

Roll No.

Code : H8SC102

KENDRIYA VIDYALAYA SANGATHAN, PATNA REGION
PERIODIC TEST - 2, 2018-19

CLASS - X
SCIENCE

Sl.No. 3665

TIME - 3 HOURS]

[MAX. MARKS - 80

General Instructions :

- (i) All questions are compulsory.
- (ii) The question paper comprises of two Sections : A and B. You are to attempt both the sections.
- (iii) All questions of Section - A and Section -B are to be attempted separately.
- (iv) Question number 1 & 2 in Section - A are one mark question. These are to be answered in one word or in one sentence.
- (v) Question numbers 3 to 5 in Section - A are two marks questions. These are to be answered in about 30 words each.
- (vi) Question numbers 6 to 15 in Section - A are three marks questions. These are to be answered in about 50 words each.
- (vii) Question numbers 16 to 21 in Section - A are five marks questions. These are to be answered in about 70 words each.
- (viii) Question numbers 22 to 27 in Section - B are questions based on practical skills and are two marks.

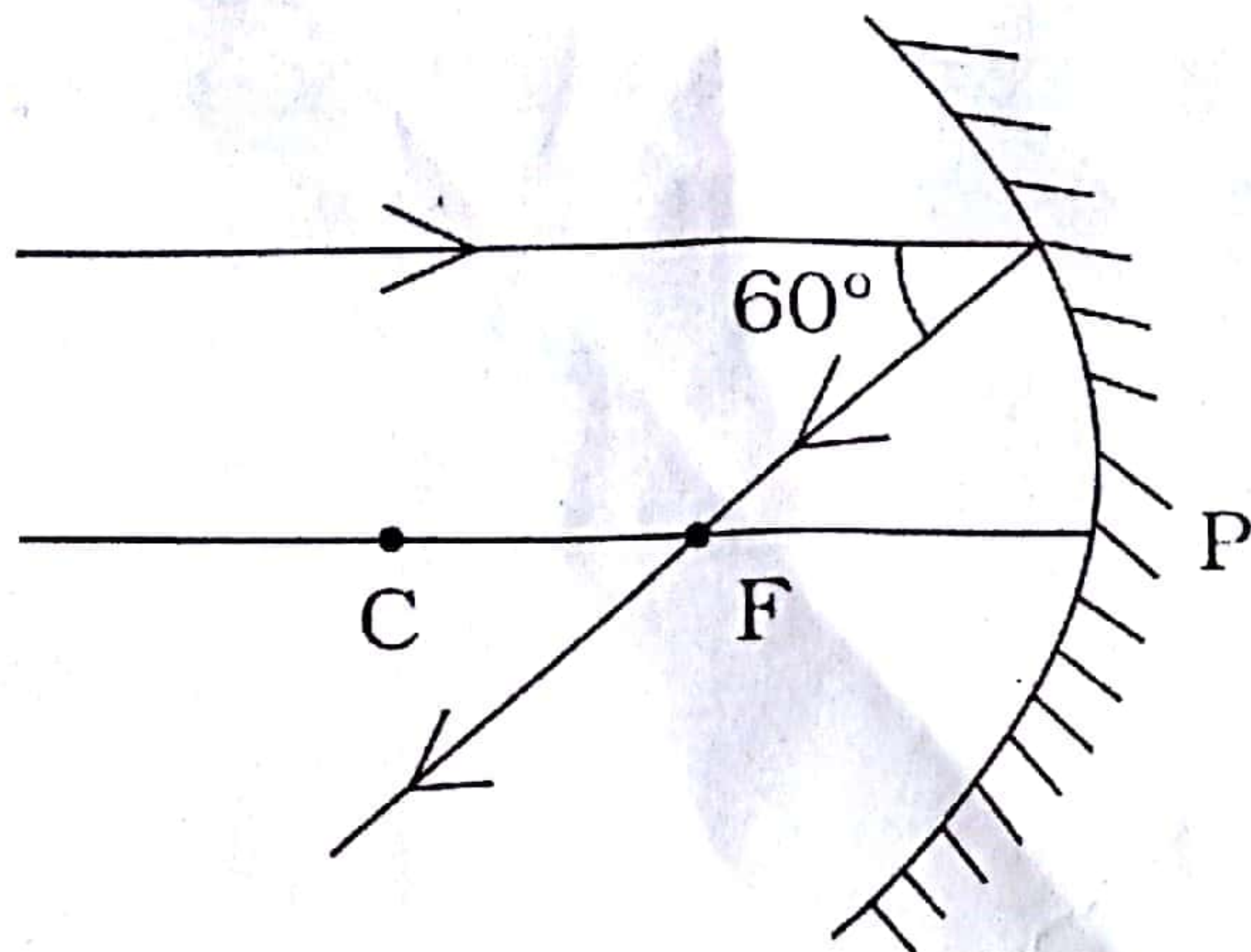
SECTION - A

1. What are the final products after digestion of carbohydrates and proteins ?

starch emulsification

$u = \text{Object distance}$
 $v = \text{Image distance}$

2. In the following ray diagram, find the angle of reflection.

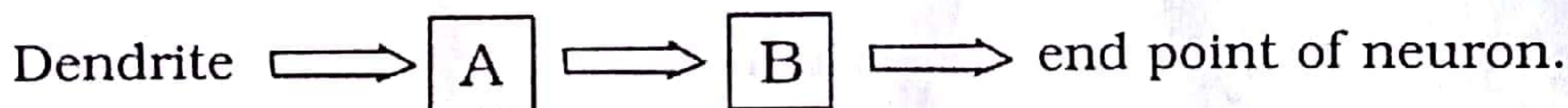


3. Define Combination Reaction. Give an example of a combination reaction which is also exothermic.

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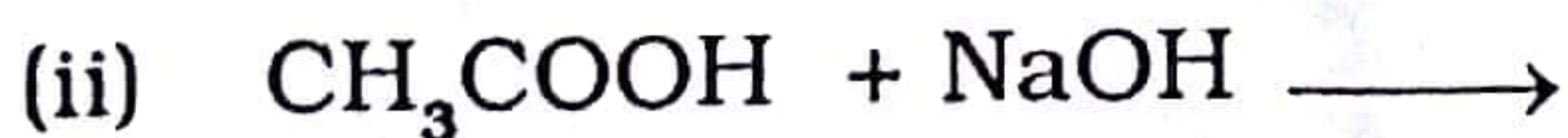
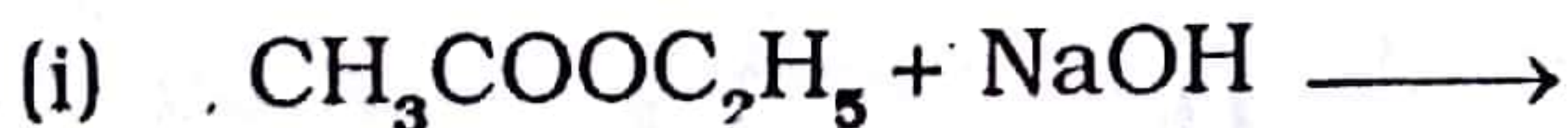
4. (a) Name two components of central nervous system in human.

(b) Write A and B in the given FLOW CHART of neuron through which information travels as an electrical impulse -



5. An object, 4.0 cm size, is placed at 25.0 cm in front of a concave mirror of focal length 15.0 cm. At what distance from the mirror should a screen be placed in order to obtain a sharp image? Find the size of the image.

6. Complete the following chemical reactions :



$\frac{1}{15.0} \times$

$\frac{1}{25} + \frac{1}{15} = \frac{1}{v}$

$\frac{1}{25} + \frac{1}{15} = \frac{1}{v}$

$\frac{1}{15} = \frac{1}{v} - \frac{1}{25}$

$\frac{1}{15} = \frac{25 - v}{25v}$

$25 = 15(25 - v)$

$25 = 375 - 15v$

$15v = 375 - 25$

$15v = 350$

$v = \frac{350}{15} = 23.33$

7. Decomposition reactions require energy either in the form of heat or light or electricity for breaking down the reactants. Write one equation each for decomposing reactions where energy is supplied in the form of heat, light and electricity.

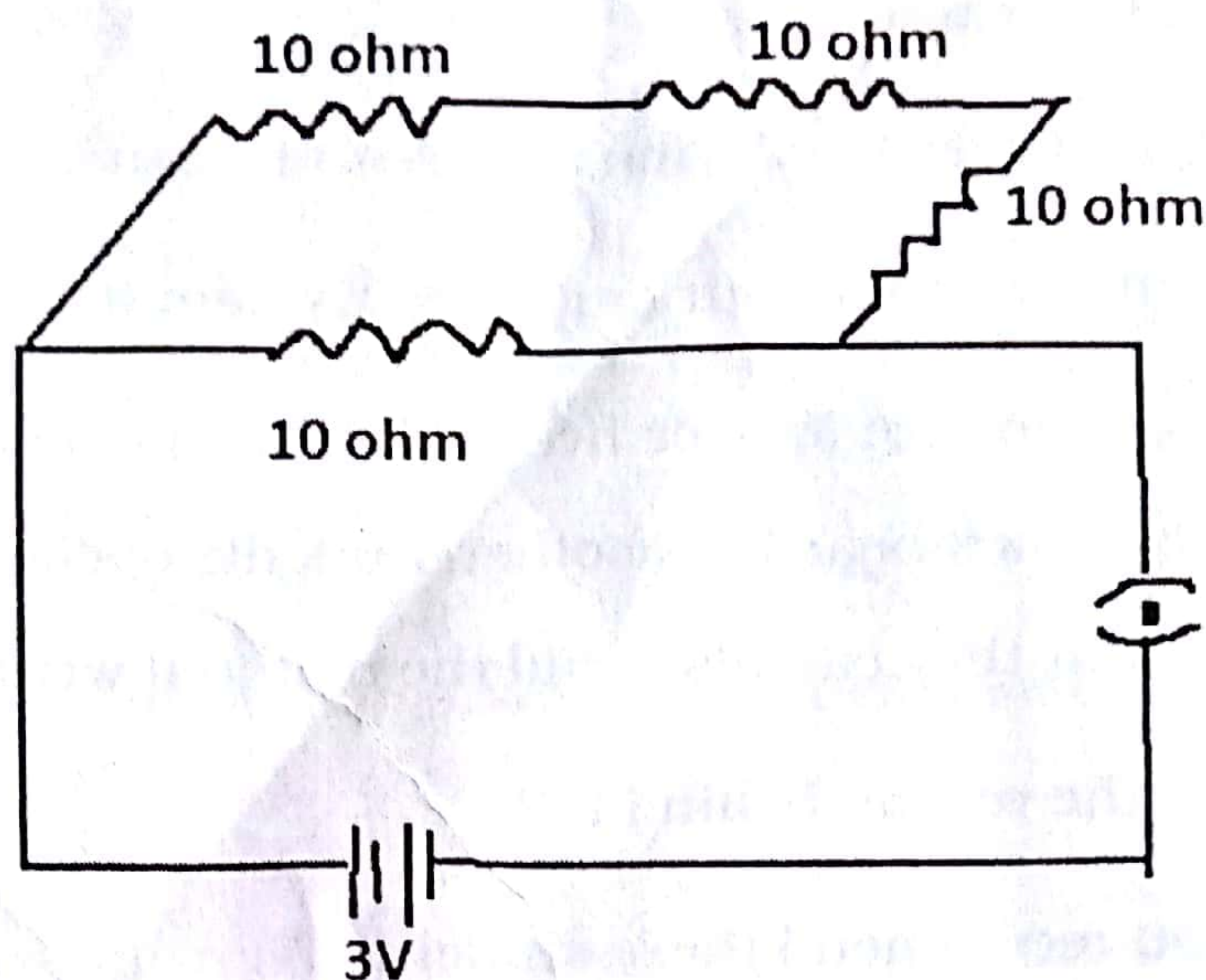
$\frac{1}{15} + \frac{1}{25} = \frac{1}{v}$

$\frac{25 + 15}{15 \times 25} = \frac{1}{v}$

$\frac{40}{375} = \frac{1}{v}$

$v = \frac{375}{40} = 9.375$

Find the current drawn from the battery by the network of four resistors shown in the figure :



CaCO_3 - Heat
 AgCl_2 - light
 H_2O - electron

9. What are sexually transmitted diseases ? Write any two such diseases caused due to (i) Virus (ii) bacteria. Which device or devices may be used to prevent the spread of such diseases ?

10. Diagram of Human Excretory System and label the following organs of excretory system which perform following functions :

- (i) Form urine.
- (ii) Is a long tube which collects urine from kidney.
- (iii) Store urine until it is passed out.

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11. Name the three hormones secreted by the following endocrine glands and specify one function of each :

- (i) Thyroid - Thyroxine
- (ii) Adrenal -
- (iii) Pancreas -

reactant
~~to~~ reactant

12. (i) What is the role of HCl in our stomach ?
(ii) What is emulsification of fats ?
(iii) Which protein digestive enzyme is present in pancreatic juice ?
13. 'pH has a great importance in our daily life.' Explain it by giving three examples.
14. In a school-room, there are four or five students who were not able to read the material written on black board. The other students of class helped them to sit at the front seat, so that they can also read the material written on black board.
(i) What can be the reason behind it ?
(ii) What will you recommend these students ?
(iii) What precautions you will insist them ?
15. List three kinds of blood vessels of Human Circulatory System and write their functions in tabular form.
16. (i) Define Corrosion. **JSUNIL TUTORIAL**
(ii) What is corrosion of iron called ?
(iii) How will you recognize corrosion of silver ?
(iv) Why corrosion of iron is a serious problem ?
(v) How can we prevent corrosion of iron ?
17. Explain the following :
(i) Why is the tungsten used exclusively for filament of electric lamps ?
(ii) Why are the conductors heating devices, such as bread-toasters and electric irons, made of an alloy rather than a pure metal ?

Ray

hypermetropia

- (iii) Why is the series arrangement not used for domestic circuits ?
- (iv) How does the resistance of a wire vary with its area of cross-section ?
- (v) Why are copper and aluminum wires usually employed for electricity transmission ?

OR

- (i) Write two differences between electric energy and electric power.
- (ii) Out of 60 W and 40 W lamps, which has higher electrical resistance when in use ?
- (iii) What is the commercial unit of electric energy ? Convert it into joules.

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18. (i) Draw a neat diagram of human brain and label Medulla and Cerebellum. Write the functions of Medulla and Cerebellum.

- (ii) With the help of diagram show the path of reflex arc when we touch a hot object.

19. Lata needs a lens of power - 4.5 D for correcting her vision :

- (i) What kind of defect in vision is she suffering from ?

- (ii) What is the focal length and nature of the corrective lens ?

- (iii) Draw ray diagram showing :

- (a) Defected eye
- (b) Correction for defect
- (c) Normal eye

Arise Ar

$$\frac{1}{35} = \frac{1}{10} + \frac{1}{f}$$

$$P = \frac{1}{f}$$

$$f = \frac{1}{P}$$

$$f = \frac{1}{-4.5}$$

$$f = -\frac{10}{4.5}$$

$$f = -2.22$$

the groups of element which is bonding for the characteristic reactions in a circulated particular compound. X / Science

20. (i) Draw Human Female Reproductive System and label ovary, oviduct and uterus.

(ii) What is double fertilization? Explain it in detail.

21. (i) Define the term 'Isomers.'

(ii) Draw two possible isomers of the compound with molecular formula C_3H_6O and write their names.

(iv) Give electron-dot structures of the above two compounds.

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(i) What are hydrocarbons? Give examples.

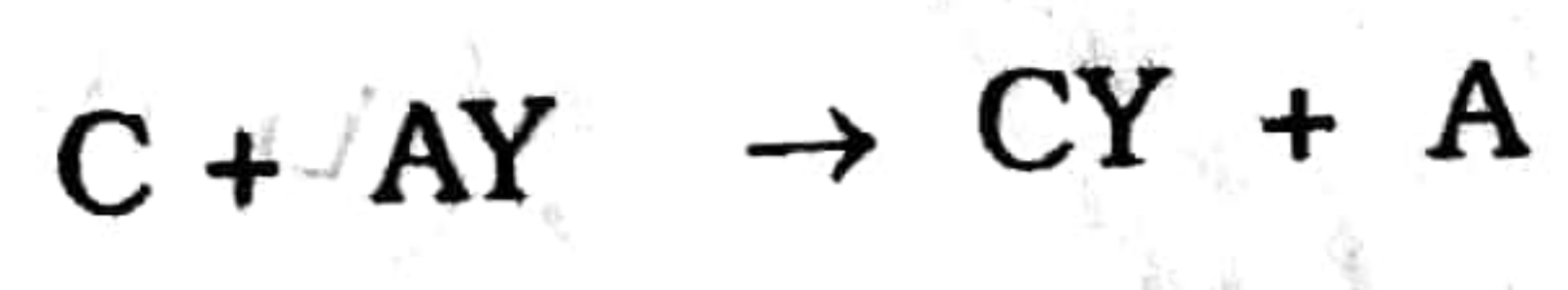
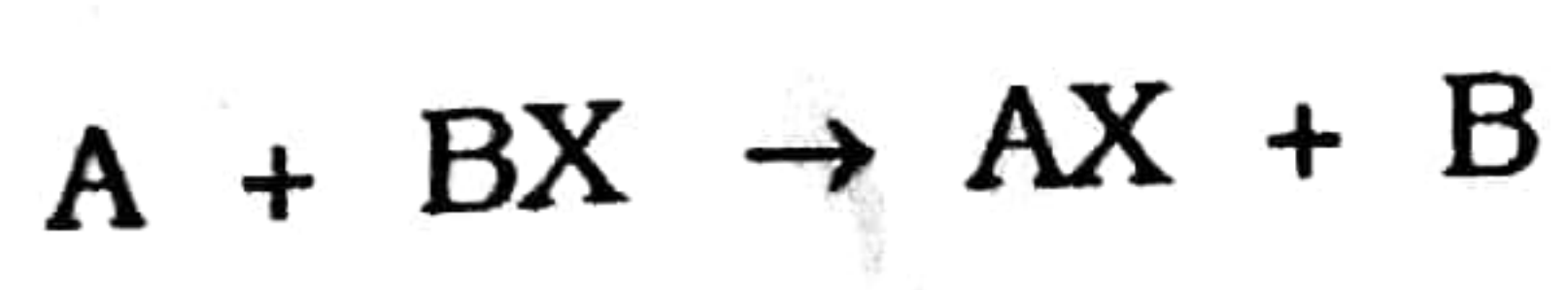
(ii) Give the structural differences between saturated hydrocarbons and unsaturated hydrocarbons with two examples each.

(iii) What is a functional group? Give examples of two different functional groups.

SECTION - B

22. A solution 'X' gives orange colour when a drop of universal indicator is added to it. On the other hand, another solution 'Y' gives bluish-green colour when a drop of universal indicator is added to it. What are the types of solution 'X' and 'Y' and what types of pH would they have?

23. On the basis of sequence of reactions, identify the most and the least reactive metals respectively:



(a) A, C

(c) C, A

(b) B, C

(d) C, B

24. Mention the precautions taken while making a slide & observing it under Microscope.

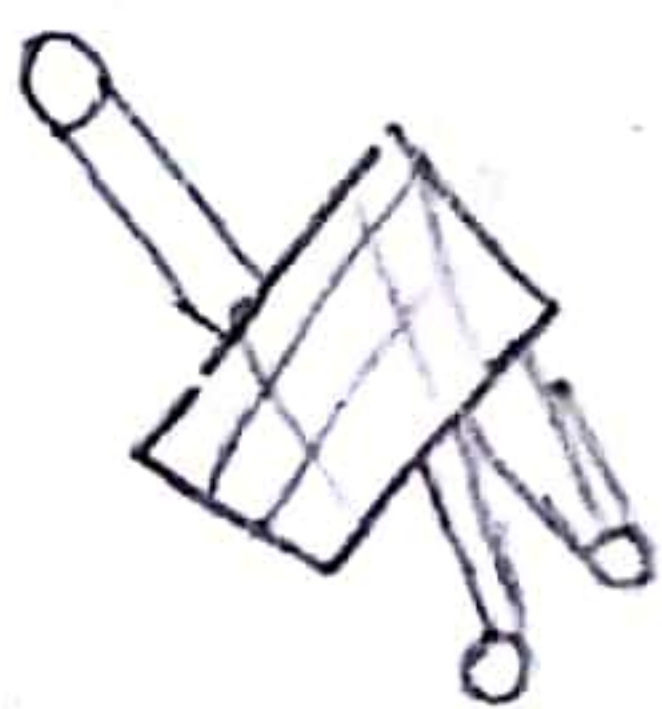
25. A student is viewing under microscope a permanent slide showing various stages of Asexual Reproduction by budding in yeast. Draw diagrams of what he observes.

26. Write two precautions that must be taken while determining the equivalent resistance of two resistors when connected in series.

27. (i) What will be the position of the object to get the enlarged image of the same side of the lens as the object ?

(ii) On what factor, the ability of a lens to converge the light rays depends ?

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atmos