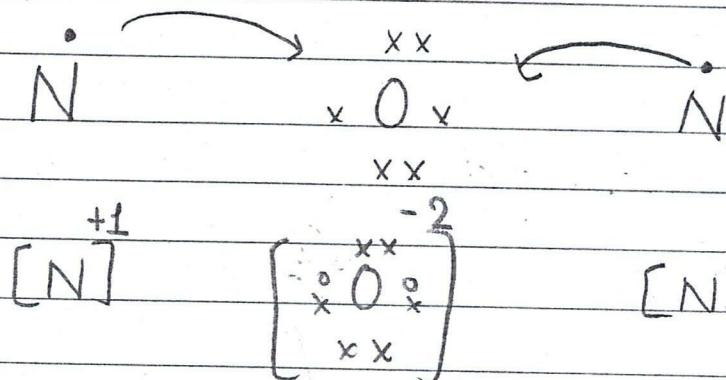
a.(i) Na_2O

Na - • ,   O → X
Electric configuration :-
Na → 2, 8, 1
O → 2, 6

$[N]^{+1}$ $\begin{bmatrix} \ddot{O} \end{bmatrix}^{-2}$ $[N]^{+1}$
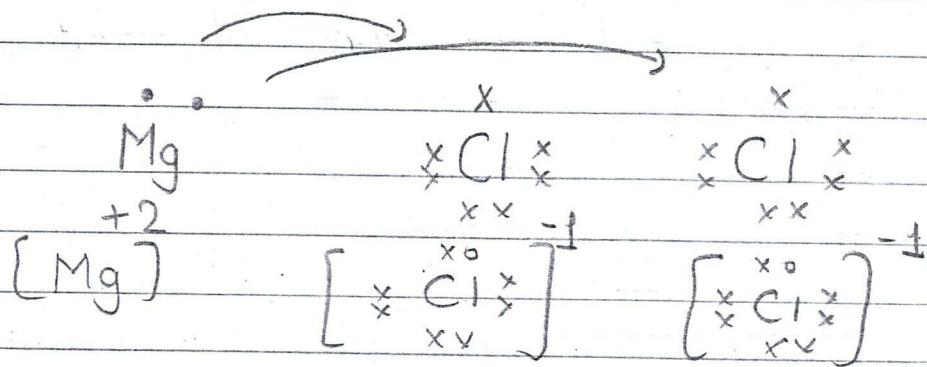
(ii) $MgCl_2$
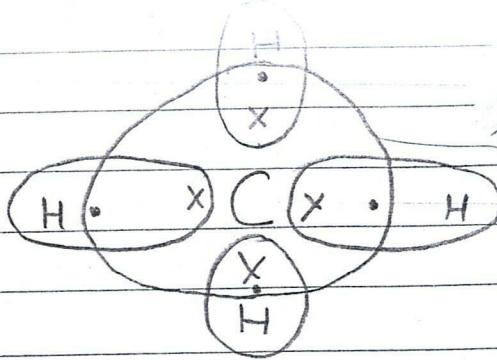
Mg - • , Cl_2 → X

Electronic   configuration :-
Mg → 2, 8, 2
Cl → 2, 8, 7

$[Mg]^{+2}$ $\begin{bmatrix} Cl \end{bmatrix}^{-1}$ $\begin{bmatrix} Cl \end{bmatrix}^{-1}$

QUES - 17

a.(i) Propanoic acid.

(ii) Propanone.

b. $Zn + FeSO_4 \rightarrow ZnSO_4 + Fe$

Zinc + Iron (II) $\rightarrow$ Zinc + Iron
          sulphate   Sulphate

QUES - 18

(a) Site of digestion of fats in our body :-

Fats are digested in our body at two places.

C.P.T.O

※ Process of digestion of fats :-

(i) In our stomach fat is digested with the help of Gastric juices.

(ii) Our small intestine is the site of total digestion of fats.

(i) At first, it recives the secreation of Liver, bile juice.

– Bile juice do the emulsification of fats which means breaks down large globules into small globules.

(ii) Next, it recives the secretion of pancreas.

– It releases lipase, which turn fats into fatty acid and glycerol

– Intestinal juice also acts upon fats.
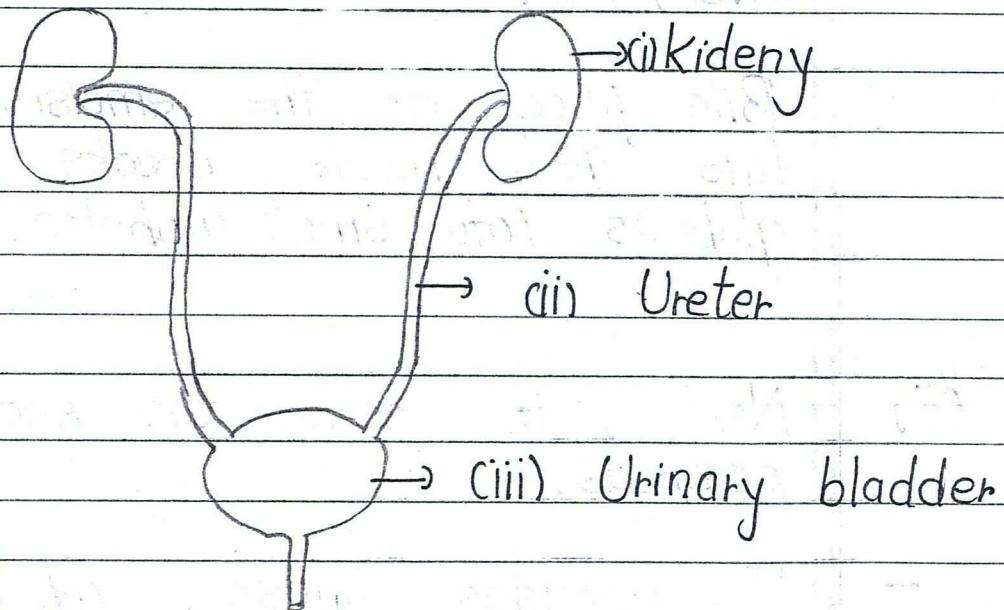
CPTO

propagation.

(i)	Rose	(Cutting)
(ii)	Strawberry	(Layering)

QUES - '19'

(i) kideny

(ii) Ureter

(iii) Urinary bladder

QUES - '20'

(a) Stars twinkle because of atmospheric refraction. In this process stars seems to twinke. Since stars are far from and they are like point sources of light. In our atmospher there

(b) The colour of a clear sky appears blue becaus of scattering of light. In this small molecules in atmosphere scatter blue light.

(c) Power of accomodation of eye $\neq$ is the ability of eye which enable it to adjust itself for seeing far and near objects.

— Our eye do this with the help of ciliary muscles.

QUES - '21'

(a) Ability of doing work is known as energy and the rate at which energy is consumed is known as power.

$$P = VI$$

The S.I unit of electric power is 'Watt' (W).

each other because if they do it then at the place of intersection it will show two directions which is not possible.

QUES '22'

Given,

$V = 5V$ $t = 1h$
$I = 500 mA$ $= 60 min$
∴ $1 mA = 10^{-3} A$ $= 3600 sec$
∴ $500 mA$
$= \dfrac{500}{1000}$
$= 0.5A$

(i)   Resistance of bulb :-

$V = IR$
$R = \dfrac{V}{I}$

$= \dfrac{5}{0.5}$

$= \dfrac{50}{5}$

$= \boxed{10 \: \Omega}$

$$P = VI$$
$$= 5 \times 0.5$$
$$= \boxed{2.5 \text{ Watt}}$$
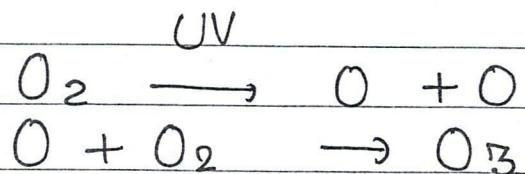
(iii)
$$E = VIt$$
$$= 5 \times 0.5 \times 3600$$
$$= 2.5 \times 3600$$
$$= \underline{9000 \text{ Joules}}$$
$$= \boxed{9 \text{ kJ}}$$

QUES - '23'

(a) Ozone layer is a protective layer around our atmosphere which protects us from the harmful Ultra Voilet radiation (UV) rays from sun.

It is formed by three oxygen molecules.

$$O_2 \xrightarrow{\text{UV}} O + O$$
$$O + O_2 \longrightarrow O_3$$

Protective meavsures done by Ozone layer.

नोट—केन्द्र के नाम की मुहर उत्तरपुस्तिका के किसी भी भाग पर न लगाएं।

नोट—परीक्षार्थी उत्तरपुस्तिका के किसी भी भाग में अपना नाम व केन्द्र का नाम न लिखें।

परीक्षार्थी द्वारा भरा जाय—

अनुक्रमांक (अंकों में)—

अनुक्रमांक (शब्दों में)

विषय ...... *Science*

प्रश्नपत्र संकेतांक— 233(HIJ)

कक्ष निरीक्षक द्वारा भरा जाय—

केन्द्र संख्या— | 1 | 9 | 7 | 0 |

परीक्षा कक्ष संख्या— | 0 | 2 |

(उपरोक्त सभी प्रविष्टियों की जाँच मेरे द्वारा सावधानीपूर्वक कर ली गई है।)

कक्ष निरीक्षक का नाम ...... रजनी

दिनांक— 01/03/2024
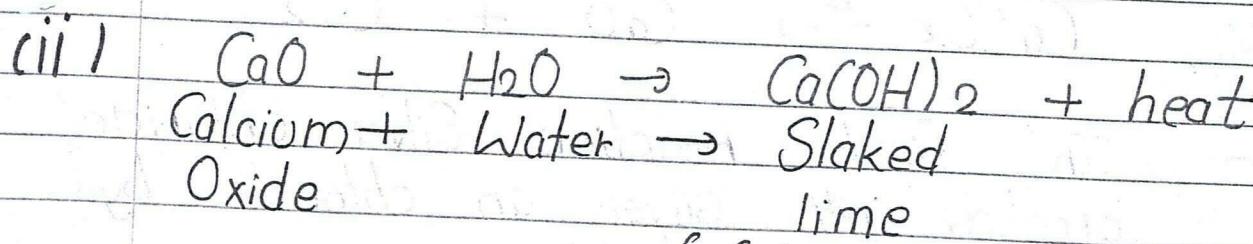
हस्ताक्षर कक्ष निरीक्षक— Rajni

परीक्षक के हस्ताक्षर व संख्या 2410194

2. It also saves us from mutations.

- It is toxic in nature.

(b) Biological Magnification is the process in which harmful substances like DDT pesticides, fertilizers get accumulated in the tropic level.

- Scince it is not digested it passes from one level to another.

- It causes very much harm to the top level consumers.

Ques '24'

(i) Calcium Oxide (CaO)
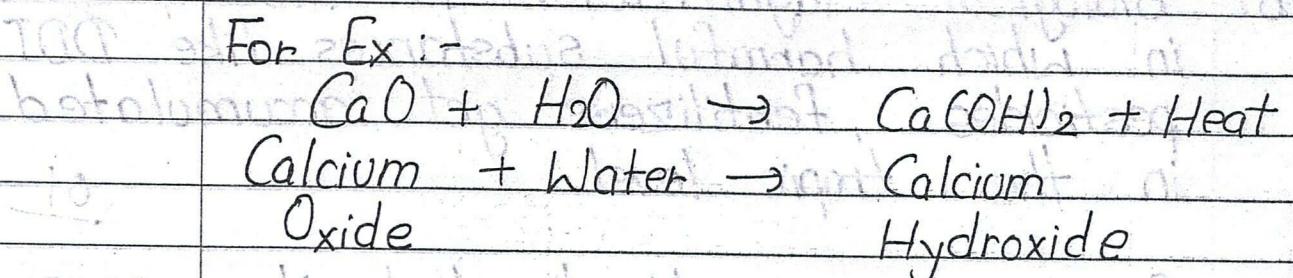
(ii) $CaO + H_2O \rightarrow Ca(OH)_2 + heat$
Calcium + Water $\rightarrow$ Slaked
Oxide   lime
$$\left[\begin{array}{c} Calcium \\ Hydroxide \end{array} \right]$$
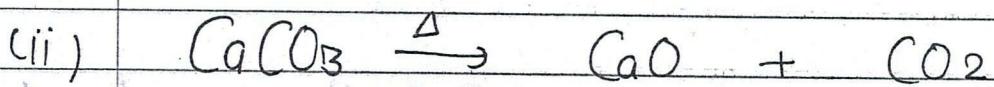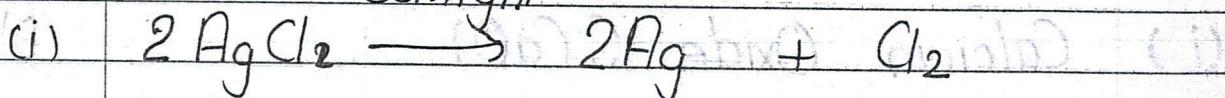
Generally combination reaction are exothermic.

All combustion reactions are also exothermic

For Ex :-

$$CaO + H_2O \longrightarrow Ca(OH)_2 + Heat$$

Calcium + Water $\longrightarrow$ Calcium
Oxide   Hydroxide

ENDOTHERMIC REACTION :- In endothermic reaction the energy is absorbed in the form of heat, light and electricity

For Ex :-

(i) $$2AgCl_2 \xrightarrow{\text{Sunlight}} 2Ag + Cl_2$$

(ii) $$CaCO_3 \xrightarrow{\Delta} CaO + CO_2$$

— In first reaction Silver chloride breakes into Silver an chloride by absorbing sunlight.

— In second reaction CaC Calcium Carbonate breaks down into

QUES 25

(a) (i) Minerals :-

Minerals are the substances elements or compounds which occur naturally in the earth surface.

(ii) Ore :-
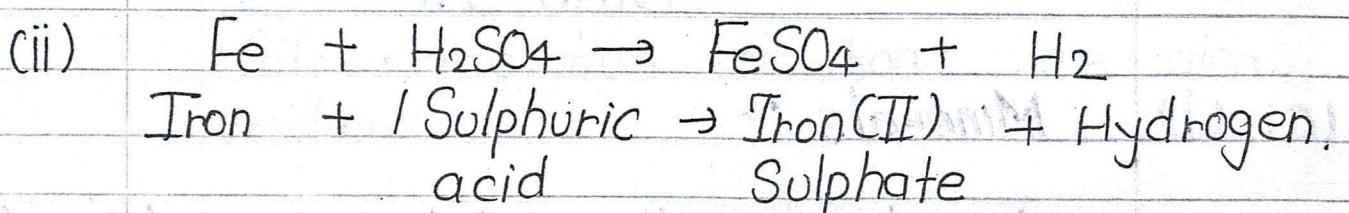
Ore are the minerals from which a single type of metal can be profitably extracted.

Ex :- Copper pyrite, Zinc blende.

- All ores are minerals but not all minerals are ores.

(b) Two metals which can displace hydrogen from acid.

Sodium (Na), Iron (Fe)

(ii) $Fe + H_2SO_4 \rightarrow FeSO_4 + H_2$

Iron + / Sulphuric → Iron(II) + Hydrogen.
acid   Sulphate

\-   Two metals which can not do this-

Silver (Ag) , Gold (Au)

QUES - '26'

a) Two sexually transmitted diseases are.

(i) AIDS (Aquired Immuno Deficency Syndrome)

(ii) Sphyllis , Gonorrohea.

(b) Role of acid in our stomach:-

(i) kills maximum germs present in food

(ii) Make food acidic so that pepsin

(c) Thyroxin hormone is secreted from thyroid gland.

(d) Insulin is the hormone which is responsible for storing glucose in our body. Since patients of diabetes have increase in glucose level that's why they are treated by giving injection of insulin

QUES '- 27'

(a) Methods used by plants to get rid of excretory products.

(i) They release oxygen from stomata which is also a excretory product for them formed during photosynthesis.

(ii) They also accumulate excretory substance in leaves which later fall off.

(iii) They also secrete some amount of excretory product in soil.

(V) Excretory product also accumulate in the form of gums & resins.

(b) When Mendel did the Dihybrid cross between two pea plants.

- One is pure Round and Yellow (RRYY)
- Other is Wrinkled and Green. (rryy)

$$RRYY \quad X \quad rryy$$

$$\downarrow$$

F1   Rr Yy

When he did selfing between the hybrid they found that two of new plants are formed which have combination of both mother and father.

$$Rr Yy \quad X \quad Rr Yy$$

Round Yellow	Round green	Wrinkled yellow	Wrinkled Green
9	3	3	1

(a) Enzymes are the catalyst which breaks or join two compounds.
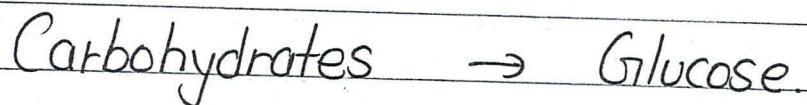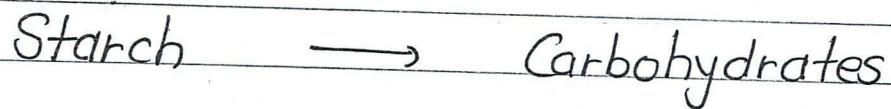
Two digestive enzymes are:-

1. Ptylin   2. Pepsin.

1. Function of Ptylin.
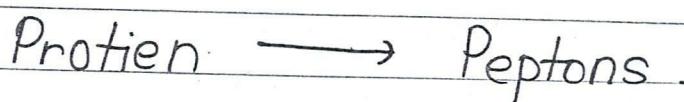
- It is also known as salivary amylase

- It help in breaking down starch into carbohydrates. and then into glucose

$$Starch \longrightarrow Carbohydrates$$

$$Carbohydrates \rightarrow Glucose.$$

- Almost 30% carbohydrate is digested by it.

2. Function of pepsin.

- It breaks down protien into peptones. & then amino acid.

$$Protien \longrightarrow Peptons.$$

(b)

Basis of Diffrenciation	UNICELLULAR	MULTICELLULAR
1 Mode of reproduction.	The mode of reproduction is asexual.	The mode of reproduction is sexual.
2 Variation	There are less variations	There are more variations.
3 Process	There are many process like fission, budding etc.	There is only one process fertilization.
4 Examples.	Amoeba, Paramecium	Animals & plants.

परीक्षार्थी द्वारा भरा जाय—

अनुक्रमांक (अंकों में)— [ ]   अनुक्रमांक (शब्दों में)— ....

विषय........ SCIENCE   प्रश्नपत्र संकेतांक— 233 (CHIJ)

कक्ष निरीक्षक द्वारा भरा जाय—

केन्द्र संख्या— | 1 | 9 | 7 | 0 |

परीक्षा कक्ष संख्या— | 0 | 2 |

(उपरोक्त सभी प्रविष्टियों की जाँच मेरे द्वारा सावधानीपूर्वक कर ली गई है।)

कक्ष निरीक्षक का नाम........ रजनी

दिनांक— 01/03/204

हस्ताक्षर कक्ष निरीक्षक— Rani

परीक्षक के हस्ताक्षर व संख्या........ 2410194

Given,   (Concave Mirror)

ho = 3cm

U = -10cm

f = -15cm

V = ?

N = ?

hi = ?

By mirror formula:-

$$\frac{1}{f} = \frac{1}{V} + \frac{1}{U}$$

$$\frac{1}{-15} = \frac{1}{V} + \left[\frac{1}{-10}\right]$$

$$\frac{1}{-15} + \frac{1}{10} = \frac{1}{V}$$

$$\frac{-2+3}{30} = \frac{1}{V}$$

$$\frac{1}{30} = \frac{1}{V}$$

$$\boxed{30cm = V}$$
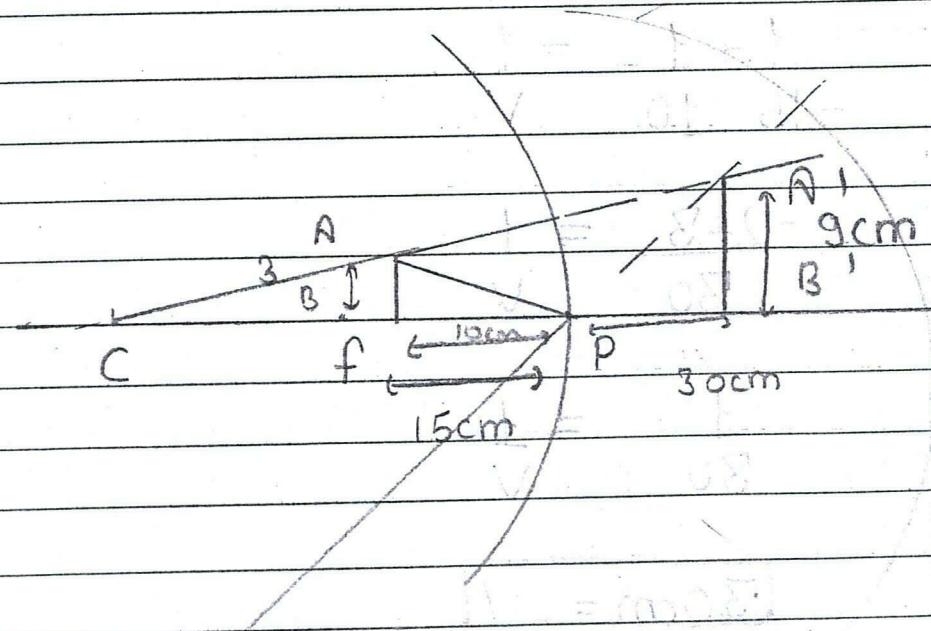
$$\frac{hi}{ho} = \frac{-V}{U}$$

$$\frac{hi}{3} = \frac{+30}{+10}$$
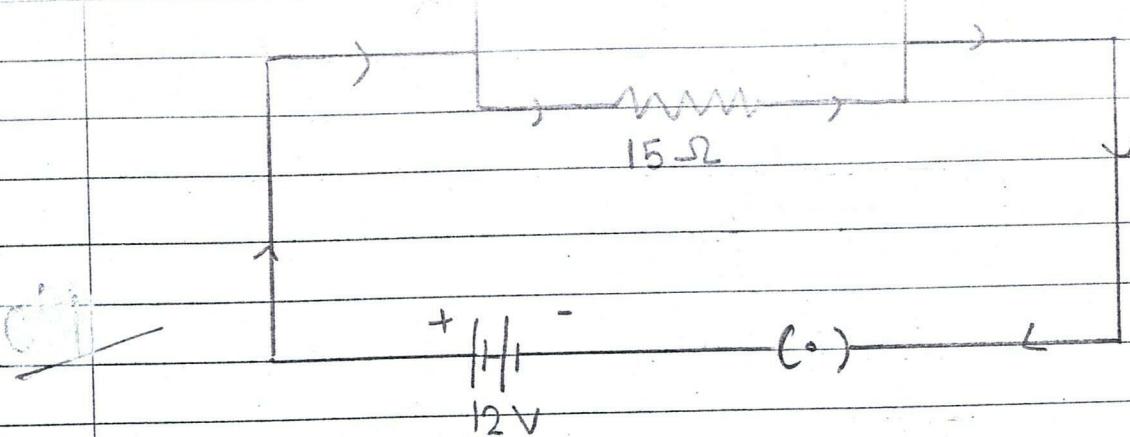
$$hi = 3 \times 3$$
$$= \boxed{9 \, cm}$$

$$m = \frac{+30}{+10}$$
$$= \boxed{30}$$

Image is virtual erect and enlarged.

15 Ω

12 V

(i)

Let $R_1 = 4\,\Omega$, $R_2 = 6\,\Omega$, $R_3 = 15\,\Omega$
Given, $V = 12\,\Omega$

Total resistance of the circuit.
In this circuit R_1 & R_2 are connected in series.

$$\therefore R' = R_1 + R_2$$
$$= 4 + 6$$
$$= 10\,\Omega$$

R' & R_3 are connected in parallel

$$\therefore \frac{1}{R} = \frac{1}{R'} + \frac{1}{R_3}$$

$$= \frac{1}{10} + \frac{1}{15}$$

$$= \frac{3+2}{30}$$

$$= \frac{1}{R} = \frac{5}{30}$$

$$R = \frac{\cancel{50} \ 30}{5}$$

$$= 6 \, \Omega$$

∴ Total resistance of the circuit

$$\boxed{6 \, \Omega}$$

(ii) Total current flowing in the circuit.

$$V = IR$$

$$\frac{V}{R} = I$$

$$\frac{12}{6} = I$$

$$2A = I$$

So, the total current flowing in the circuit is 2A

(i) Temprature of the conductor.

(ii) Length of the conductor.

(iii) Area of cross section of the conductor.

$$R = \rho \frac{l}{A}$$