

ANSWERS (LABELLING)

1. (a) X : Objective lens
Y : Diaphragm
Z : Mirror

(b)

Part	Function
Y	To control the amount of light entering the lens
X	To magnify specimens
Z	To reflect light into the objective lens

2. (a)
(b)

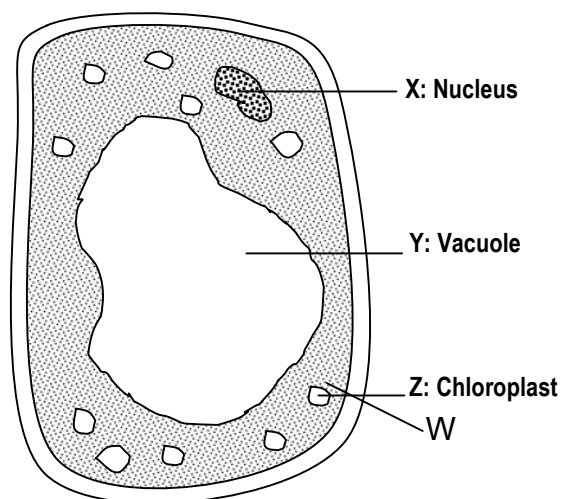


FIGURE 2

(c) Stores cell sap // Stores wastes materials// Stores water and dissolved minerals

3. (a)

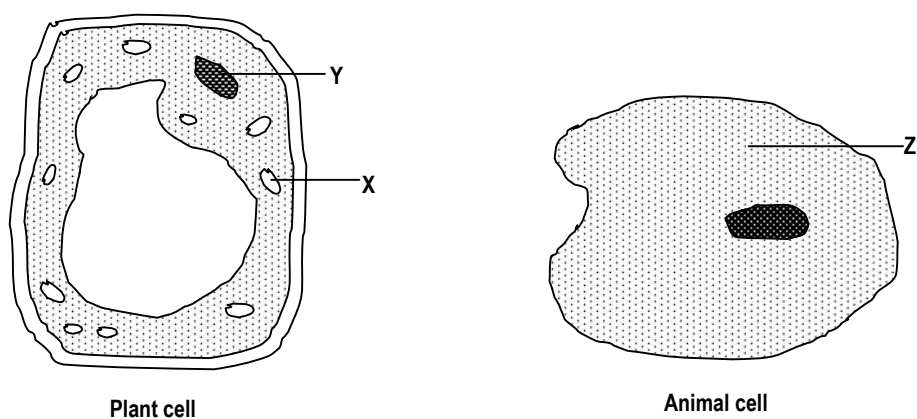


FIGURE 3

(b) State the functions of structures Y and Z and complete the table below.

Name of structure	Function of structure
Y	Controls the activities of the cell
Z	Stores nutrients // Carries out chemical processes in the cell

(c) i) nucleus / cytoplasm

ii) cell membrane

4. (a) X: Nerve cell
Y: Sperm cell
Z: Muscle cell

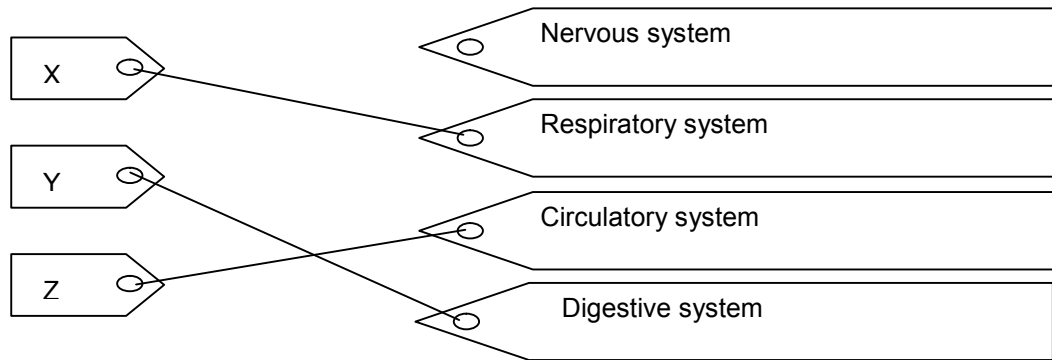
(b) To carry impulses around the body

(c) P: Tissue
Q: System

5. (a) X : Lungs
Y : Stomach
Z : Heart

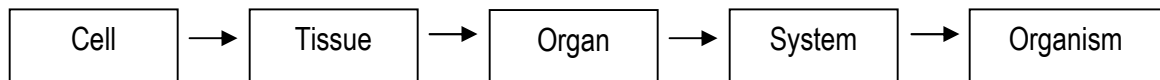
(b) Organs

Systems



[3 marks]

(c)

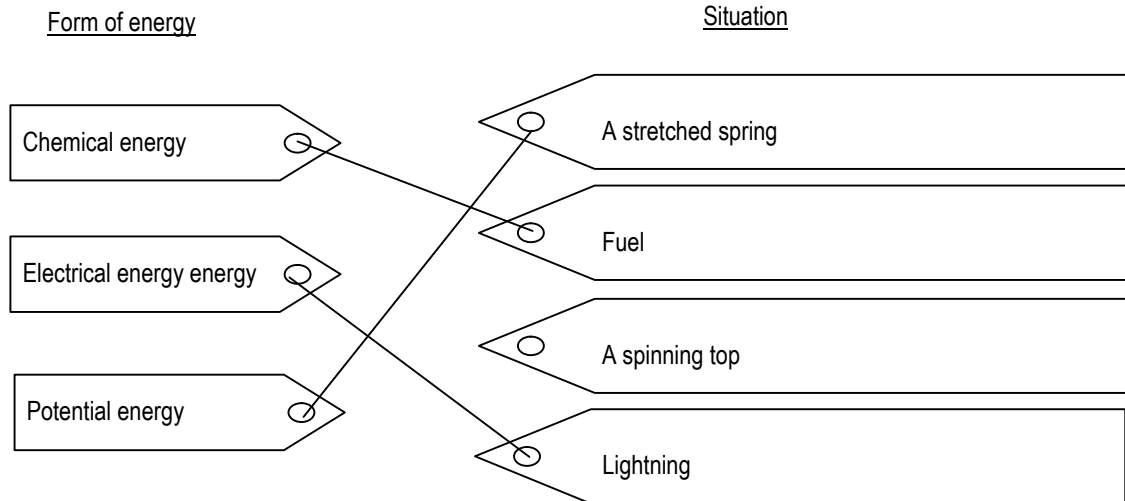


6. (a) X : Carbon dioxide
Y: Oxygen
Z : Nitrogen

(b) (i) Y
(ii) X

7. (a) Picture 1 – Sound energy
Picture 2 – Chemical energy
Picture 3 – Kinetic energy

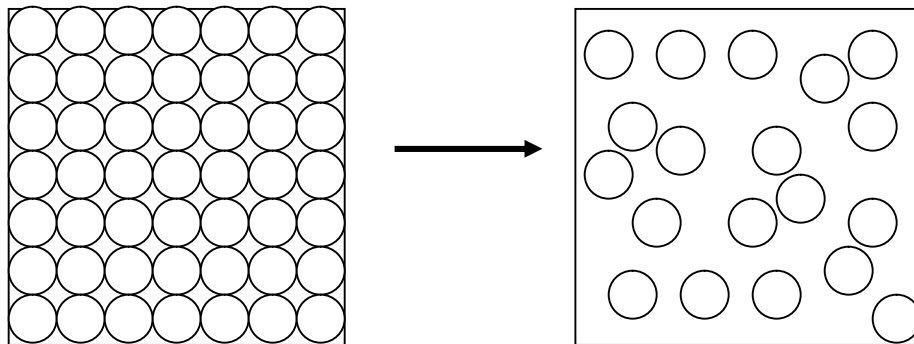
(b)



8. (a) X : Melting
Y : Condensation
Z : Sublimation

(b) Iodine crystals / ammonium chloride crystals / naphthalene/dry ice(solid carbon dioxide)

(c)



9. (a) X : Touch receptor
Y : Cold receptor
Z : Pressure receptor

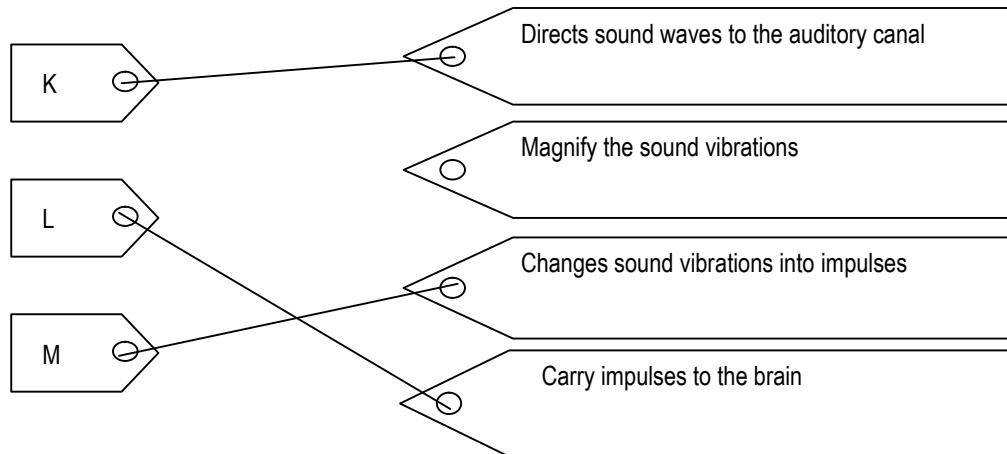
(b) Touch receptor

(c) There are more receptors at the finger tip // The epidermis of the finger tip is thinner

10. (a) K : Pinna
L : Auditory nerve
M : Cochlea

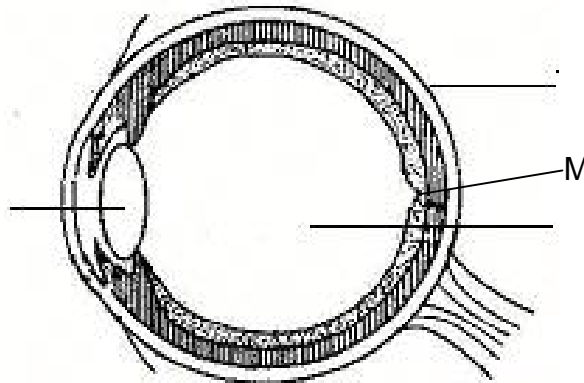
(b) Structure

Function



11. (a) X: Eye lens
Y: Sclera
Z: Vitreous humour

(b)



(c) Provides food and oxygen to the eye // Supply nutrients and oxygen to the eye // Prevent reflection of light inside the eye

(d) Iris

12. (a) P : Salty
Q : Sweet

(b)

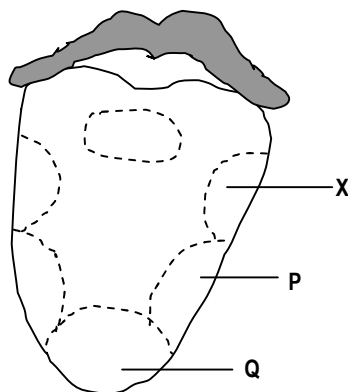


FIGURE 12

(c) Nose

- (d) The sensory receptors in the nose are not stimulated because there is too much mucus in the nose//The nose produces too much mucus and this prevents chemicals from stimulating the smell receptors.

13. (a)

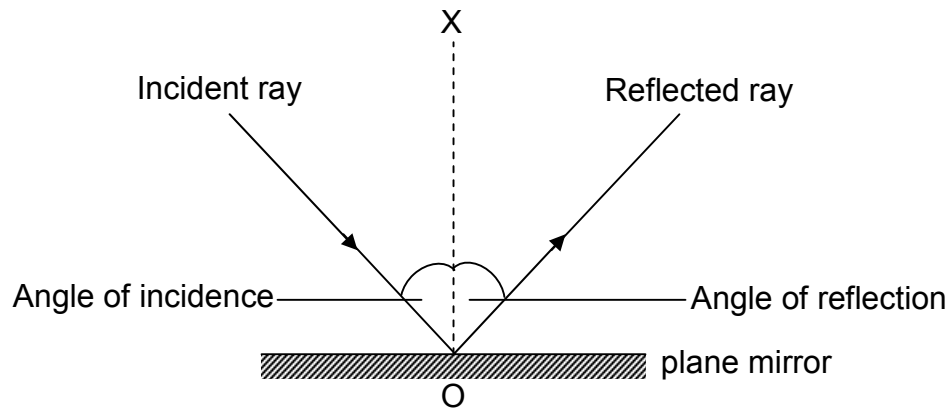


FIGURE 13.1

(b) Normal

(c) Upright // Same size as the object // Virtual // The distance of the image from the mirror is the same as the distance of the object from the mirror, laterally inverted

(d)

Binocular	Periscope	Spectacles
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14. (a) Refraction of light

(b)

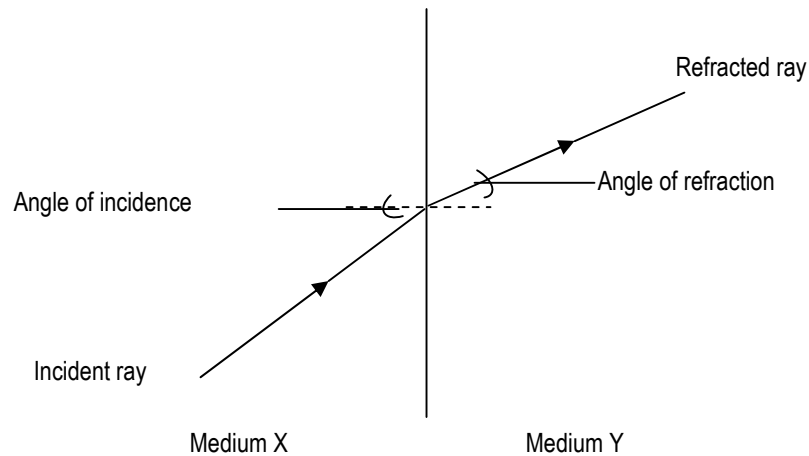


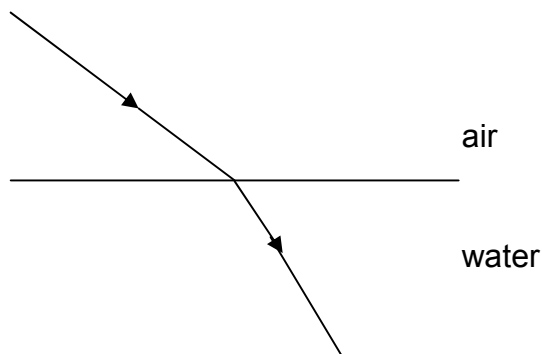
FIGURE 14.1

(c)(i) Medium Y

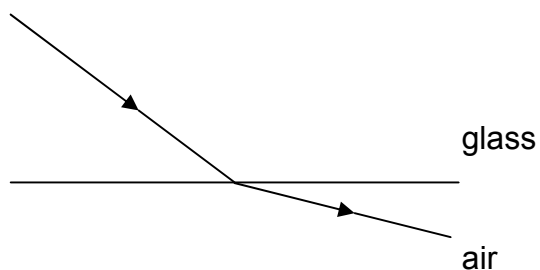
(ii) The refracted ray is bent towards the normal // The light is refracted towards the normal // The angle of refraction is smaller than the angle of incidence

(d) On Figure 14.2, draw the ray of light as it passes through two different mediums.

(i)



(ii)



(iii)

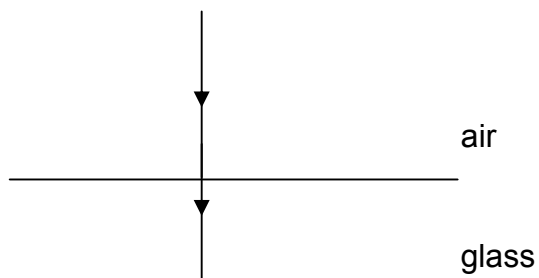


FIGURE 14.2

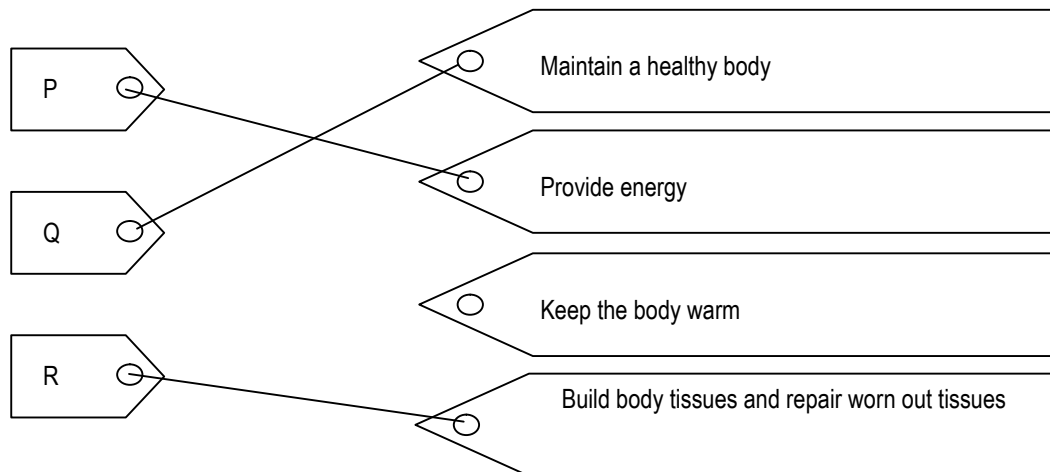
(e) A straw/stick/pencil half immersed in water appear bent at the water surface
A swimming pool/pond appears shallower than the actual depth
The star in the sky looks nearer than the actual distance

15. (a) P : Carbohydrates
Q : Vitamins
R : Protein

(b)

Classes of food

Function



16. (a) P: Oesophagus
Q: Stomach
R: Pancreas

(b)

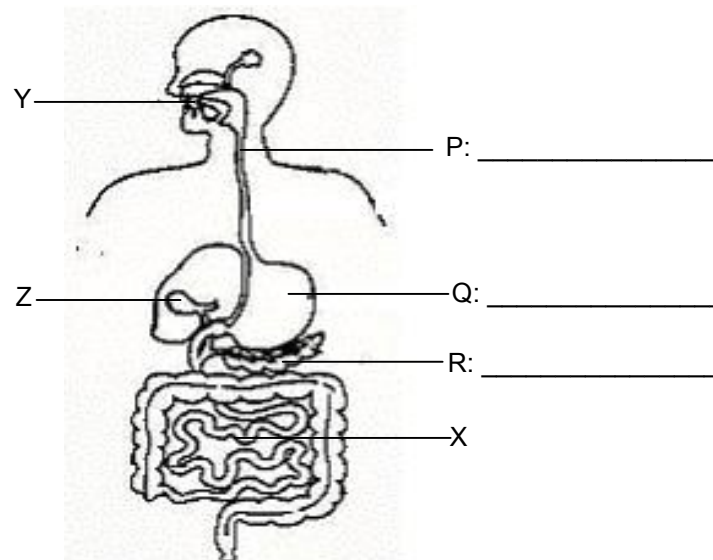


FIGURE 16

(c) Amylase. It converts starch into maltose

(d) Stores bile

17. (a) Picture 1 : Prey-predator
Picture 2 : Mutualism
Picture 3 : Parasitism

(b) Mutualism

(c) Prey-predator

18. (a)

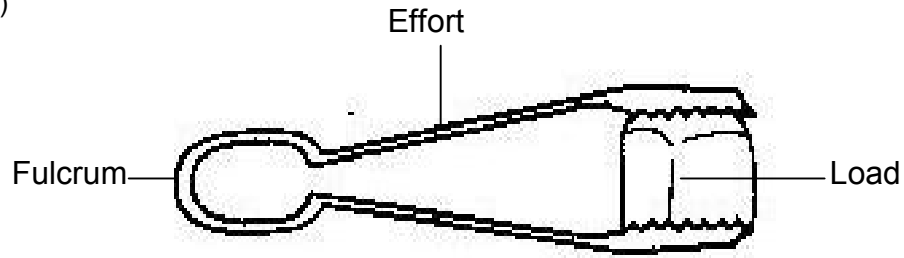


FIGURE 18.1

(b)(i) Third class lever

(ii) The effort is between the fulcrum and the load // The effort is in the middle.

(c)

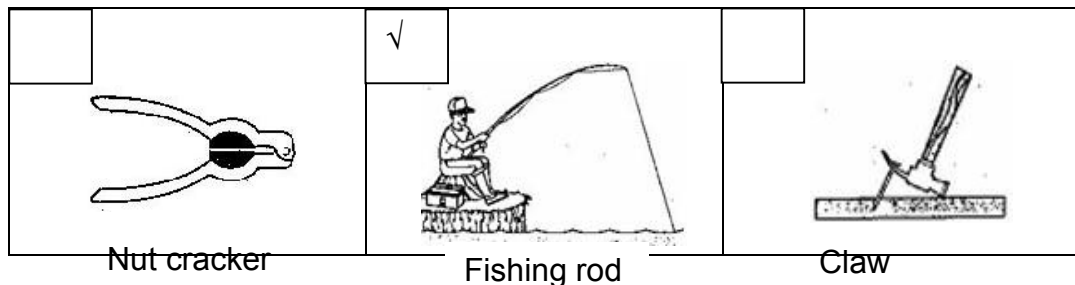


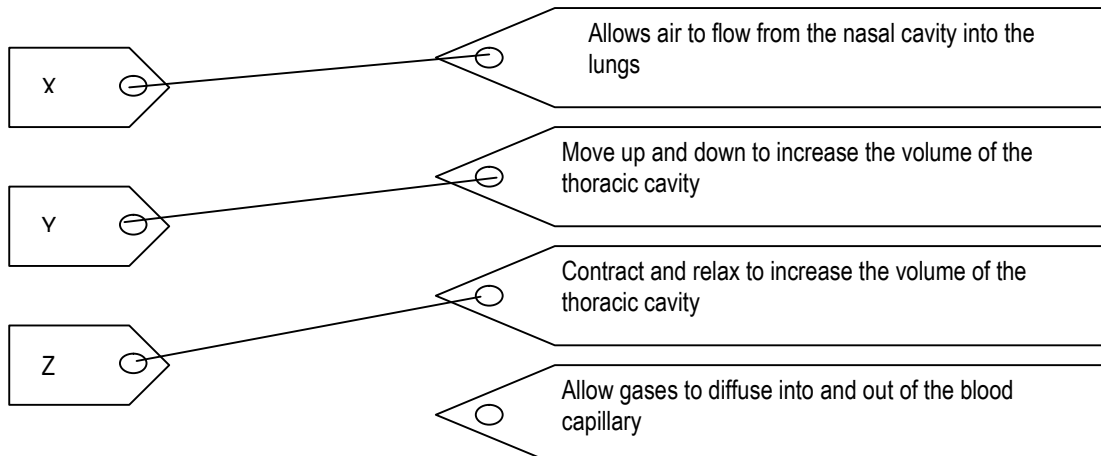
FIGURE 10.2

19. (a) X: Trachea
Y: Rib
Z: Diaphragm

(b)

Structure

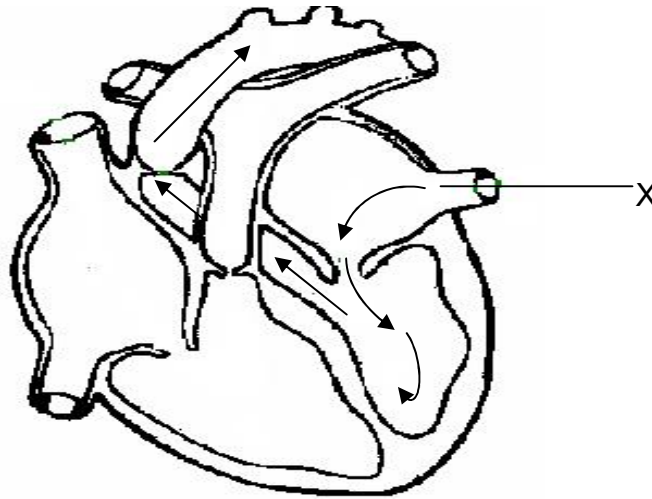
Function



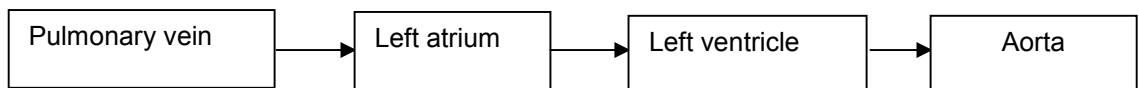
20. (a) P: Right atrium
Q: Left ventricle
R: Aorta

(b)

(c)

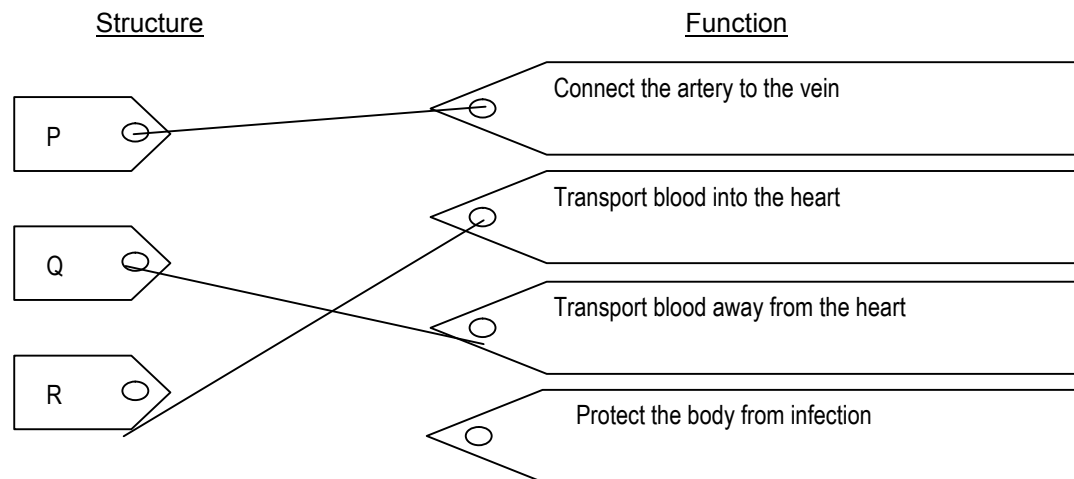


(d)



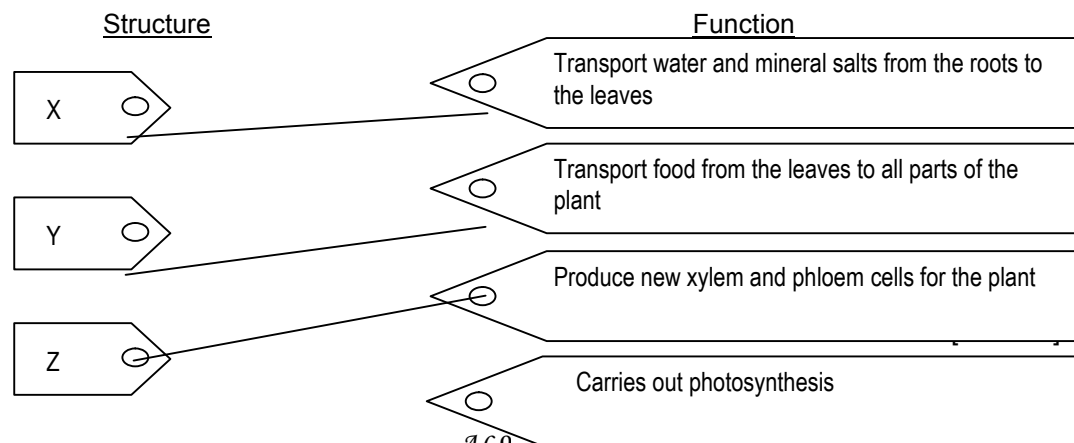
21. (a) P : Capillary
Q : Artery
R : Vein

(b)



22. (a) X : Xylem
Y : Phloem
Z : Cambium

(b)



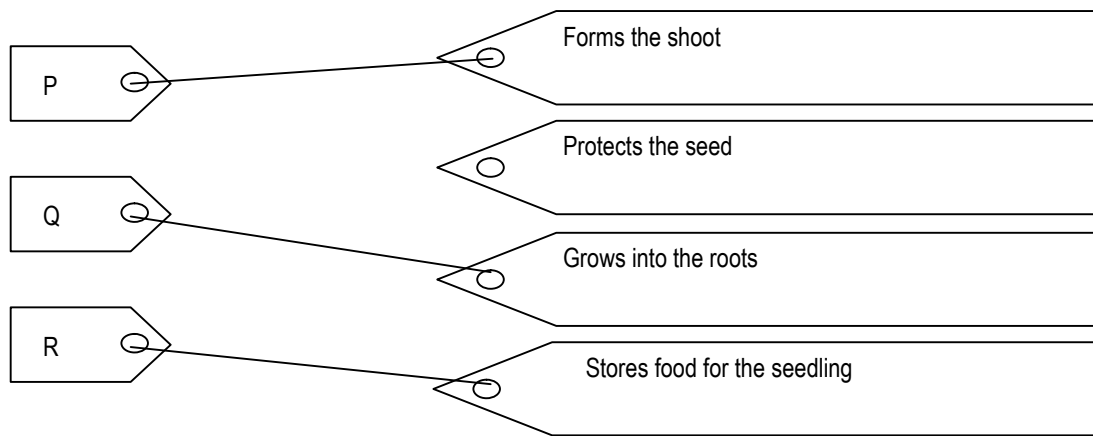
[2 marks]

23. (a) X : Cortex
Y : Medulla
R : Pelvis

(b) Urea, minerals salts and water

- (c) P carries oxygenated blood while Q carries deoxygenated blood //
Blood in P contains excretory wastes while blood in Q does not contain excretory wastes

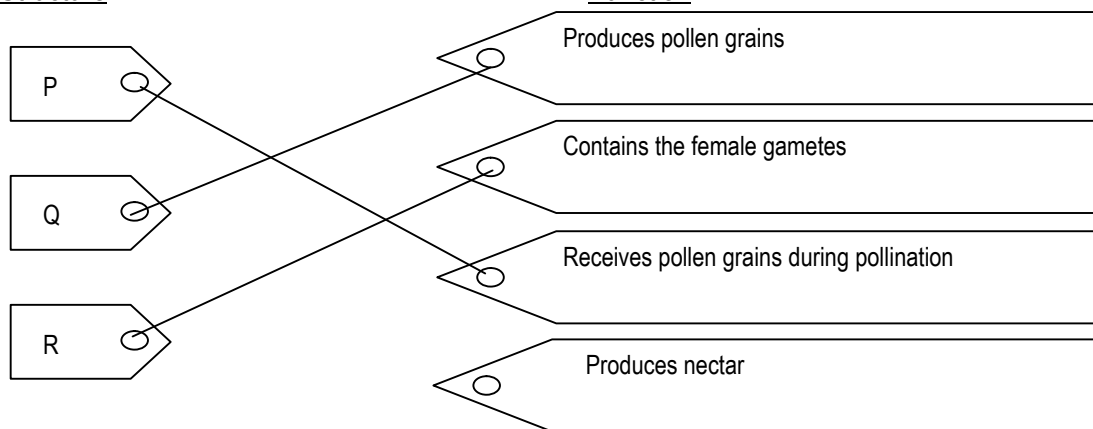
24. (a) P : Plumule
Q : Radicle
R : Cotyledon



25. (a) P : Stigma
Q : Anther
R : Ovule

(b) Structure

Function



26. (a)

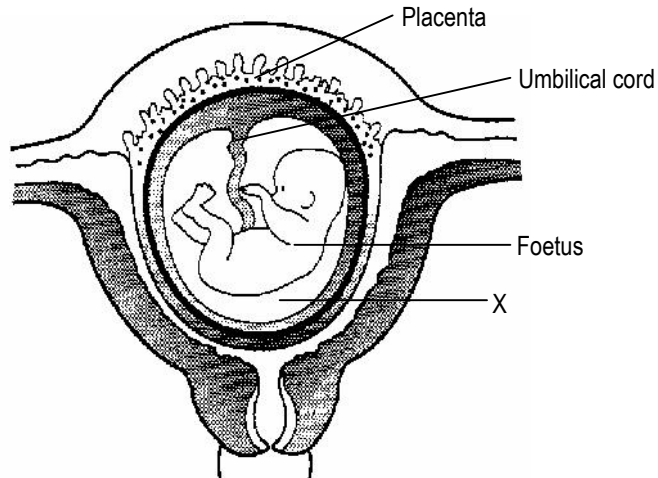
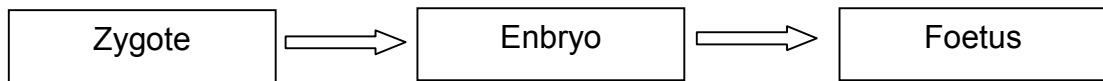


FIGURE 26

(b) Identify fluid X and state the function of X.

Fluid X	Function
Amniotic fluid	Protects the embryo/foetus from physical injury/shock

(c) Complete the sequence to show the stages in the development of a foetus



27. (a)

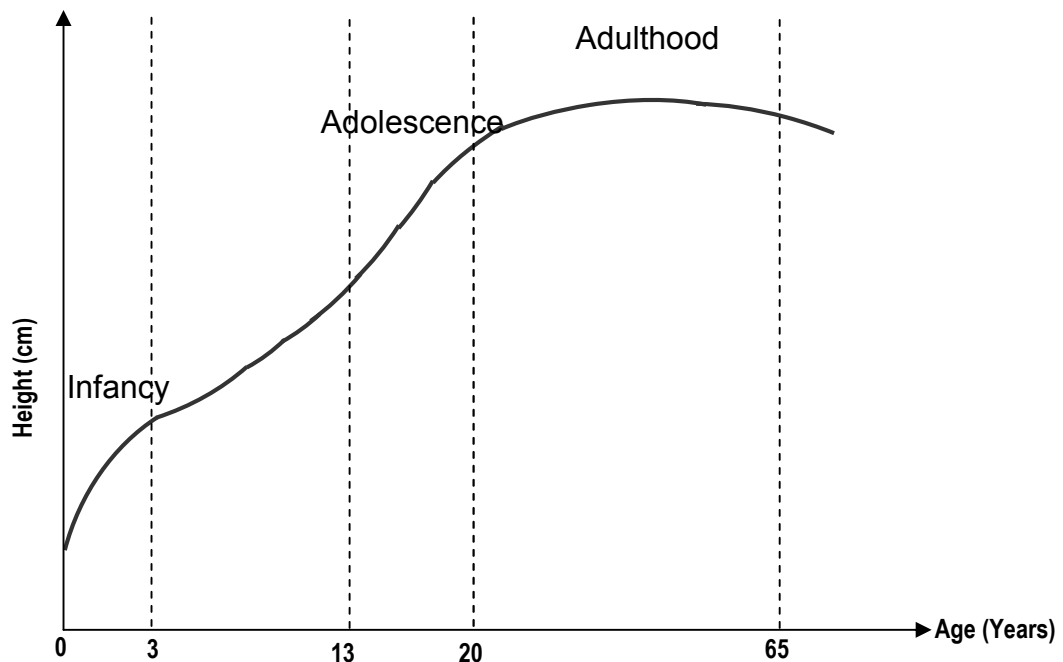


FIGURE 27

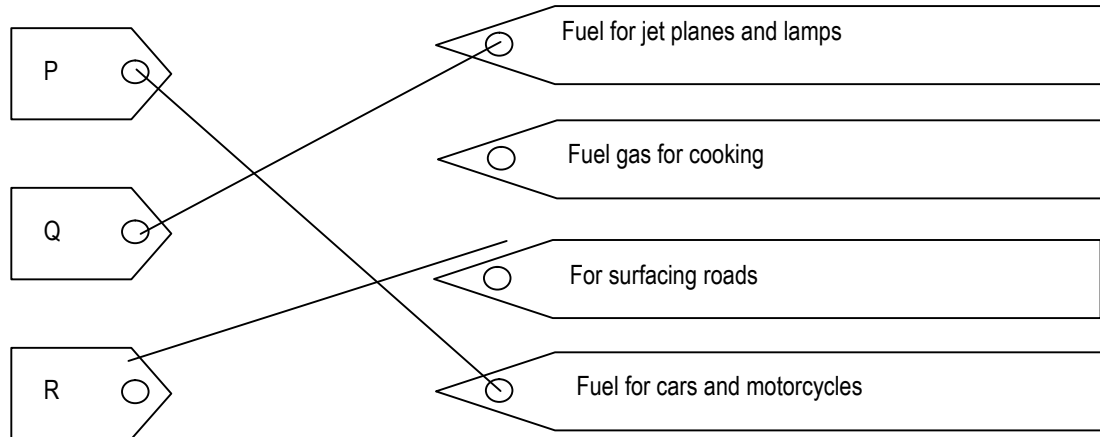
(b) Adulthood

(c) Girls reach puberty earlier than boys

28. (a) P: Petrol
Q: Kerosene
R: Bitumen

(b) Fraction

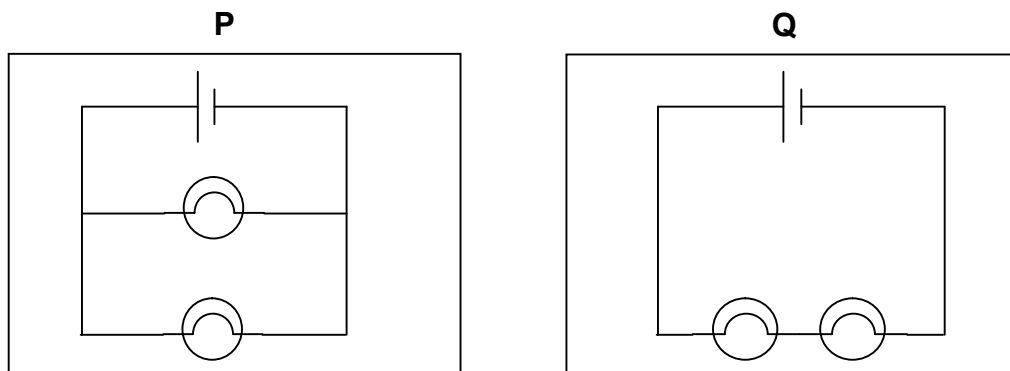
Uses



29. (a) P : Parallel circuit
Q : Series circuit

(b) Circuit P

(c)



30. (a) X: Irregular
Y : Spiral
Z: Elliptical

(b) Spiral

(c) A galaxy is an assembly of millions of stars / A system of stars