

1 What is the smallest integral value of  $k$  such that  $2x(kx - 4) - x^2 + 6 = 0$  has no real roots?

- (A) -1                      (B) 2                      (C) 3                      (D) 4

2 The height of a tower is 'h' and angle of elevation of the top of the tower is  $\alpha$ . On moving a distance  $\frac{h}{2}$  towards the tower, the angle of elevation becomes  $\beta$ .

What is the value of  $\cot\alpha - \cot\beta$  ?

- (A)  $\frac{1}{2}$                       (B)  $\frac{2}{3}$                       (C) 1                      (D) 2

3 The number  $\sqrt{2}$  is equal to:

- (A) a rational fraction  
(B) 1.41421  
(C) an infinite repeating decimal  
(D) an infinite non-repeating decimal

4 The sum of all integers between 50 and 350 which end in 1 is:

- (A) 5880                      (B) 5539                      (C) 5208                      (D) 4566

5 The degree of  $(x^2 + 1)^4 (x^3 + 1)^3$  as a polynomial in  $x$  is:

- (A) 17                      (B) 12                      (C) 7                      (D) 5

6 The sum of the distances from one vertex of a square with sides of length 2 to the mid points of each of the sides of the square is:

- (A)  $2\sqrt{5}$                       (B)  $2 + \sqrt{3}$                       (C)  $2 + 2\sqrt{5}$                       (D)  $2 + 2\sqrt{3}$

7 If  $\sin x + \cos x = \frac{1}{5}$  and  $0 \leq x < \pi$ , then  $\tan x$  is:

- (A)  $-\frac{4}{3}$                       (B)  $-\frac{3}{4}$                       (C)  $\frac{3}{4}$                       (D)  $\frac{4}{3}$

8 When two dice are thrown simultaneously what is the probability that there is exactly one 5?

- (A)  $\frac{4}{36}$       (B)  $\frac{5}{18}$       (C)  $\frac{6}{23}$       (D)  $\frac{7}{24}$

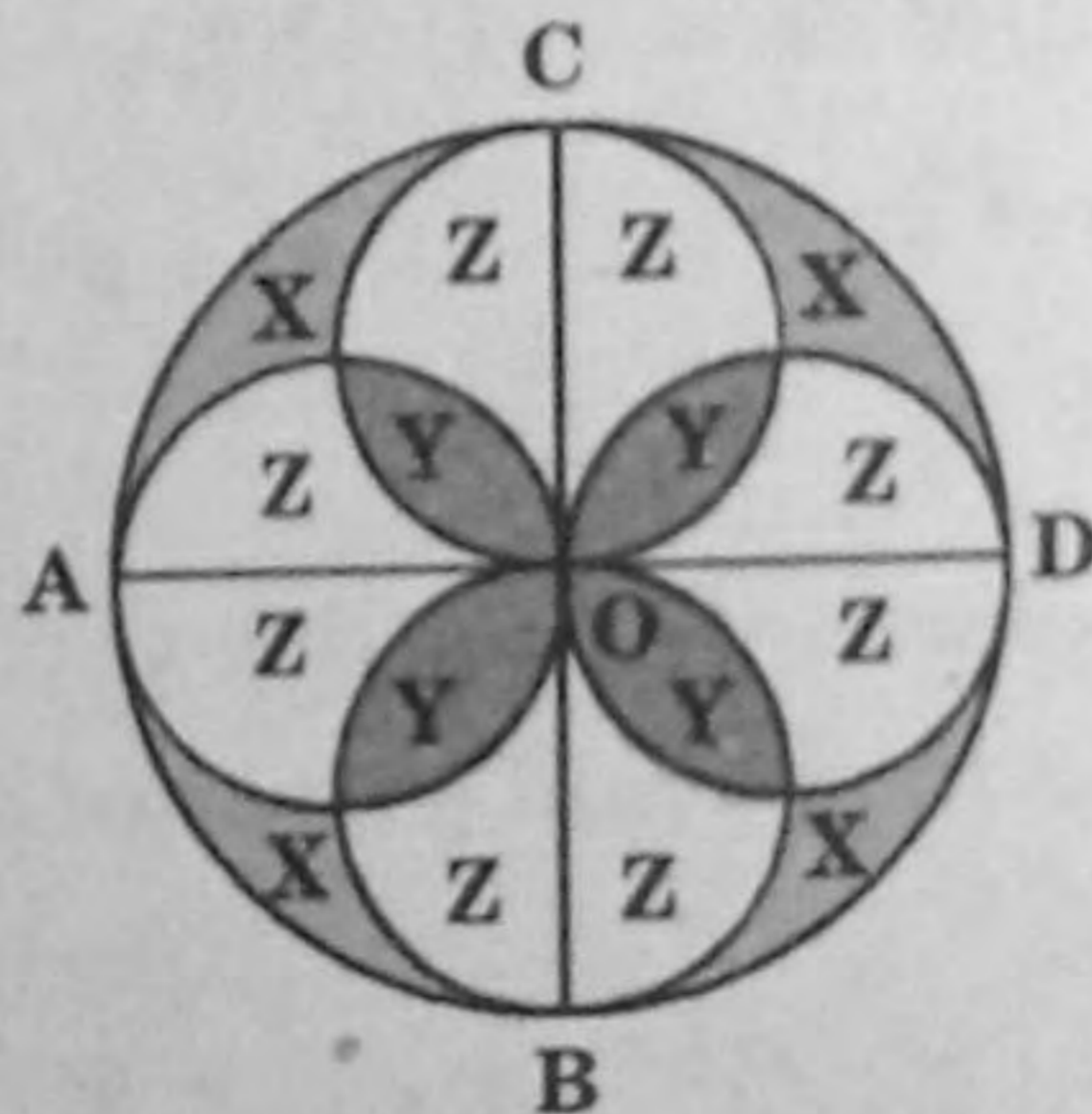
9 P, Q, R are three sets of values of x:

P : 2, 3, 7, 1, 3, 2, 3
Q : 7, 5, 9, 12, 5, 3, 8
R : 4, 4, 11, 7, 2, 3, 4

Select the correct statement from among the following:

- (A) Mean of P is equal to mode of R  
 (B) Mean of R is equal to the median of Q  
 (C) Median of Q is equal to mode of P  
 (D) Mean, Median and Mode of P are same

10 ABDC is a circle and circles are drawn with AO, CO, DO and OB as diameters. Areas X and Y are shaded  $\frac{X}{Y}$  is equal to:



- (A) 1      (B)  $\frac{1}{2}$       (C)  $\frac{1}{4}$       (D)  $\frac{\pi}{4}$

**11** A cylindrical box of radius 5 cm contains 10 solid spherical balls each of radius 5 cm. If the topmost ball touches the upper cover of the box, then the volume of the empty space in the box is:

(A)  $\frac{2500}{3} \pi \text{ cm}^3$

(B)  $5000 \pi \text{ cm}^3$

(C)  $2500 \pi \text{ cm}^3$

(D)  $\frac{5000}{3} \pi \text{ cm}^3$

**12** In what ratio does x-axis divide the line segment joining the points (3, 4) and (2, 6)?

(A) 2 : 3 internally

(B) 2 : 3 externally

(C) 3 : 2 internally

(D) 3 : 2 externally

**13** If  $4^{x+y} = 1$  and  $4^{x-y} = 4$ , then the values of x & y will be respectively.

(A)  $\frac{1}{2}$  and  $-\frac{1}{2}$

(B)  $\frac{1}{2}$  and  $\frac{1}{2}$

(C)  $-\frac{1}{2}$  and  $-\frac{1}{2}$

(D)  $-\frac{1}{2}$  and  $\frac{1}{2}$

**14** Seven equal cubes each of side 5 cm are joined end to end. Find the surface area of the resulting cuboid.

(A)  $750 \text{ cm}^2$  (B)  $1500 \text{ cm}^2$  (C)  $2250 \text{ cm}^2$  (D)  $700 \text{ cm}^2$

**15** The maximum number of common tangents to any two circles in the same plane is:

(A) two

(B) three

(C) four

(D) five

**16** Four equal sized maximum circular plates are cut off from a square paper sheet of area 784 sq. cm. The circumference of each plate is:

(A) 22 cm

(B) 44 cm

(C) 66 cm

(D) 88 cm

**17**  $\frac{\sin\theta}{1 + \cos\theta} + \frac{1 + \cos\theta}{\sin\theta}$  is equal to:

(A)  $\frac{2}{\sin\theta}$

(B)  $\frac{4}{\sin\theta \cos\theta}$

(C) 2

(D)  $2\sin\theta \cdot \cos\theta$

**18** The vertices of a triangle ABC are  $(\lambda, 2 - 2\lambda)$ ,  $(-\lambda + 1, 2\lambda)$  and  $(-4 - \lambda, 6 - 2\lambda)$  respectively. If its area be 70 Sq. units, then the number of integral values of  $\lambda$  is:

(A) 1

(B) 2

(C) 4

(D) 10

**19** If ABC and DEF are two triangles, then to ensure that the two triangles ABC and DEF are congruent, the three conditions given below:

$AB = DE, AC = DF, \angle ABC = \angle DEF$  are:

(A) sufficient but not necessary

(B) necessary but not sufficient

(C) neither necessary nor sufficient

(D) both necessary as well as sufficient

**20** The non-zero root of the equation  $3^{2x} + 9 = 10 \cdot 3^x$  is:

(A) a positive fraction

(B) a negative fraction

(C) a positive integer

(D) a negative integer

**21** The three sides of a right triangle have integral lengths, which form an arithmetic progression one of the sides could have length?

(A) 22

(B) 58

(C) 81

(D) 361

**22** If  $2a = b$ , the pair of equations  $ax + by = 2a^2 - 3b^2$ ,  $x + 2y = 2a - 6b$  possess:

- (A) no solution
- (B) only one solution
- (C) only two solutions
- (D) an infinite number of solutions

**23** What is the remainder when  $3x^3 - 2x^2y - 13xy^2 + 10y^3$  is divided by  $x - 2y$ ?

- (A) 0
- (B)  $y$
- (C)  $x + y$
- (D)  $x + 2y$

**24** ABC is a circle with centre "O". P is an external point in the line AB. From P, a tangent PC has been drawn. If  $AB = 10$  cm,  $BP = 8$  cm, then the tangent PC is equal to:

- (A) 24 cm
- (B) 18 cm
- (C) 12 cm
- (D) 10 cm

**25** The square of an integer is called a perfect square. If  $x$  is a perfect square, the next larger perfect square is:

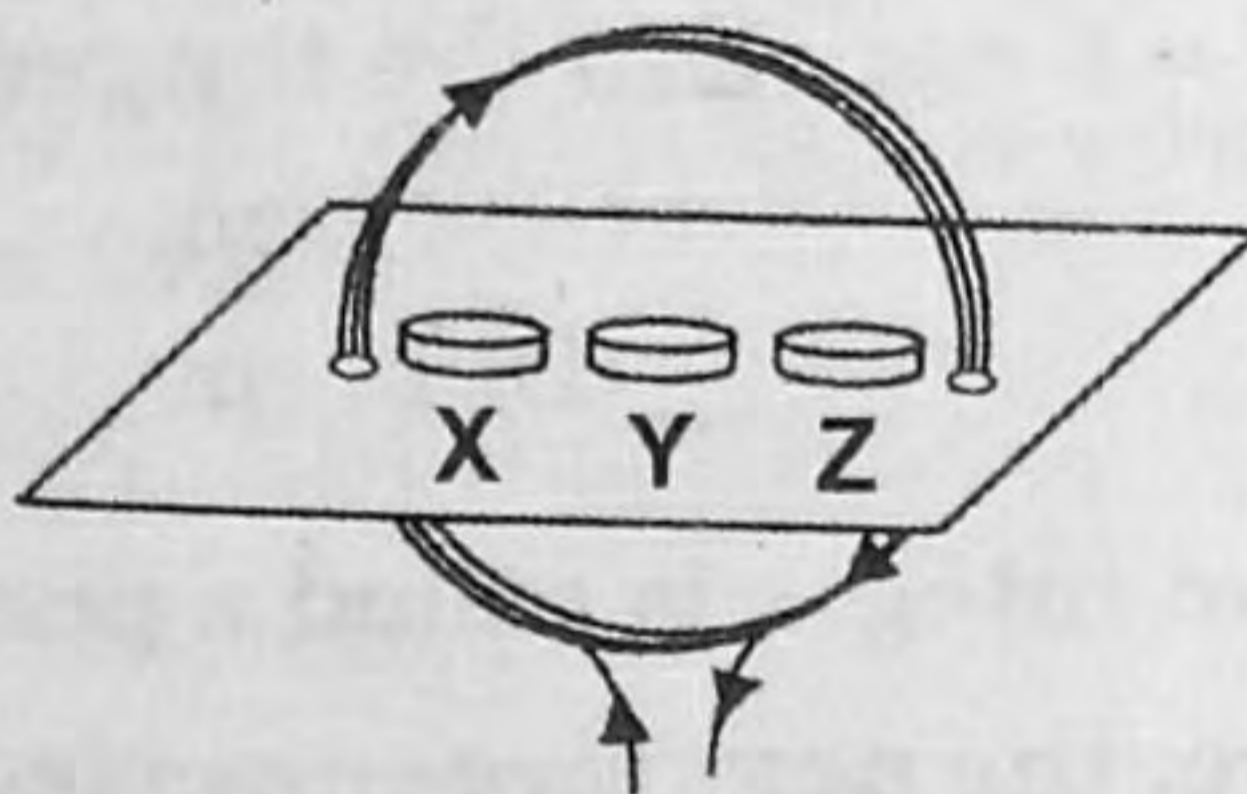
- (A)  $x + 1$
- (B)  $x^2 + 1$
- (C)  $x^2 + 2x + 1$
- (D)  $x + 2\sqrt{x} + 1$

**26** When we come out of a dark room, the following changes occur in our eyes.

- |      |                              |
|------|------------------------------|
| I.   | The pupil becomes smaller    |
| II.  | The iris relaxes completely  |
| III. | The ciliary muscles contract |

- (A) I and II only                      (B) II and III only  
 (C) III and I only                      (D) I, II and III

**27** The figure shows a circular coil carrying a current 'I', while X, Y and Z are plotting compasses.

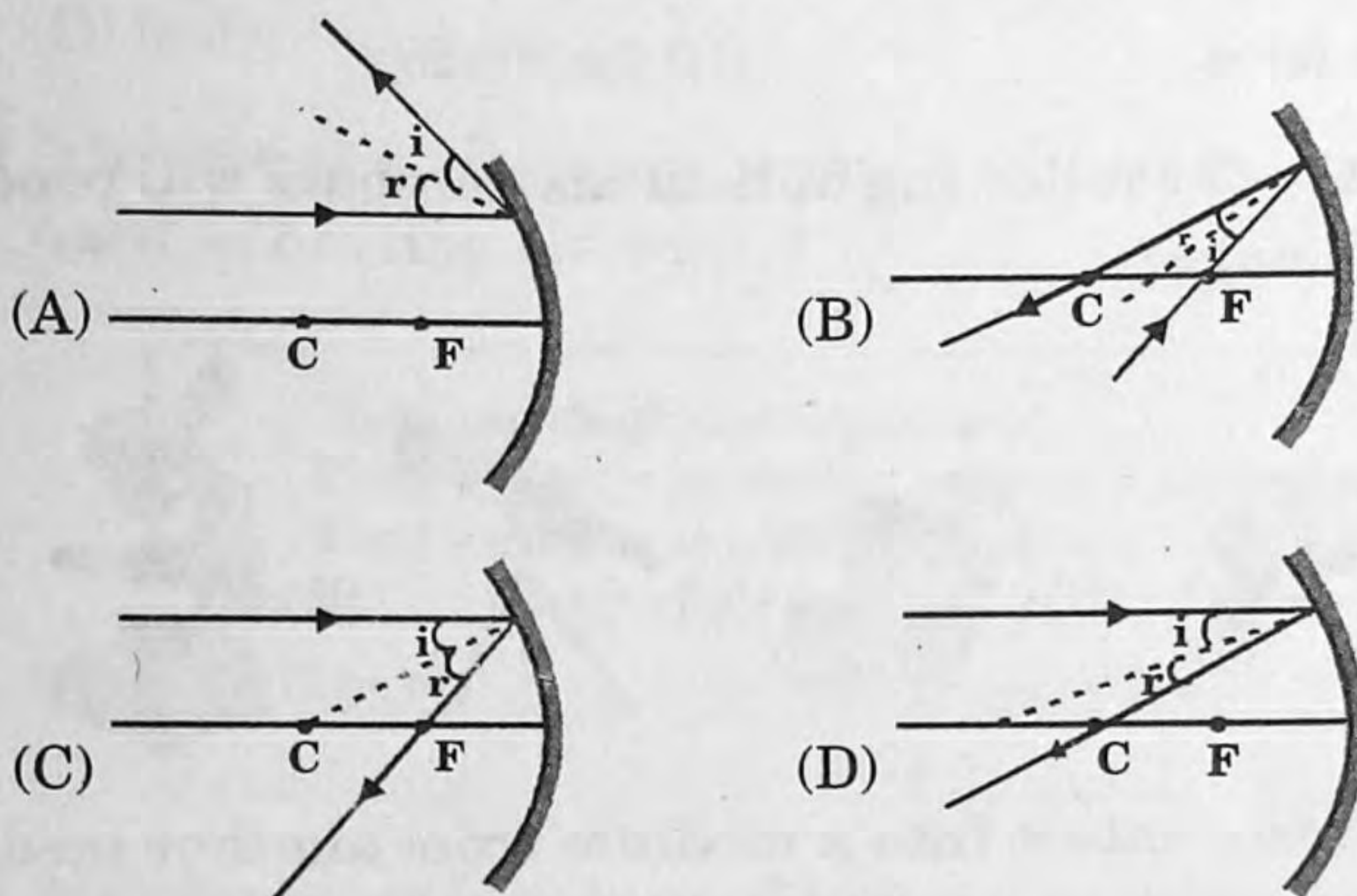


In which direction does the needles of the compasses X, Y and Z point?

	X	Y	Z
(A)	↑	↑	↑
(B)	↑	↑	↓
(C)	↓	↑	↓
(D)	↑	↓	↓

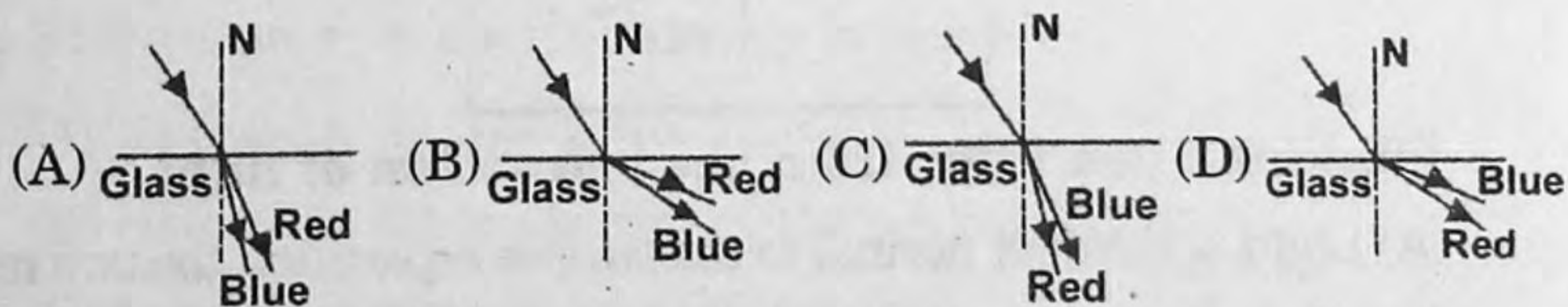
28

A light ray is incident parallel to the principal axis of a concave mirror. Which of the following ray diagrams depict the reflection of incident ray?



29

A beam which consists of red and blue light is incident on a glass block from air, as shown. Which figure shows correctly the refraction of the light in glass?



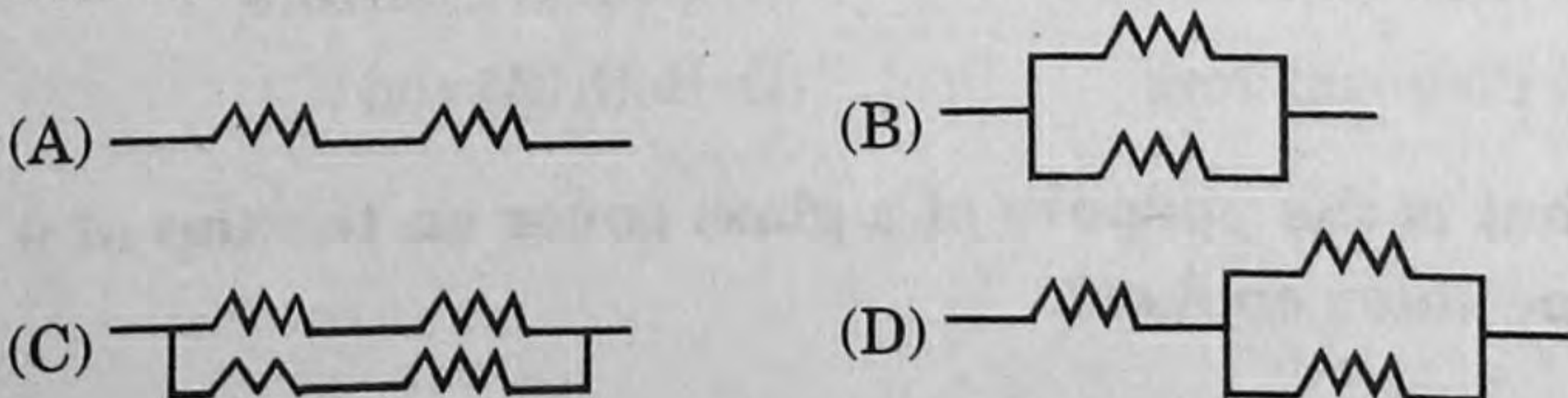
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In a biogas plant, for the production of biogas from biomass which of the following are needed?

- (A) Air      (B) Water      (C) Nitrogen      (D) Carbon dioxide

31

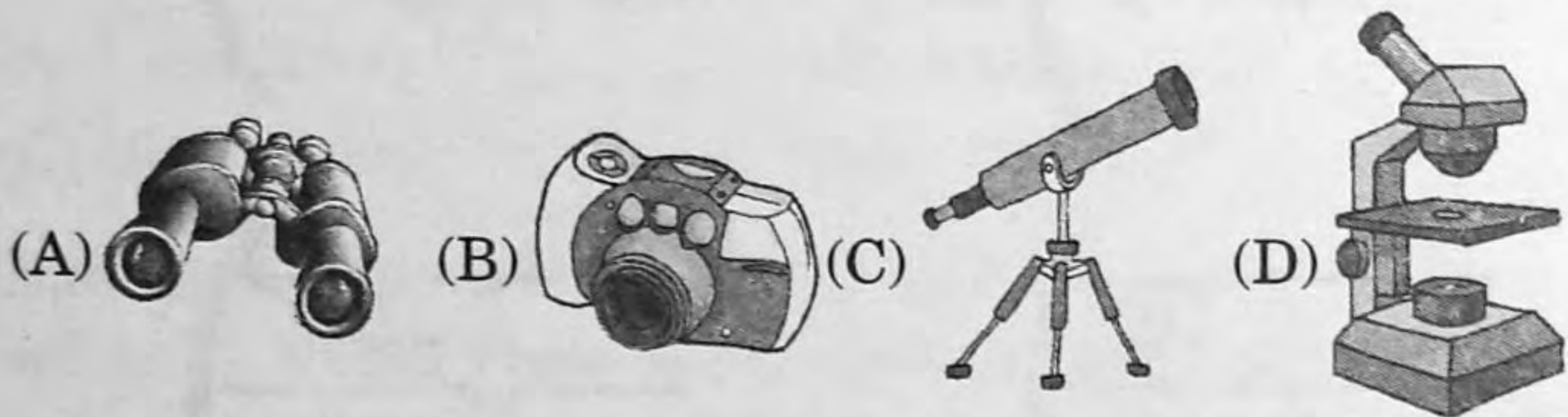
All the resistors shown below have the same resistance  $5\ \Omega$ . Which arrangement has an effective resistance of  $5\ \Omega$ ?



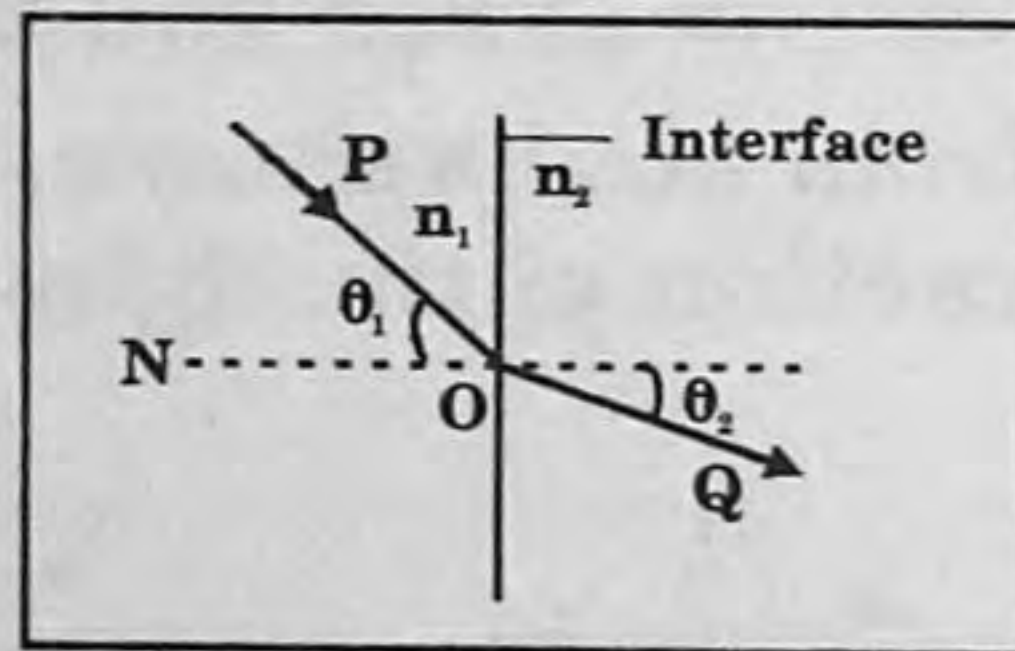
**32** In Fleming's right hand rule, the fore finger points in the direction of:

- (A) the magnetic field                      (B) the current  
(C) the force                                  (D) the motion

**33** Which of the following optical instruments will produce a real image?



**34** A light ray enters into a medium from another medium as shown in figure.



**What can you infer from the refraction of light?**

- (A) Light is incident normal to the surface separating the two media  
(B) Light entered into a rarer medium from a denser medium  
(C) Light entered into a denser medium from a rarer medium  
(D) Both (A) and (C)

**35** Anvesh brought mirror 'X' to obtain enlarged, virtual images. Identify mirror 'X'.

- (A) Convex mirrors                      (B) Concave mirrors  
(C) Plane mirrors                        (D) Both (A) and (C)

**36** What is the purpose of a glass cover on the top of a box type solar cooker?



- (A) Allows one to see the food being cooked
- (B) Allows more sunlight into the box
- (C) Prevent dust from entering the box
- (D) Reduce heat loss by radiation

**37** Why are the alloys nichrome and manganin commonly used as heating elements?

- I. They have high melting points
- II. They undergo oxidation at room temperature
- III. They have low thermal expansion

- (A) I and II only
- (B) II and III only
- (C) III and I only
- (D) I, II and III

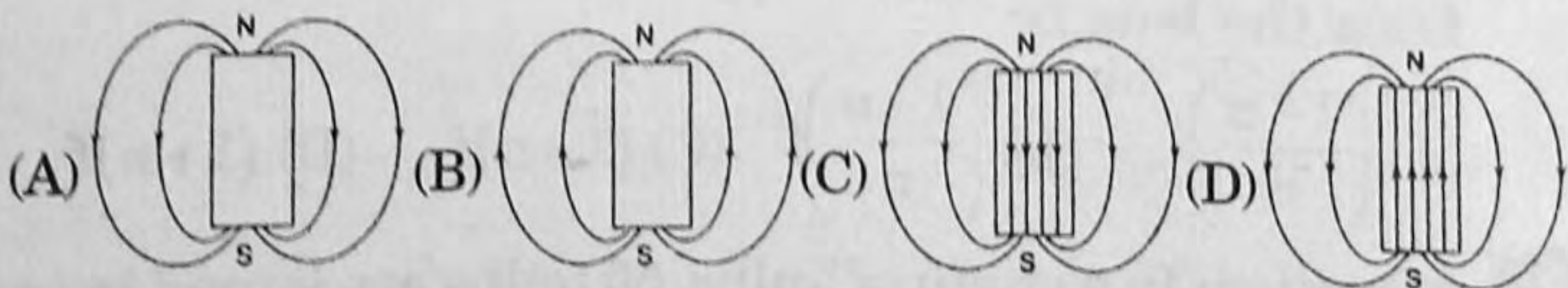
**38** If a diverging lens is used to form an image which is one third the size of the object, where must the object be placed?

- (A)  $f$
- (B)  $2f$
- (C)  $3f$
- (D)  $4f$

**39** In human eye, the focussing is done by:

- (A) change in the refractive index of the eye fluids
- (B) change in the convexity of the lens surface
- (C) to and fro movement of the retina
- (D) to and fro movement of the eye lens

**40** Which pattern shown in figure correctly represents the magnetic field lines due to a bar magnet?



- 41** Why the site of an hydro electric plant be chosen carefully?  
(A) Produces a large amount of carbon monoxide and carbon dioxide  
(B) Produces air pollution  
(C) Affects the organisms of the region  
(D) It is expensive

- 42** Even in absolutely clear water, why a diver cannot see very clearly?  
(A) Diffusion of light rays  
(B) Velocity of light is reduced in water  
(C) Rays of light passing through the water makes it turbid  
(D) The focal length of the eye lens in water gets changed

- 43** Which of the following can correctly represent W, X and Y?

W: Energy obtained from the interior of the Earth

X: Energy obtained from the splitting of nucleus of an atom

Y: Energy obtained from the decay of organic matter

- (A) W – Biomass, X – Solar, Y – Petroleum  
(B) W – Geothermal, X – Nuclear, Y – Biomass  
(C) W – Nuclear, X – Petroleum, Y – Hydro  
(D) W – Hydro, X – Geothermal, Y – Natural gas

- 44** A wire of uniform thickness is cut into four equal parts. The resistance of each part in comparison to the resistance of the wire will be:

- (A) equal      (B)  $1/4^{\text{th}}$       (C)  $1/8^{\text{th}}$       (D)  $1/16^{\text{th}}$

- 45** Arun uses eyeglasses with converging lens as he cannot see nearby objects distinctly. Identify the main reason for the defect of eyes.

- (A) The cornea is not spherical (B) Elongation of eye ball  
(C) Shortening of eye ball      (D) Excessive curvature of eye lens

- 46** A concave lens of focal length 'f' forms an image which is 'n' times the size of the object. The distance of the object from the lens is:

- (A)  $\left(\frac{1-n}{n}\right)f$       (B)  $\left(\frac{1+n}{n}\right)f$       (C)  $(1-n)f$       (D)  $(1+n)f$

- 47** **Assertion:** In a chain of bulbs, 50 bulbs are joined in series. One bulb is removed now. If the remaining 49 bulbs are again connected in series across the same supply, then the current flowing in each bulb increases.

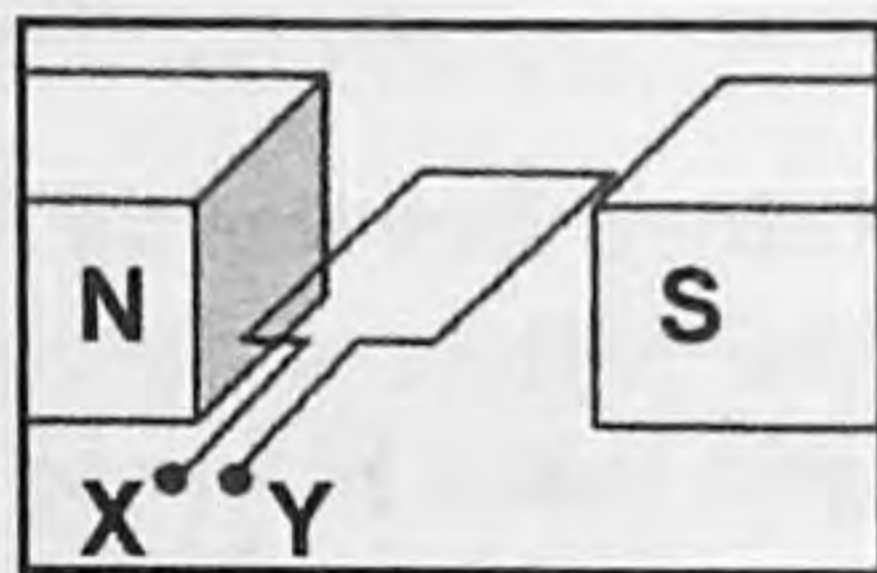
**Reason:** The resistance of 49 bulbs will be more than 50 bulbs.

- (A) Both Assertion and Reason are true. Reason is the correct explanation of assertion.
- (B) Both Assertion and Reason are true. Reason is not the correct explanation of assertion.
- (C) Assertion is true and reason is false
- (D) Assertion is false and reason are true

**48** If  $x$ ,  $y$ ,  $z$  denotes object distance, image distance and focal length incase of a mirror respectively, then the correct relation in connecting these parameters is:

- (A)  $z = \frac{xy}{x+y}$     (B)  $z = \frac{x+y}{xy}$     (C)  $z = \frac{xy}{x-y}$     (D)  $x = \frac{zy}{x+y}$

**49** The figure shows the coil of an AC motor.



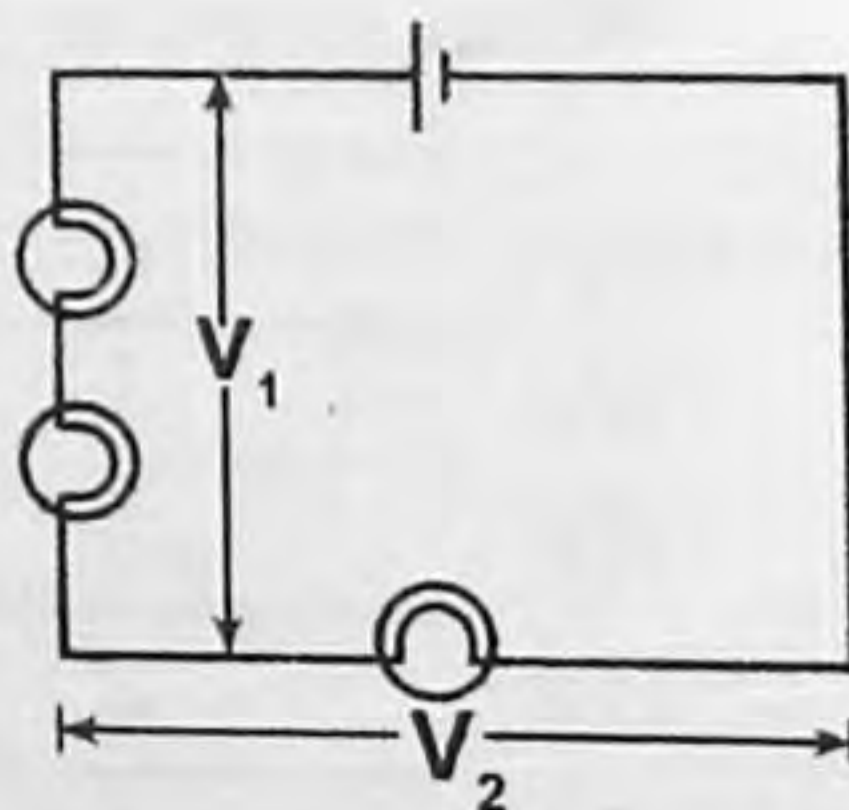
What is connected to the ends X and Y of the coil?

- (A) Commutator
- (B) Hair spring
- (C) Soft iron core
- (D) Slip rings

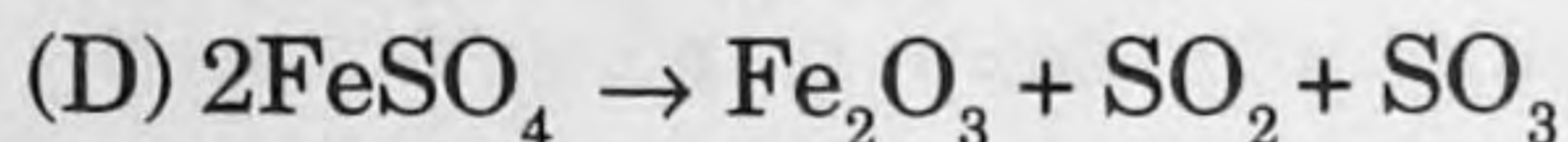
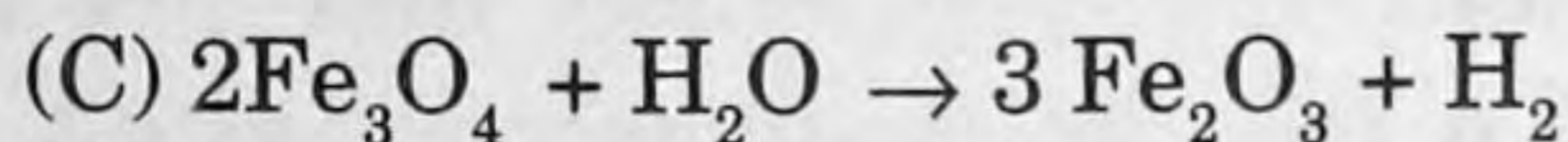
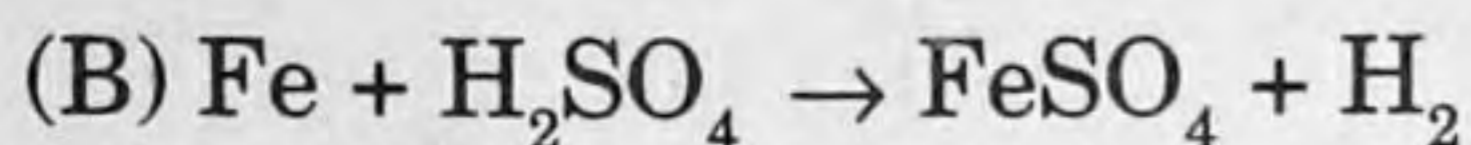
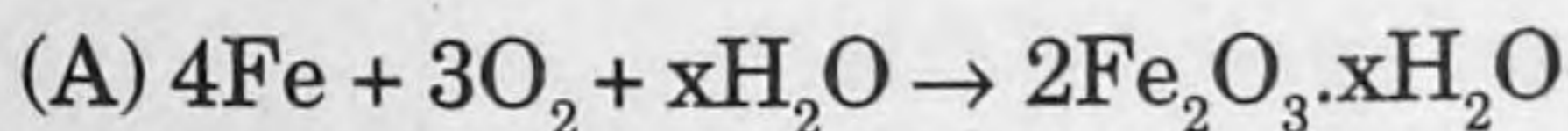
**50** The figure shows three bulbs that are connected in a circuit :

What is the total voltage,  $V$  for the circuit?

- (A)  $V = V_1 = V_2$     (B)  $V = V_1 + V_2$   
(C)  $V = V_1 - V_2$     (D)  $V = V_2 - V_1$



**51** Which of the following equation best describes the formation of rust?



**52** Soaps can remove dirt or grease from clothes by the formation of :

- (A) acid                      (B) base                      (C) micelle                      (D) ethyl alcohol

**53** A SCBA (Self Contained Breathing Apparatus) provides oxygen for the fire fighters, scuba divers etc. The generation of oxygen takes place by the reaction of  $\text{CO}_2$  and  $\text{H}_2\text{O}$  that are present in exhaled air with  $\text{KO}_2$  by the following equation:



What are the values of a, b, c ?

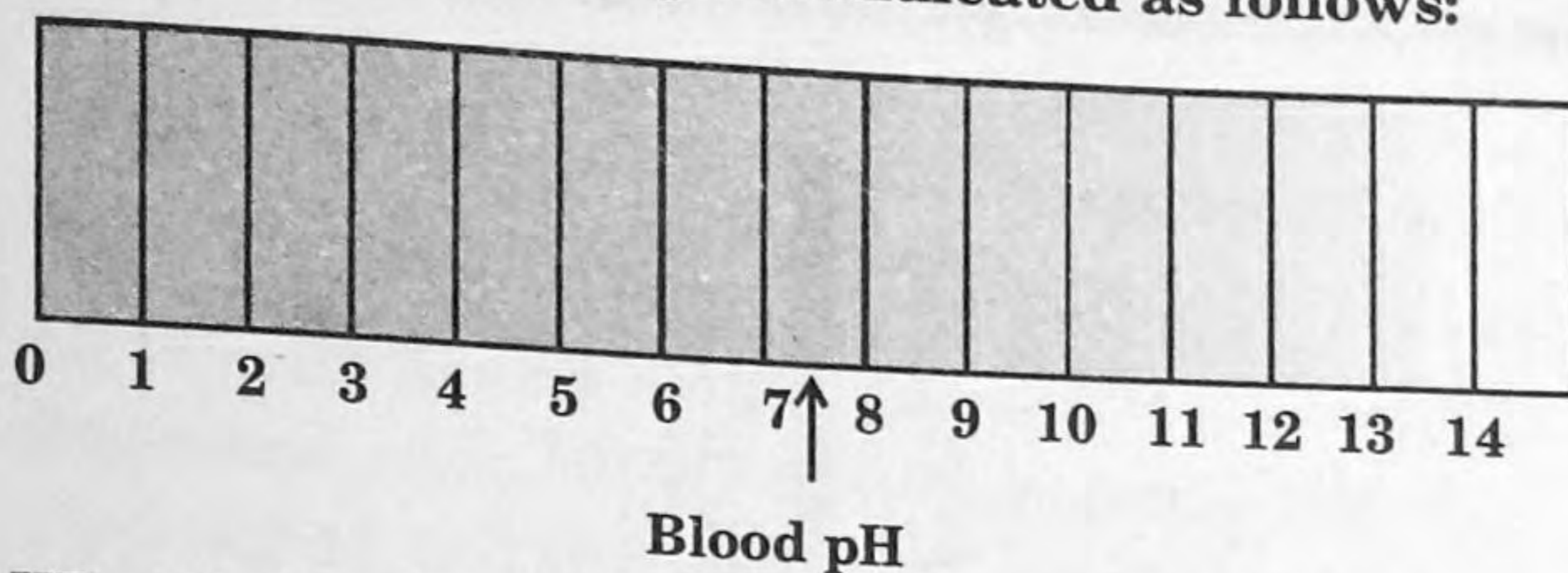
	a	b	c
(A)	1	2	4
(B)	3	2	2
(C)	2	1	2
(D)	4	2	4

**54** The reaction  $\text{Na}_2\text{SO}_{4(aq)} + \text{BaCl}_2 \longrightarrow \text{BaSO}_{4(s)} + 2\text{NaCl}_{(aq)}$  belongs to which kind of chemical reaction ?

Sodium sulphate                      Barium sulphate

- (A) Combination reaction                      (B) Decomposition reaction  
(C) Displacement reaction                      (D) Double displacement reaction

55 In a pH scale, blood pH is indicated as follows:



What is the nature of blood?

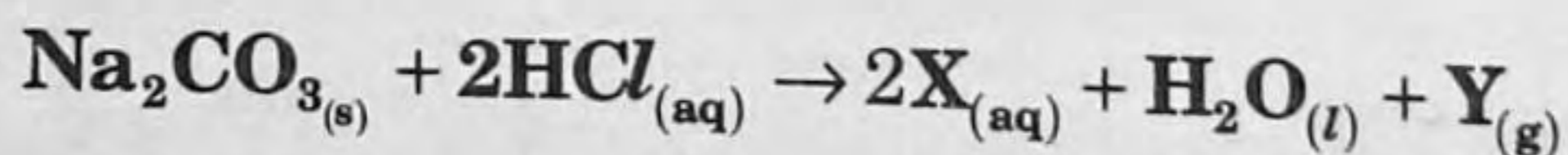
- (A) Neutral (B) Highly alkaline  
(C) Slightly alkaline (D) Acidic

56 Which of the following statements are correct?

- I. The natural source of oxalic acid is tomato.  
II. Bleaching powder is used in textile and wood industry.  
III. Plaster of Paris possess two molecules of water of crystallisation.

- (A) I and II only (B) II and III only  
(C) III and I only (D) I, II and III

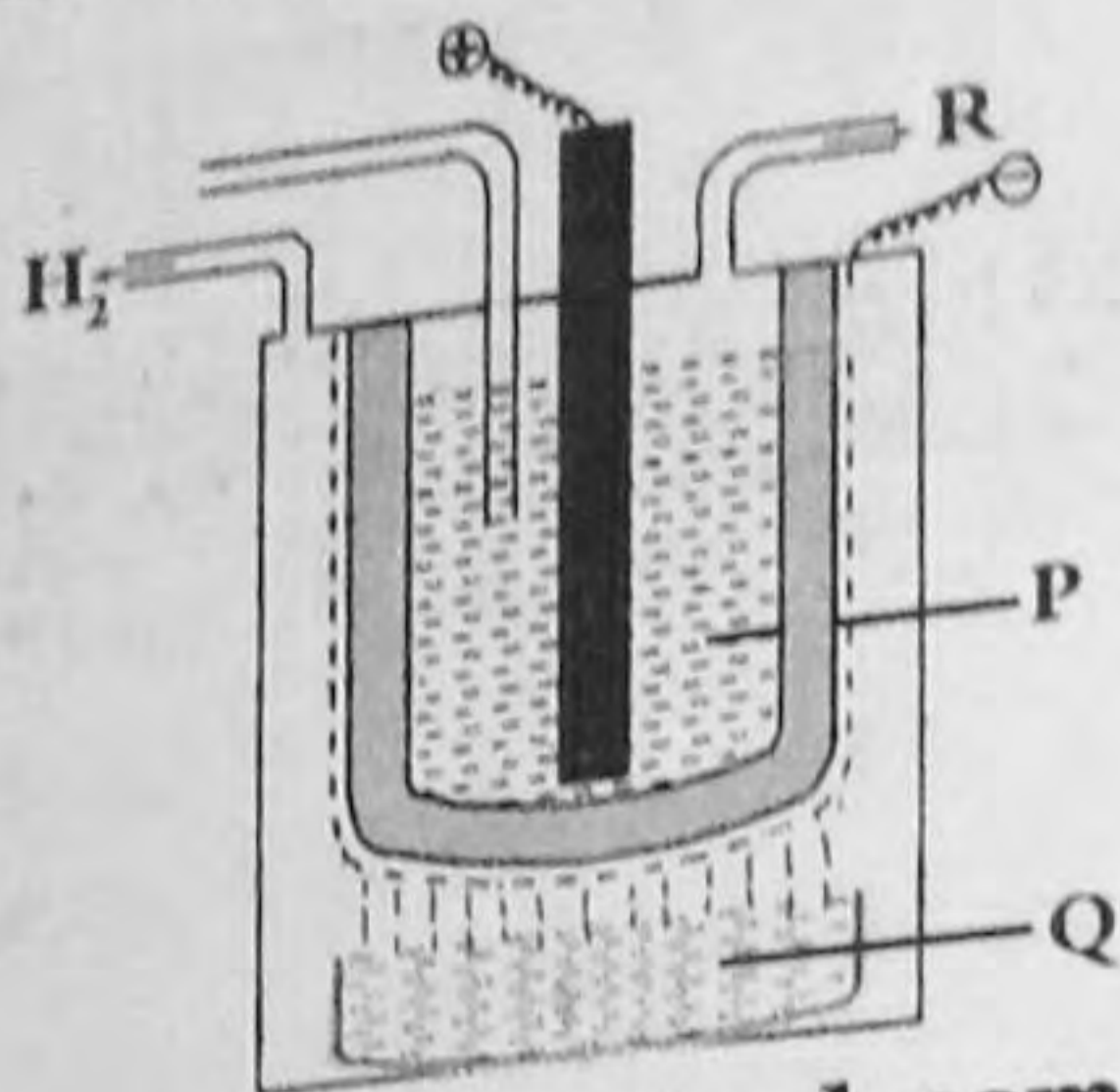
57 Below equation represents the reaction between an acid and a metal carbonate:



What are 'X' and 'Y'?

	X	Y
(A)	NaOH	CO <sub>2</sub>
(B)	NaCl	O <sub>2</sub>
(C)	Na <sub>2</sub> O	O <sub>2</sub>
(D)	NaCl	CO <sub>2</sub>

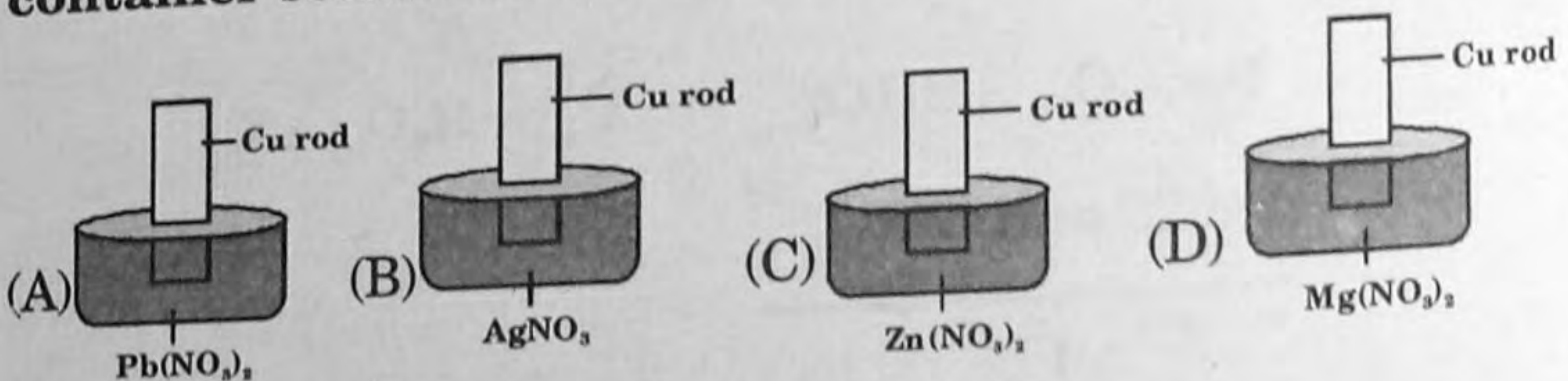
The arrangement of Nelson cell electrolysis is given below.



In the above electrolytic method, compound 'P' undergoes electrolysis and gives 'Q' and 'R' at respective electrodes. 'R' can be used in the preparation of PVC, CFC and in swimming pools. 'Q' can be used in preparing soaps and detergents. What are P, Q and R?

	P	Q	R
(A)	$\text{NaHCO}_3$	$\text{Na}_2\text{CO}_3$	$\text{CO}_2$
(B)	$\text{NaOH}$	$\text{Cl}_2$	$\text{NaCl}$
(C)	$\text{NaCl}$	$\text{NaOH}$	$\text{Cl}_2$
(D)	$\text{Na}_2\text{CO}_3$	$\text{H}_2\text{O}$	$\text{CO}_2$

59 Four colourless salt solutions are placed in separate containers and a copper rod is dipped in each. In which container solution turns blue?



60 Study the given reaction.



Which of the following statements is correct regarding the given reaction?

- (A)  $\text{I}_2$  is oxidant  
 (B)  $\text{I}_2$  is reduced  
 (C)  $\text{HNO}_3$  is oxidised  
 (D)  $\text{HNO}_3$  is reduced

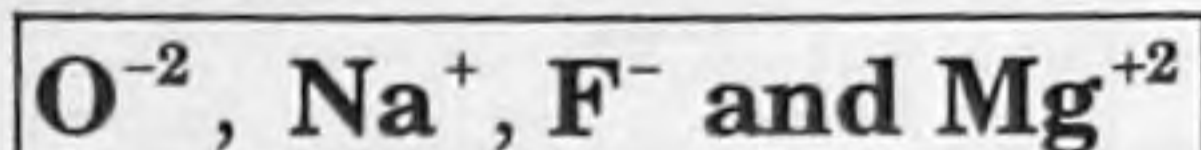
**61** In an accident at a factory, some nitric acid was split. Which substance, when added in excess, would neutralise the acid without leaving an alkaline solution?

- (A) Aqueous ammonia (B) Aqueous sodium hydroxide  
(C) Calcium carbonate (D) Water

**62** An element having atomic number 34 is placed in which group and period in the modern periodic table?

- (A) Group 15 and 4th period (B) Group 16 and 5th period  
(C) Group 14 and 7th period (D) Group 16 and 4th period

**63** The correct order of ionic radius for the following ions is:



- (A)  $\text{Na}^{+} > \text{Mg}^{+2} > \text{O}^{-2} > \text{F}^{-}$  (B)  $\text{F}^{-} > \text{Mg}^{+2} > \text{O}^{-2} > \text{Na}^{+}$   
(C)  $\text{Mg}^{+2} > \text{Na}^{+} > \text{O}^{-2} > \text{F}^{-}$  (D)  $\text{O}^{-2} > \text{F}^{-} > \text{Na}^{+} > \text{Mg}^{+2}$

**64** Which of the following ore is subjected to roasting in the concentration of ore procedure?

- (A) Oxide ores (B) Silicate ores  
(C) Sulphide ores (D) Carbonate ores

**65** Identify the correct ratio of the hydrogen atoms present in propane and propyne.

- (A) 1 : 2 (B) 2 : 1 (C) 3 : 2 (D) 2 : 3

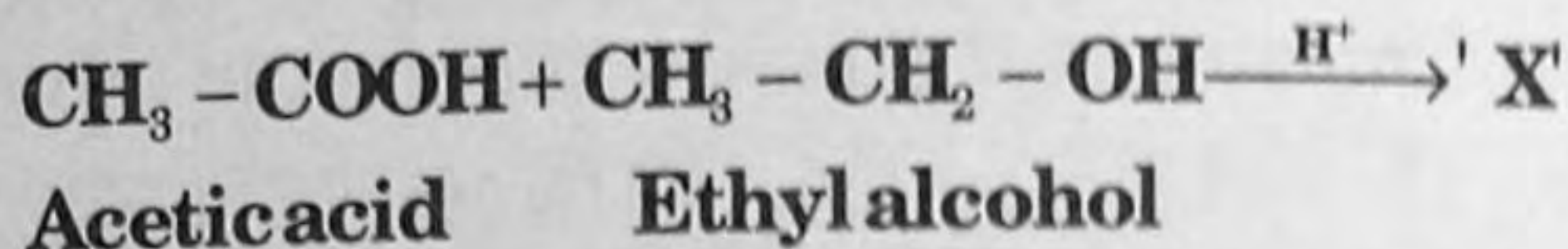
**66** Which of the following statements is NOT correct?

- (A) Soap acts by forming micelles and trapping the fat within the micelles.  
(B) Soap molecules work as a bridge between polar water molecules and non-polar oil molecules.  
(C) Soap is formed by physical change when fats are heated.  
(D) Soap is an emulsifier.

**67** Which of the following statements is/are correct about C-60?

- (A) It looks like foot ball  
 (B) It is also called as Buckminster fullerene  
 (C) It has hexagonal ring structure  
 (D) Both (A) and (B)

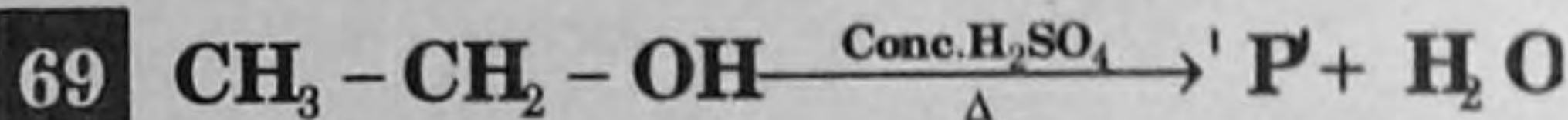
**68** The reaction between ethyl alcohol and ethanoic acid is given as:



(i) How many moles of 'X' will be produced when 1 mole of  $\text{C}_2\text{H}_5\text{OH}$  mixed with 1 mole of  $\text{CH}_3\text{COOH}$  in the presence of acid.

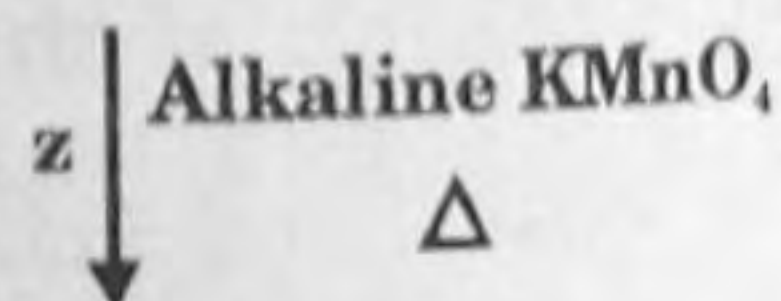
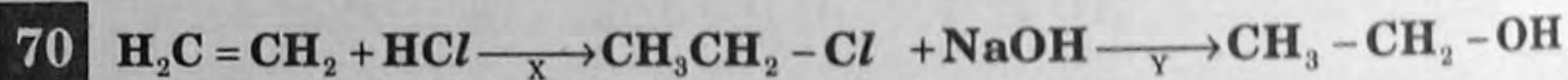
(ii) What is compound 'X'?

	(i)	(ii)
(A)	2 moles	Propanoic acid
(B)	1 mole	Butanoic acid
(C)	3 moles	Ester
(D)	1 mole	Ester



What is 'P'?

- (A)  $\text{CH}_3 - \text{CH}_3$  (B)  $\text{CH}_2 = \text{CH}_2$  (C)  $\text{CH} \equiv \text{CH}$  (D)  $\text{CH}_3 - \text{CH}_2 = \text{CH}_2$



$\text{CH}_3\text{COOH}$   
Acetic acid

What type of organic reactions X, Y and Z should be involved in the conversion of ethylene to acetic acid?

	X	Y	Z
(A)	Addition	Substitution	Oxidation
(B)	Oxidation	Substitution	Addition
(C)	Substitution	Oxidation	Addition
(D)	Substitution	Addition	Oxidation



- 71** The information below lists the steps involved to test for the presence of starch in a leaf.

P - Boil the leaf in alcohol in a water bath  
Q - Add iodine solution  
R - Wash the leaf in hot water  
S - Boil the leaf in water

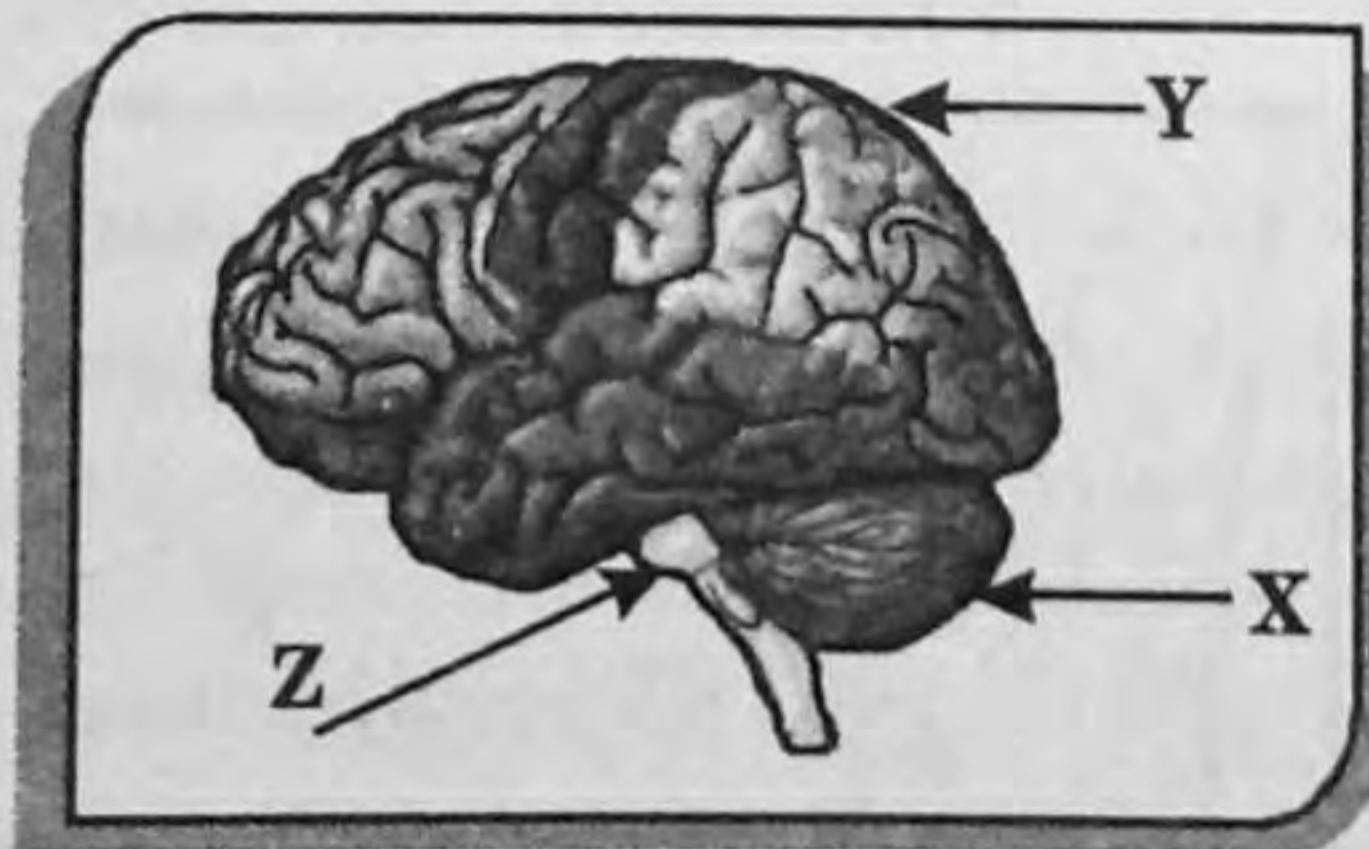
Which of the following sequences is correct to test for the presence of starch in a leaf?

- (A) S, Q, R and P  
(B) P, S, Q and R  
(C) Q, R, P and S  
(D) S, P, R and Q
- 72** The flowchart given below shows one of the pathway of glucose break-down.

Glucose  $\xrightarrow{\text{In cytoplasm}}$  P  $\xrightarrow{\text{In muscle cell}}$  Q + Energy

Identify P and Q.

- (A) P - Ethanol , Q - Carbon dioxide  
(B) P - Pyruvate, Q - Carbon dioxide  
(C) P - Pyruvate, Q - Lactic acid  
(D) P - Ethanol, Q - Pyruvate
- 73** Figure given below shows the structure of the human brain.



Predict what will happen if part X is injured?

- (A) Breathing will be affected
- (B) The person will not be able to think rationally
- (C) Coordination and stability of the body will be adversely affected
- (D) The person will not be able to move

**74** Which of the following is true about the digestion of food in the mouth?

	Enzyme in the mouth	Food digested in the mouth
(A)	Amylase	Protein
(B)	Protease	Protein
(C)	Lipase	Fat
(D)	Amylase	Starch

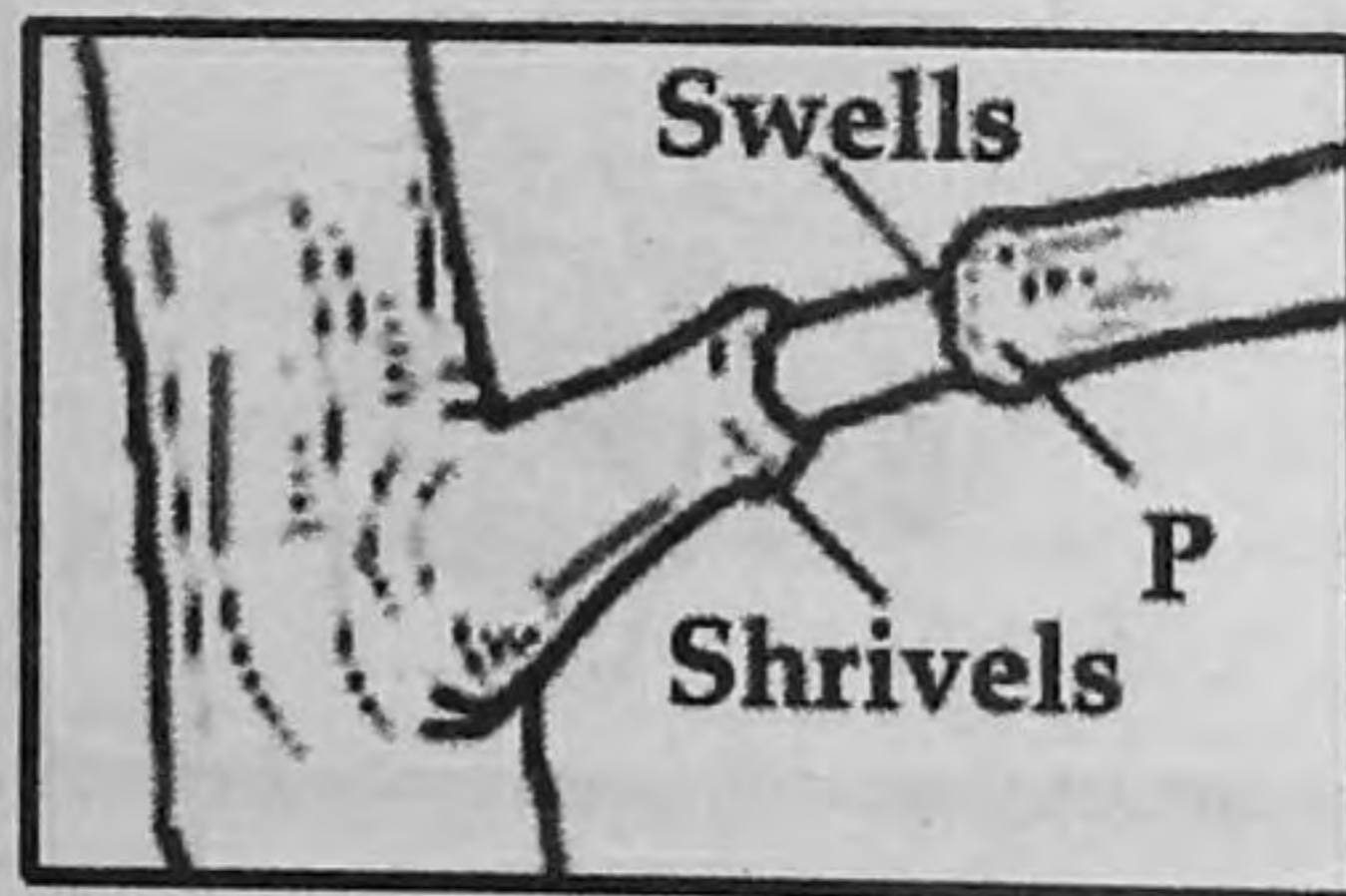
**75** Two tall plants with heterozygous alleles as shown below are crossed.

$$Tt \times Tt \text{ (T = Tall, t = Dwarf)}$$

Predict the phenotypic ratio of the  $F_1$  generation from the following:

- (A) 3 tall : 1 dwarf
- (B) 2 tall : 2 dwarf
- (C) 1 tall : 3 dwarf
- (D) 4 tall : 0 dwarf

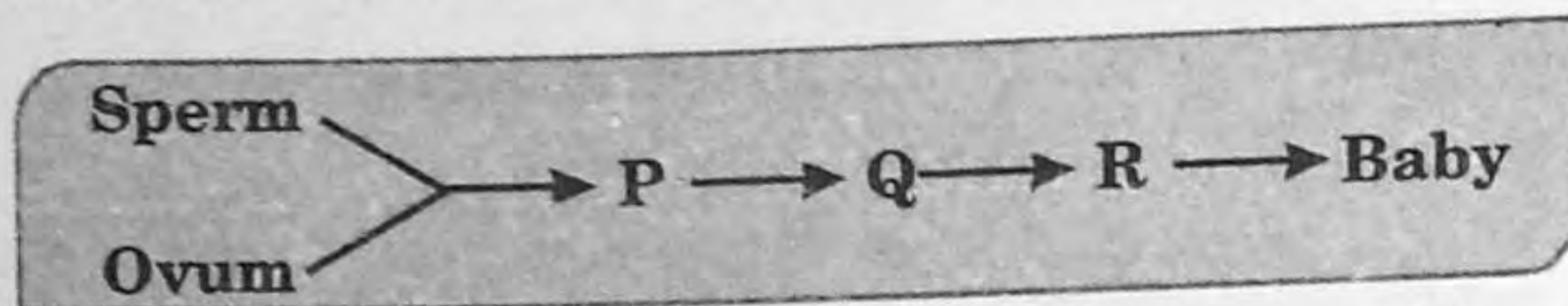
**76** The figure given below shows girdling experiment.



The portion 'P' of the stem in figure swells after a few days this happens because of:

- (A) accumulation of toxic wastes at P
- (B) accumulation of water at P
- (C) accumulation of food at P
- (D) rapid multiplication of cells

**77** Figure given below shows the stages of development after fertilisation has taken place in the oviduct.



Which of the following represent P, Q and R?

	P	Q	R
(A)	Embryo	Zygote	Foetus
(B)	Zygote	Embryo	Foetus
(C)	Foetus	Zygote	Embryo
(D)	Zygote	Foetus	Embryo

**78** Which of the following human activities is considered as the conservation of living things?

- (A) Felling trees to build houses
- (B) Killing animals for their skin
- (C) Replanting trees that are cut down
- (D) Digging drains for water to flow

**79** In a population of mice, some with light-coloured fur and some with dark-coloured fur, are introduced into a field with dark soil. A few generations later, the majority of the mice have dark-coloured fur. Which of the following statements best explains this change?

- (A) Light-coloured mice can run faster
- (B) Dark-coloured mice have fewer offspring
- (C) Light-coloured mice have changed colour over generations
- (D) Dark-coloured mice are better able to hide from their predators

**80** The information given below refers to the Endocrine gland:

- Secreted by endocrine glands located on top of the kidneys
- Converts glycogen into glucose
- Deficiency can cause Addison's disease

Identify the hormone.

- (A) Adrenal (B) Pancreas  
(C) Progesterone (D) Thyroid

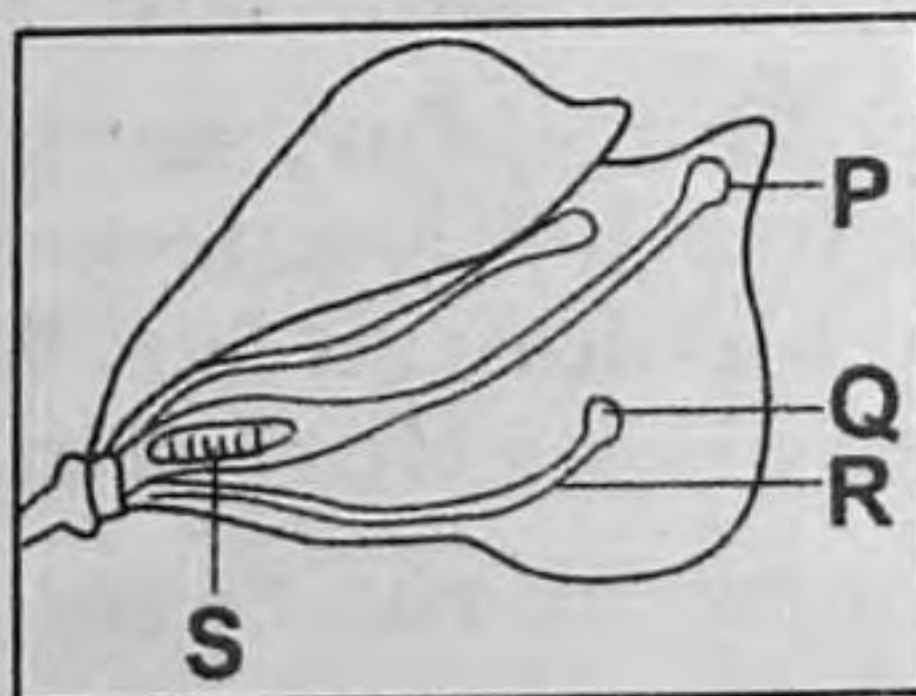
**81** The table given below shows a list of organisms and their methods of reproduction.

Organism	Method of reproduction
Sponges	P
Planaria	Q
Hydra	R

What do 'P', 'Q' and 'R' represent?

- (A) P - Fission, Q - Gemmules, R - Regeneration  
(B) P - Sporulation, Q - Regeneration, R - Budding  
(C) P - Binary fission, Q - Sporulation, R - Gemmules  
(D) P - Gemmules, Q - Regeneration, R - Budding

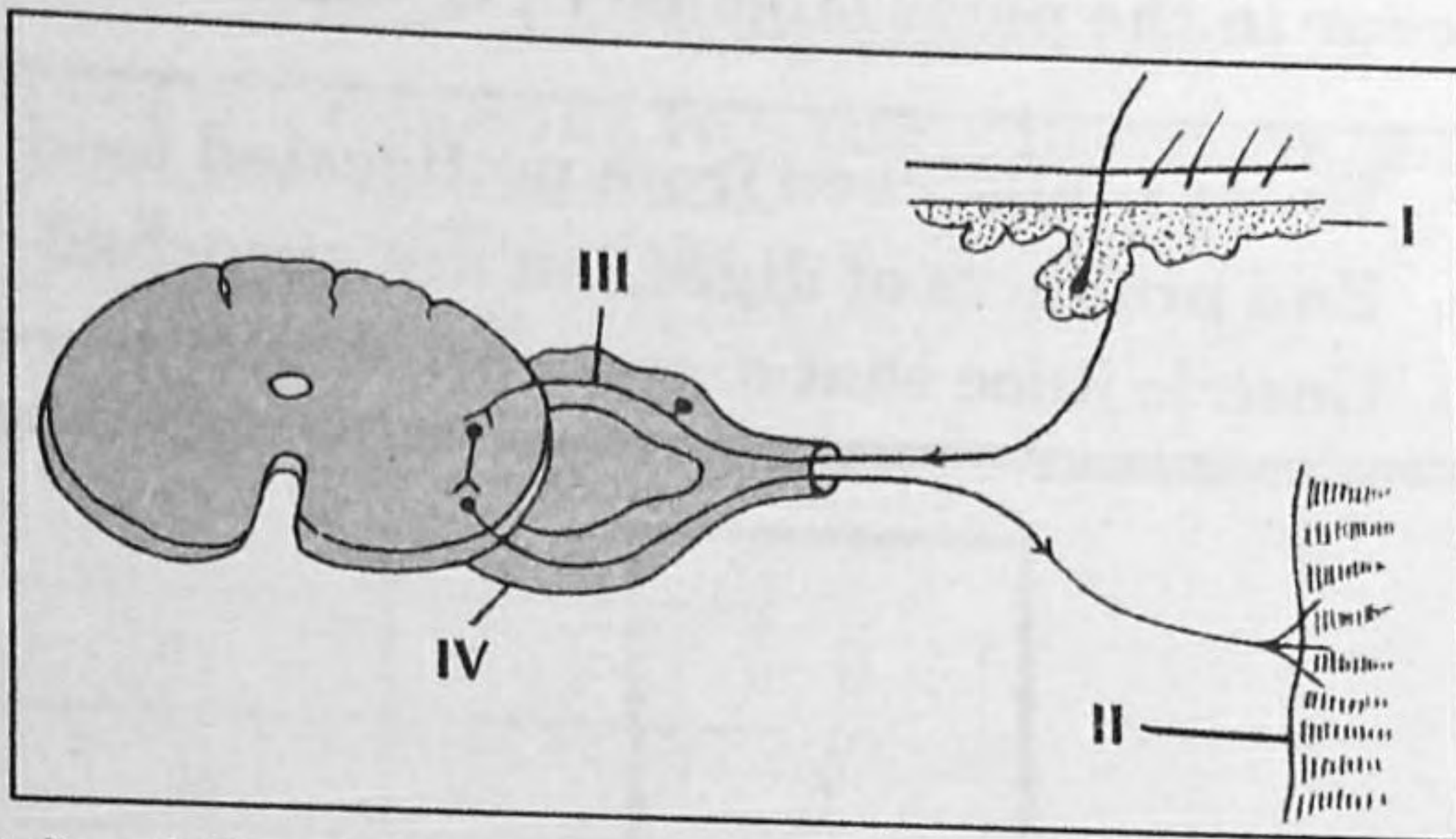
**82** The figure given below shows the cross section of a flower.



Which of the following parts of the flower produce male and female reproductive cells?

	Male reproductive cell	Female reproductive cell
(A)	P	Q
(B)	P	S
(C)	R	P
(D)	Q	S

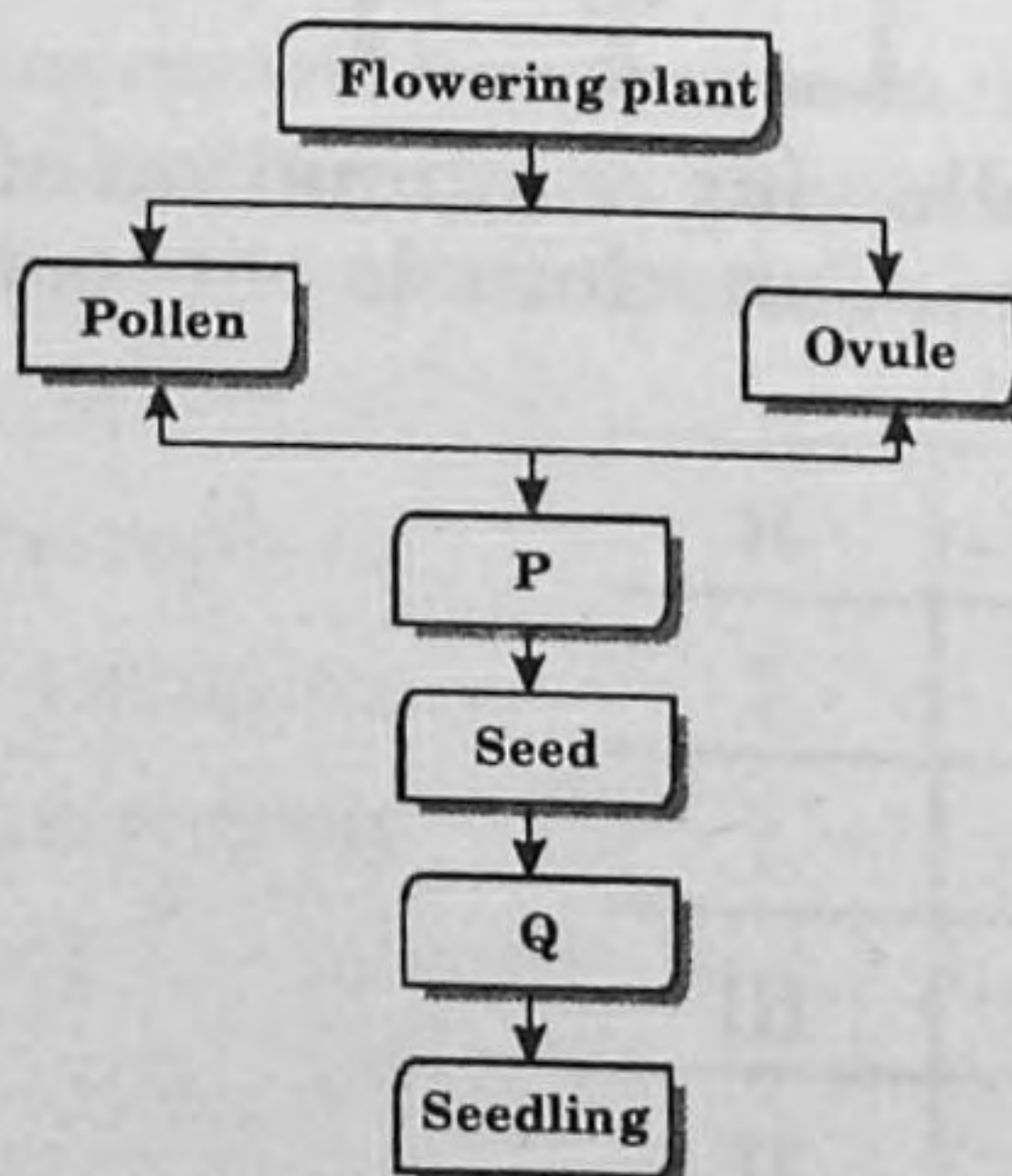
**83** The figure given below shows reflex arc.



Which of the following is a receptor?

- (A) I                      (B) II                      (C) III                      (D) IV

**84** Observe the flow chart showing a part of the life cycle of a flowering plant given below.

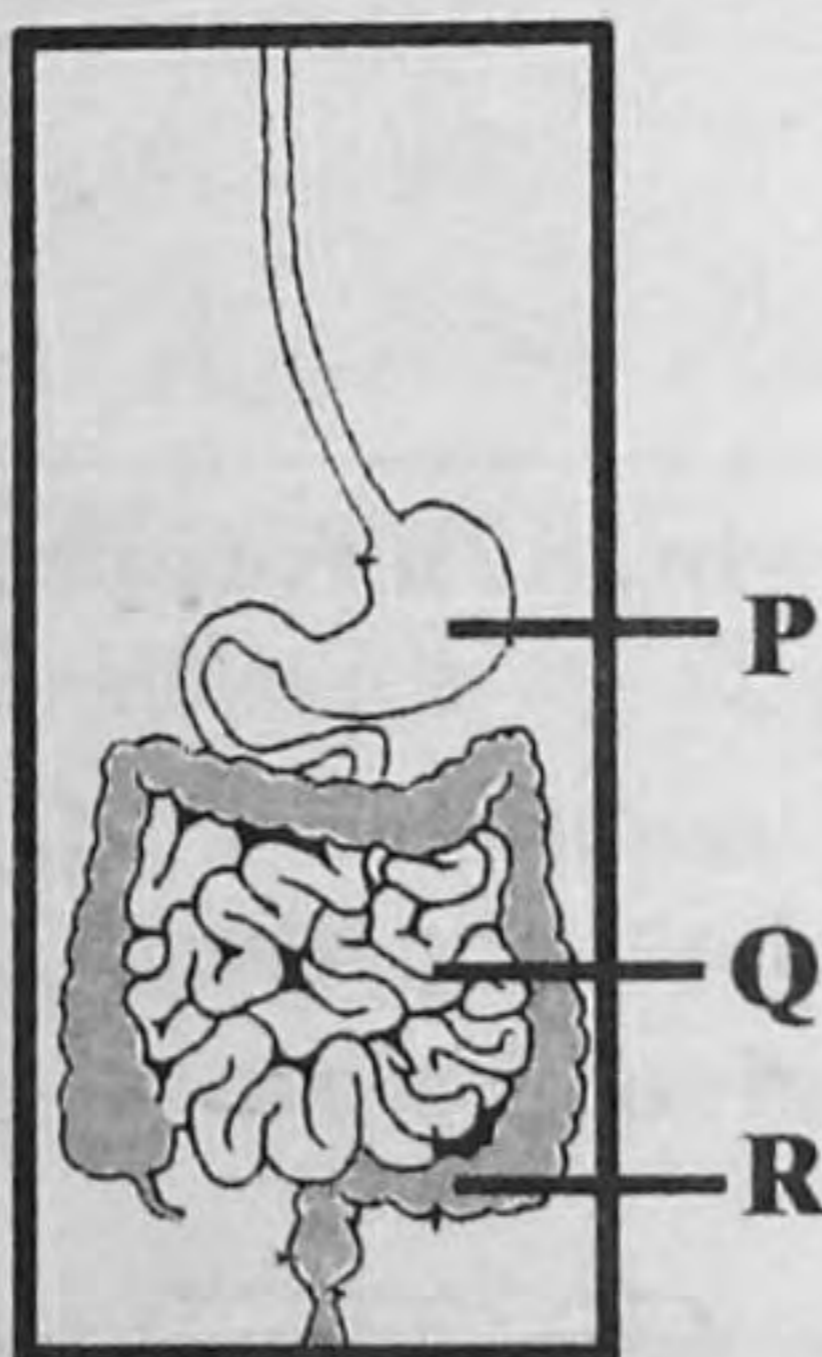


Which of the following processes represents P and Q?

	P	Q
(A)	Fertilisation	Pollination
(B)	Pollination	Fertilisation
(C)	Dispersal	Germination
(D)	Fertilisation	Germination

**85** In the given human digestive system, processes I, II and III occur in the parts labelled P, Q and R.

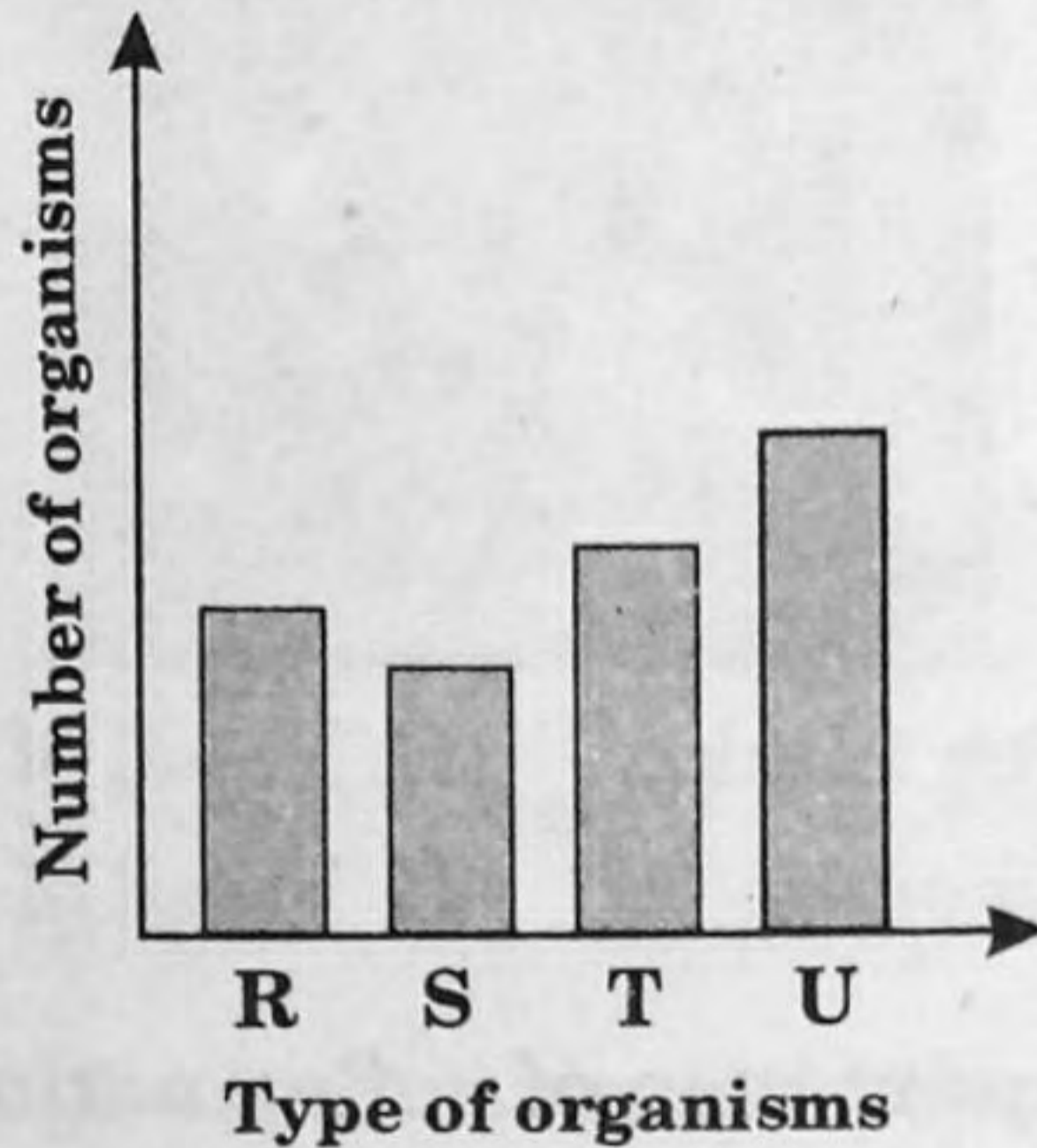
- I. Water is absorbed from undigested food
- II. End products of digestion are absorbed
- III. Gastric juice that digests protein is secreted



Which of the following combination of organs of digestive system and their functions is correct?

	P	Q	R
(A)	II	III	I
(B)	III	II	I
(C)	II	I	III
(D)	III	I	II

- 86** The graph given below shows the number of living things R, S, T and U in a habitat.



Which of the following regarding the graph is correct?

	Producer	Teritiary consumer
(A)	R	T
(B)	S	R
(C)	U	S
(D)	R	U

- 87** The information below shows the response of a part of a plant is:

- To get water and mineral salts from the soil.
- To anchor itself in the soil.

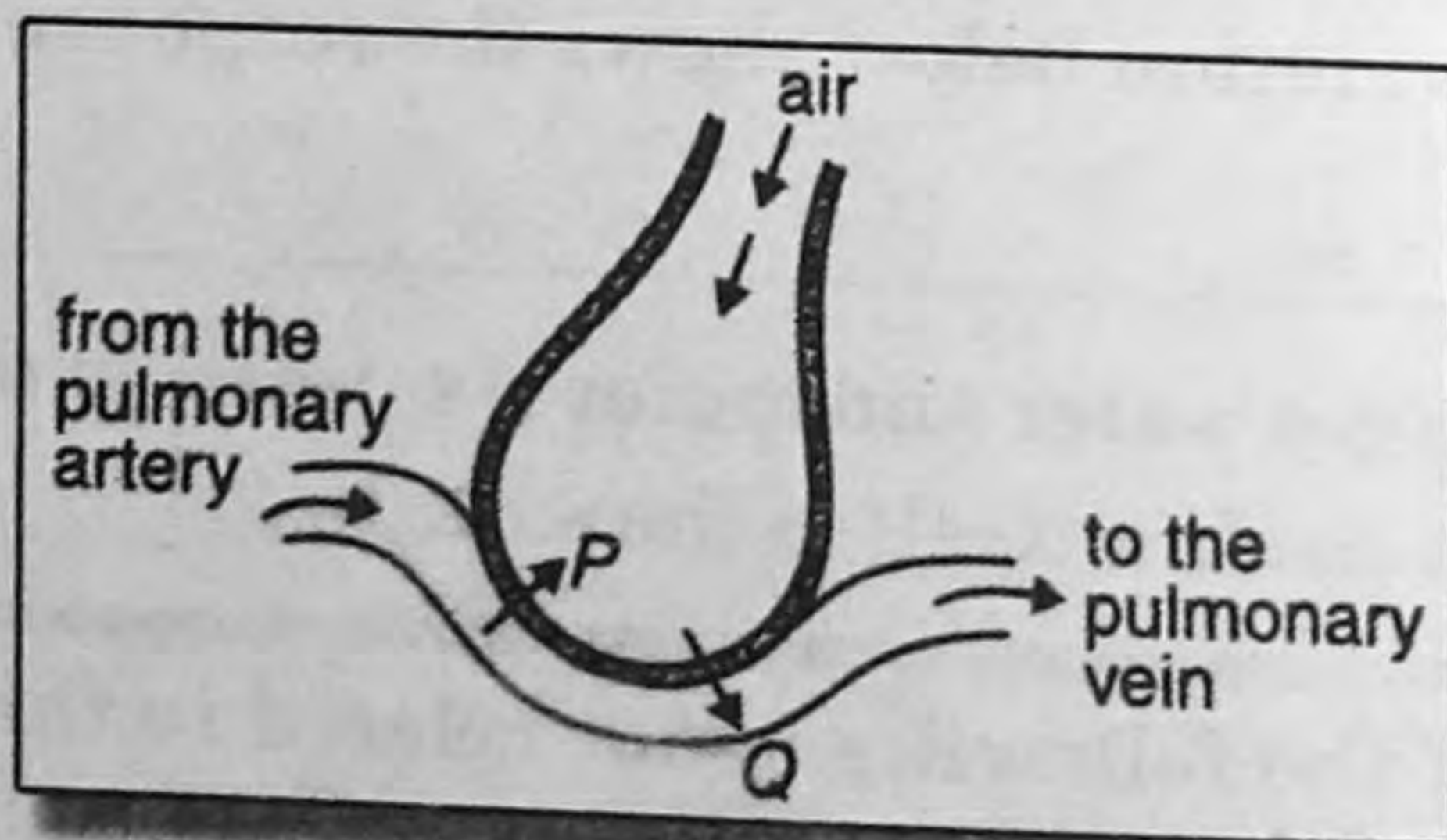
Which of the following is not related to the functions of the part of the plant mentioned above?

- (A) Positive geotropism  
 (B) Positive phototropism  
 (C) Negative phototropism  
 (D) Positive hydrotropism

- 88 Preserved traces of living organisms are called fossils. What type of fossil is shown in the given figure ?



- (A) Fossil of a tree trunk      (B) Fossil of Trilobite  
(C) Fossil of Ammonite      (D) Fossil of Knightia
- 89 What is the importance of reflex action?
- (A) Protect the body from serious damage by quick automatic responses towards stimuli.  
(B) Enable a person to climb the stairs without looking.  
(C) Enable a person to protect himself from attack by using self defence techniques.  
(D) Enable a person to choose his actions according to his will.
- 90 Figure given below shows the exchange of gases taking place between an alveolus and a capillary.



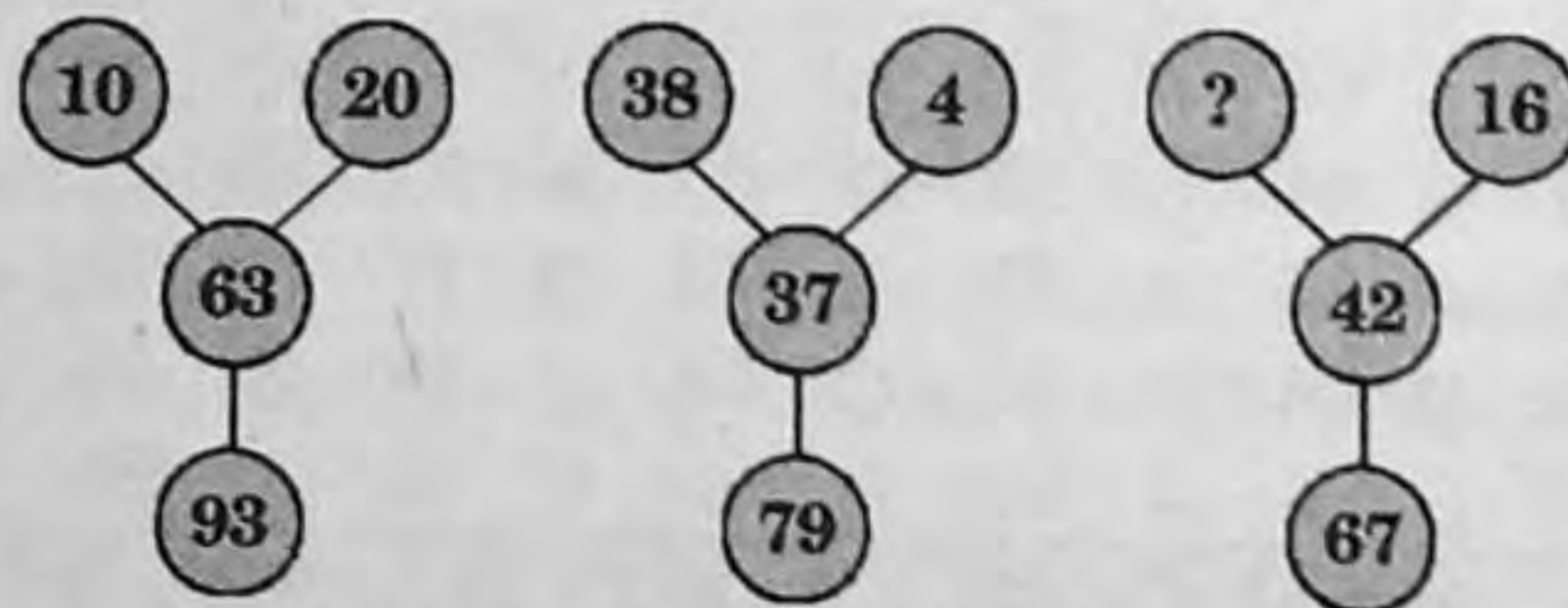
The gas 'P' in the given figure can:

- (A) turn lime water milky  
(B) ignite a glowing splinter  
(C) cool the filament of a bulb  
(D) be used to fill a meteorological balloon



- 91** The term 'Fourth Estate' refers to:  
 (A) Judiciary (B) Press (C) Tea estate (D) Real estate
- 92** February 28 is celebrated as:  
 (A) Postal day (B) Navy day (C) Science day (D) Youth day
- 93** The 'Baht' is the monetary unit of which country?  
 (A) Bangladesh (B) Thailand (C) China (D) Myanmar
- 94** In which city is the Indian Naval Academy situated?  
 (A) Mumbai (B) Ezhimala (C) Kozhikhode (D) Thrissur
- 95** How many rings are entwined in the olympic emblem?  
 (A) 3 (B) 4 (C) 5 (D) 7
- 96** Which Indian born scientist received the Nobel Prize for his work on interpreting the genetic code in 1968?  
 (A) Dr. Jagdish Chandra Bose (B) Dr. Har Gobind Khorana  
 (C) Sir. C.V. Raman (D) Dr. S. Chandra Shekar
- 97** Which of the following is an interactive programming language?  
 (A) COBOL (B) FORTRAN (C) PASCAL (D) BASIC

- 98** Find the missing number in the given series.



- (A) 5 (B) 6 (C) 8 (D) 9

- 99** Where are the head quarters of the Amnesty International?  
 (A) Geneva (B) Paris (C) London (D) New York
- 100** Which fort did emperor Babur describe as 'The pearl amongst the fortresses of hind'?  
 (A) Jaipur Fort (B) Golconda Fort  
 (C) Red Fort (D) Gwalior Fort