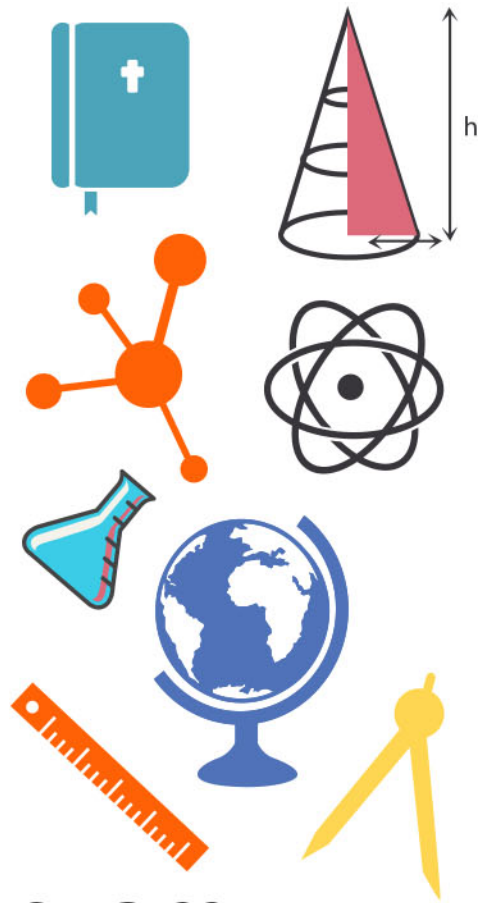


student **BJC** exam
Past Paper Booklet
Health
Science



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| SCHOOL No. | CANDIDATE No. |
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| INITIALS | SURNAME |
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**MINISTRY OF EDUCATION
BAHAMAS JUNIOR CERTIFICATE
EXAMINATION 2018**

0055 HEALTH SCIENCE

**PAPER I (MULTIPLE CHOICE ITEMS)
(40 Marks)**

Monday **4 June 2018** 1:00 P.M.–2:00 P.M.

INSTRUCTIONS TO CANDIDATES:

1. Write your school number, candidate number, surname and initials in the spaces provided at the top right hand side of this page.
2. For each question or item, there are four suggested answers – A, B, C and D. When you have selected an answer to a question or item, circle the letter of the answer you have selected.

FOR EXAMPLE:

What body system is responsible for transporting oxygen around the body?

- A the circulatory system
- B the excretory system
- C the immune system
- D the nervous system

3. If you want to change your choice, erase the unwanted circle clearly or place an X across the letter. Then proceed to circle the letter which you think is correct.

FOR EXAMPLE:

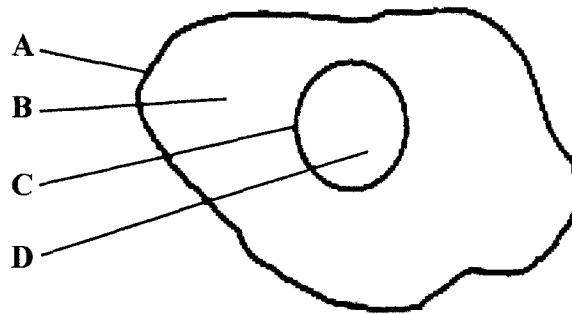
What body system is responsible for transporting oxygen around the body?

- A the circulatory system
- B the excretory system
- C the immune system
- D the nervous system



1. Which cell in the human body is sensitive to pain?
- A neurone
 - B lymphocytes
 - C phagocytes
 - D red corpuscle
2. Jodi is constantly scratching her dry itchy scalp. Which characteristic is being carried out?
- A excretion
 - B growth
 - C nutrition
 - D sensitivity

3. The diagram shows a simple human body cell. Which structure represents the cytoplasm?



4. Gametes are specialised cells in the human body. Where in the human body are these cells produced?
- A bone marrow
 - B ductless gland
 - C lymph nodes
 - D reproductive organs
5. Which is a daily oral hygiene practice used to keep the body healthy?
- A regular visits to the doctor
 - B getting regular eye examinations
 - C brushing and flossing the teeth before bedtime
 - D shampooing and rinsing the hair while showering
6. While playing basketball, Jermaine trips and breaks his tibia bone. In what part of the body is the tibia bone located?
- A arm
 - B ankle
 - C leg
 - D wrist

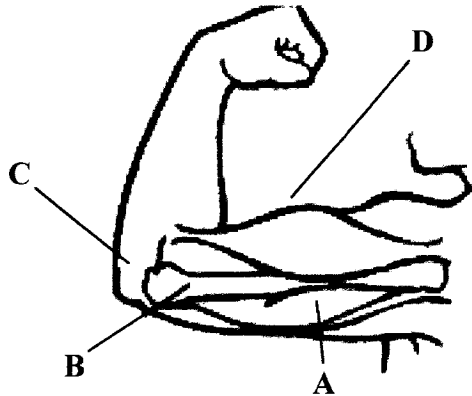


7. The diagram shows a type of muscle cell in the body.

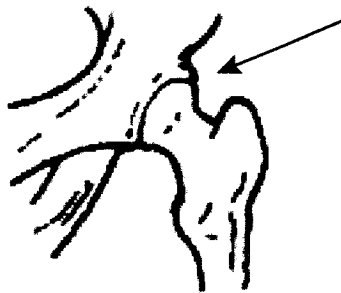


In which type of muscle tissue are these cells found?

- A cardiac muscles
 - B skeletal muscles
 - C smooth muscles
 - D voluntary muscles
8. The diagram shows the muscles and bones in the upper arm. Which muscle is relaxed?



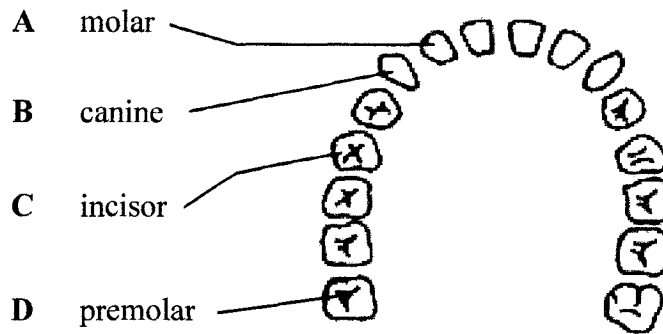
9. The diagram shows a type of moveable joint found in the human body?



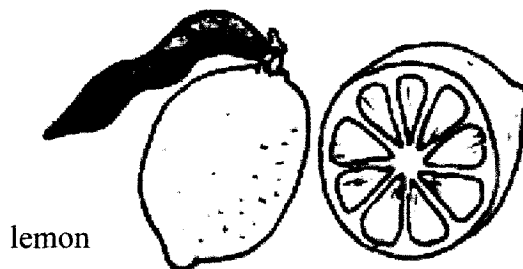
Which fluid lubricates this joint?

- A blood
 - B lymph
 - C synovial
 - D tissue
10. What is the name of the substance the hygienist removes from the surface of the teeth to prevent decay?
- A acids
 - B enzymes
 - C pepsin
 - D plaque

11. Which letter correctly labels one of the four types of teeth in the human permanent set?



12. We use the tongue for tasting. What are the two other functions of the tongue?
- A ingestion and digestion
 B licking and secretion
 C mastication and digestion
 D swallowing and speech
13. The picture shows a lemon.



Which food nutrient is found in this fruit?

- A carbohydrate
 B protein
 C vitamin A
 D vitamin C
14. The table shows the partial composition of 150 grams of four different foods. Which one food, by itself, provides the body with the most energy?

| food | protein | fat | carbohydrate |
|------|---------|-------|--------------|
| A | 0.6g | 83.0g | 0.0g |
| B | 1.4g | 0.0g | 7.5g |
| C | 2.1g | 0.2g | 24.0g |
| D | 8.6g | 1.7g | 56.0g |



15. Which row in the table gives the correct information about the mineral iodine?

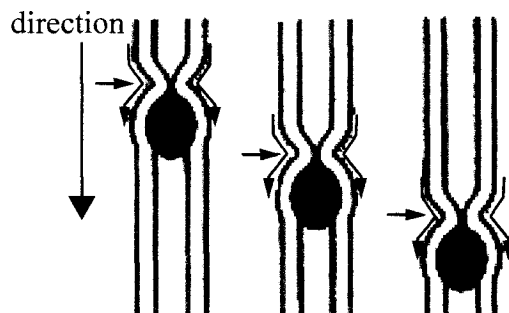
| | uses in the body | food source |
|---|------------------------------|-----------------------|
| A | healthy red blood cells | eggs and cheese |
| B | healthy thyroid gland | fish and salt |
| C | strong bones and muscles | liver and beef |
| D | strong ligaments and tendons | vegetables and fruits |

16. Which flow diagram correctly shows the order in which the processes involved in human nutrition occur?

- A absorption → ingestion → digestion → assimilation
 B assimilation → absorption → digestion → ingestion
 C digestion → ingestion → assimilation → absorption
 D ingestion → digestion → absorption → assimilation

17. The diagram shows the passage of food substances through the digestive system.

What process does this diagram represent?



- A absorption
 B digestion
 C metabolism
 D peristalsis
18. Which of these chemicals is made of the most complex molecules?

- A carbon dioxide
 B glucose
 C oxygen gas
 D water

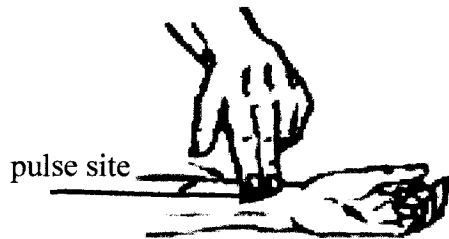
19. Which are the four main blood groups in the human body?

- A A, B, OA and O
 B A, AB, OB and OA
 C A, B, AB and O
 D A, AB, OA and O

20. Which body cells are affected by the disease leukaemia?

- A muscle
- B nerve
- C red blood
- D white blood

21. The picture shows the measurement of the pulse in the lower arm.



If the measurement taken is 22 beats in 15 seconds, what is the number of beats in one minute?

- A 44
- B 66
- C 76
- D 88

22. Which best describe the structure of an artery?

- A it contains valves
- B it has a large lumen
- C it has a thick elastic and muscular wall
- D the wall is one cell layer thick

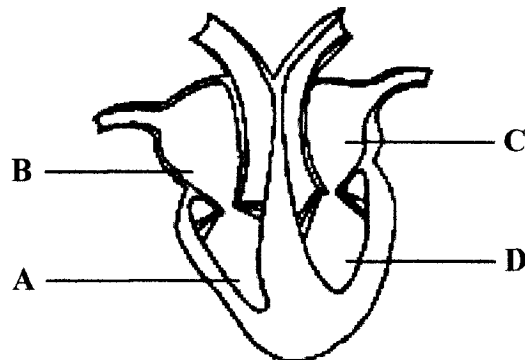
23. As blood flows through this body organ, it releases carbon dioxide, absorbs oxygen and becomes a bright red colour.

Which body organ is it?

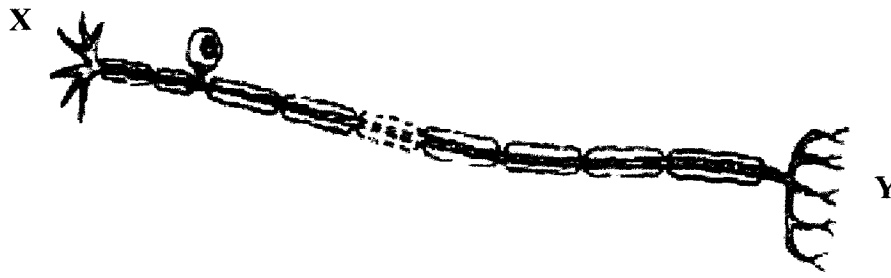
- A brain
- B heart
- C lung
- D stomach

24. The diagram represents the human heart.

Which chamber pumps blood to all parts of the body?



25. The diagram shows a sensory neurone.



Which structures could be found at X and Y?

| | X | Y |
|---|-------|-------------|
| A | brain | intestine |
| B | brain | leg |
| C | eye | hand |
| D | skin | spinal cord |

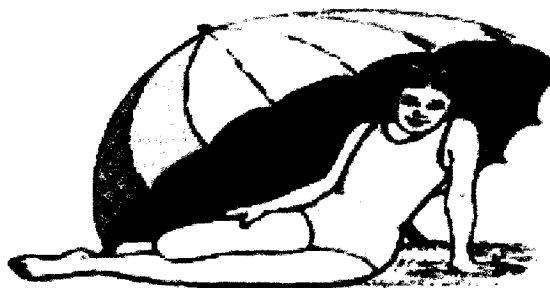
26. Which hormone speeds up the heart rate?

- A adrenaline
- B insulin
- C oestrogen
- D testosterone

27. What happens when the diaphragm muscle contracts and relaxes?

- A air moves in and out of the person's lungs.
- B blood flows through the blood vessels
- C food moves to the body organs
- D hormones moves to the body organs

28. The umbrella is shading Sibyl from the sunlight.

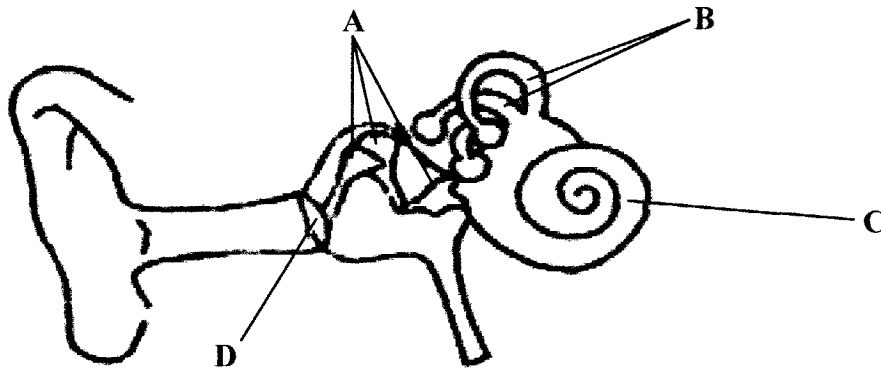


What would happen to Sibyl's skin if she was exposed to excess sunlight?

- A clog pores
- B develop acne
- C sunburn
- D vitamin deficiency

29. The diagram shows the human ear.

Which structure, if damaged by loud noises, can cause deafness?



30. Which structure, in males, serves as a passageway for both sperm and urine?

- A epididymis
- B vas deferens
- C seminal vesicle
- D urethra

31. Which is **not** a secondary sexual characteristic in males?

- A hair grows in armpits
- B hips broaden
- C muscles develop
- D skin becomes oily

32. Which condition causes the pupil of the eye to become larger in size?

- A bright flash of lightning
- B bright beaming car lights at night
- C entering a dark room
- D entering a well lit room

33. Sensory nerve endings for light and colour perception are found in which structure?

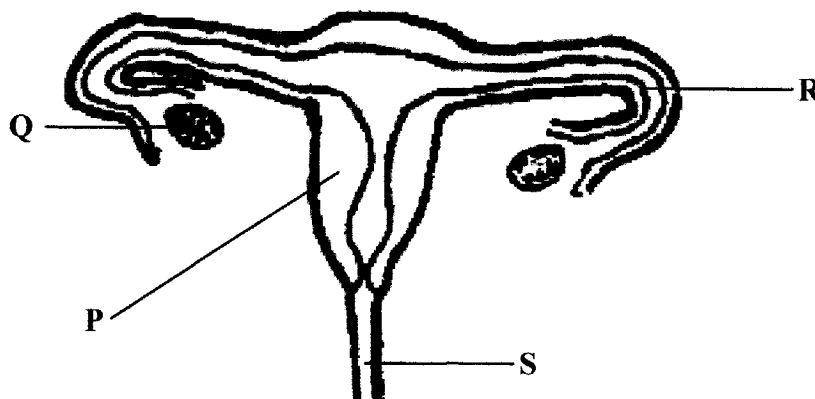
- A cochlea
- B cornea
- C dermis
- D retina

34. Which of these organs regulate the water and salt levels in the body?

- A gall bladder
- B kidneys
- C liver
- D urinary bladder

35. If a woman has a urine test and the result shows that a large amount of glucose is present in the urine, what disease is she most likely to have?
- A asthma
 - B diabetes
 - C hypertension
 - D tuberculosis

The diagram shows the female reproductive system. Use this diagram to answer questions 36 and 37.



36. Which labelled structure becomes active during puberty?
- A P
 - B Q
 - C R
 - D S
37. In which labelled structure would fertilisation occur?
- A P
 - B Q
 - C R
 - D S
38. Which diseases are caused by bacteria?
- A AIDS and chicken pox
 - B influenza and measles
 - C ringworm and athlete's foot
 - D syphilis and pneumonia
39. Excessive drinking of alcohol would most likely damage which of these organs?
- A liver
 - B lungs
 - C skin
 - D stomach

40. Which row in the table correctly matches a disease with the part of the body it affects?

| | disease | part of body affected |
|---|------------|-----------------------|
| A | bronchitis | blood |
| B | gonorrhoea | liver |
| C | malaria | lungs |
| D | ringworm | skin |



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| QUESTION | MARK |
| 1 | |
| 2 | |
| 3 | |
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| INITIALS | SURNAME |
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**MINISTRY OF EDUCATION
BAHAMAS JUNIOR CERTIFICATE
EXAMINATION 2018**

0055 HEALTH SCIENCE

**PAPER II
(60 Marks)**

Monday **4 JUNE 2018** 2:15 P.M.–3:15 P.M.

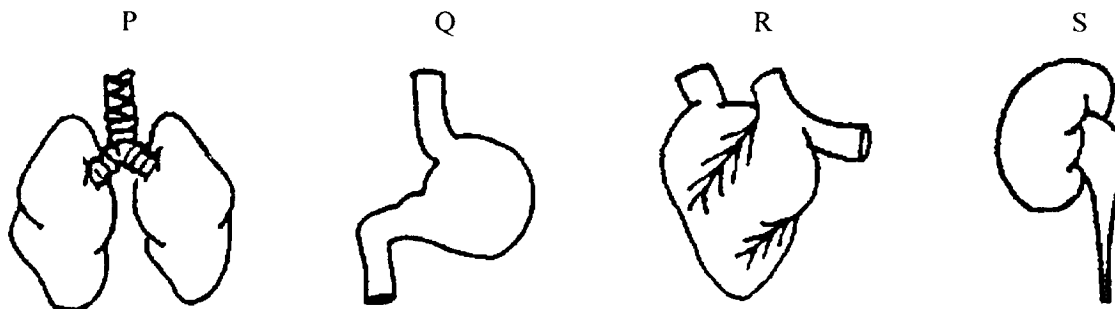
INSTRUCTIONS TO CANDIDATES:

1. Write your school number, candidate number, surname and initials in the boxes at the top right hand corner of this page.
2. Answer **ALL** questions in the spaces provided.
3. The number of marks available is shown in brackets [] at the end of each question part and at the end of the entire question.



This question paper consists of 7 printed pages.

1. The diagram shows four organs found in the human body. Use the diagram to help you answer the questions below.



- (a) State how an organ is formed?

_____ [1]

- (b) (i) Name the body systems to which organs P, Q, R and S belong.

P _____

Q _____

R _____

S _____

[4]

- (ii) Which organ shown is supplied by blood from the renal artery?

_____ [1]

- (c) Which characteristics of living things are carried out by organs P and S?

organ P _____

organ S _____

[2]

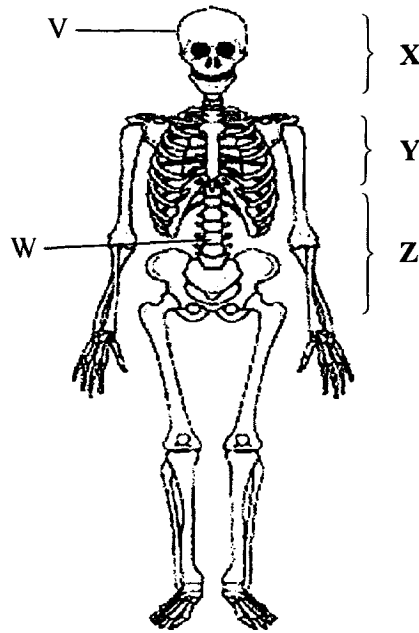
- (d) Complete the diagram to show how living things are organised.

cells → _____ → organs → _____ → organism [2]

TOTAL MARKS [10]



2. The diagram shows a system of the human body and the location of three body cavities.



- (a) (i) Name this system and give **ONE** function of this system.

name _____

function _____ [2]

- (ii) Give the scientific name of the parts labelled V and W.

V _____

W _____ [2]

- (iii) Name the body cavities labelled X, Y and Z.

X _____

Y _____

Z _____ [3]

- (b) (i) On the diagram, draw a line to a hinge joint and label it P.

- (ii) Define the term joint.

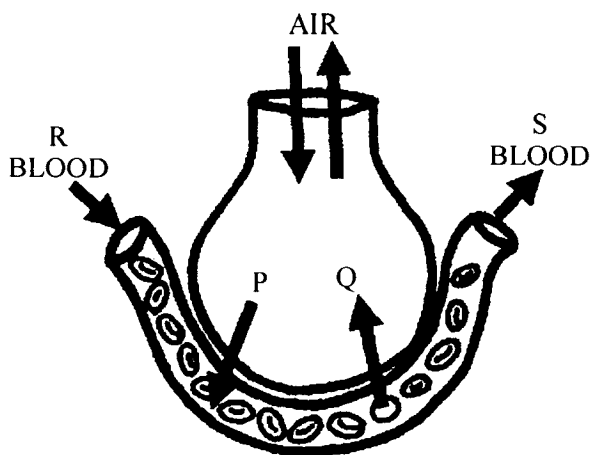
_____ [2]

- (c) State the number of bones in the human body.

_____ [1]

TOTAL MARKS [10]

3. The diagram shows an alveolus surrounded by a blood capillary.



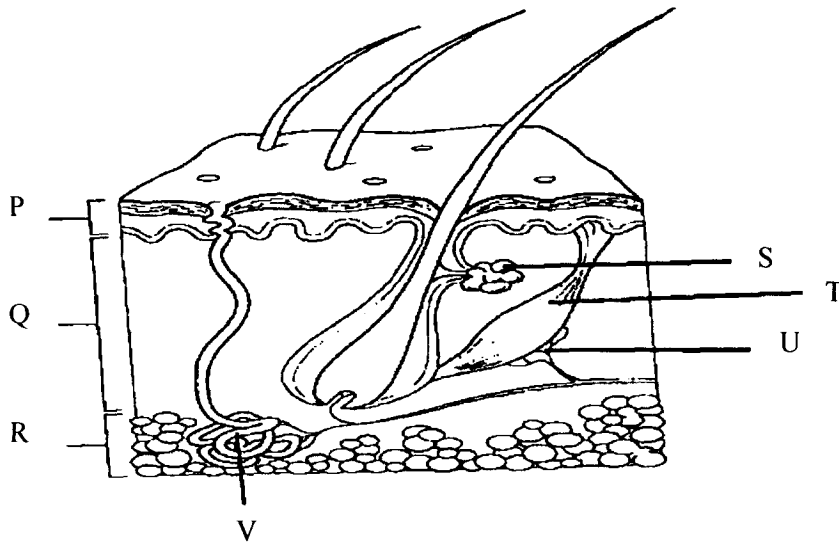
- (a) (i) In which body organ(s) will you find an alveolus?

- (ii) State what happens in the alveolus.
 _____ [2]
- (b) (i) Name the gases represented by arrows **P** and **Q**.
 gas **P** _____
 gas **Q** _____ [2]
- (ii) Name the process by which these gases enter and leave the cells.
 _____ [1]
- (c) State the type of blood found in blood vessels **R** and **S**.
 blood vessel **R** _____
 blood vessel **S** _____ [2]
- (d) The red blood cells, shown in the diagram, contain a pigment which allows them to carry out their function.
 Give the name of this pigment and state its function.
 name of pigment _____
 function of pigment _____ [2]
- (e) What percentage of gas **Q** is present in exhaled air?
 _____ [1]

TOTAL MARKS [10]



4. The diagram shows a portion of the human skin.



(a) Name the layers of the skin labelled P, Q and R.

P _____

Q _____

R _____

[3]

(b) Write the letter of the part of the skin responsible for carrying out the following functions?

(i) produces oil to lubricate the skin _____

(ii) produces an excretory product _____

(iii) allows the skin to sense pain _____ [3]

(c) How would the skin respond to the following changes?

(i) An increase in body temperature.

(ii) A decrease in body temperature.

_____ [2]

(d) (i) Which nutrient does the skin produce when exposed to the sun?

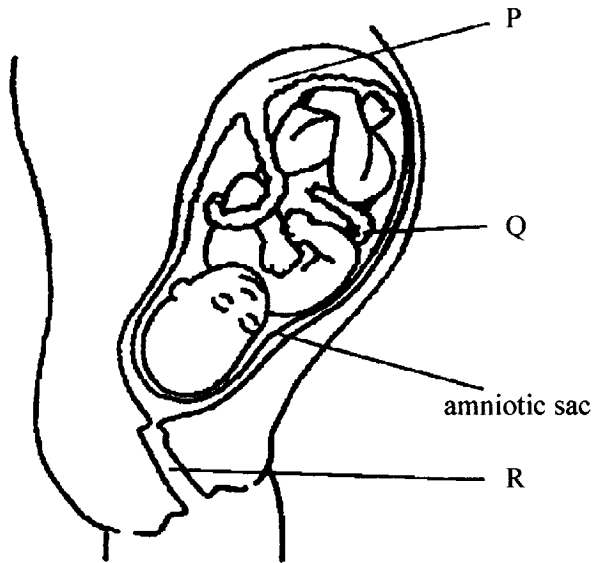
_____ [1]

(ii) Name the deficiency disease which may occur if the body lacks this nutrient?

_____ [1]

TOTAL MARKS [10]

5. The diagram shows a fully developed foetus inside its mother's womb.



- (a) Name the parts labelled Q and R.

Q _____

R _____

[2]

- (b) Name TWO useful substances exchanged between the mother and baby through structure P (placenta).

1. _____

2. _____

[2]

- (c) Name the liquid found in the amniotic sac and state ONE function of this liquid.

name _____

function of _____

[2]

- (d) Sexual reproduction involves sex cells (gametes).

Name the sex cells involved in sexual reproduction in humans.

_____ [2]

- (e) For the first four months of a baby's life its food consists mostly of milk from the mother.

- (i) Name the **gland** in the mother which produces this milk.

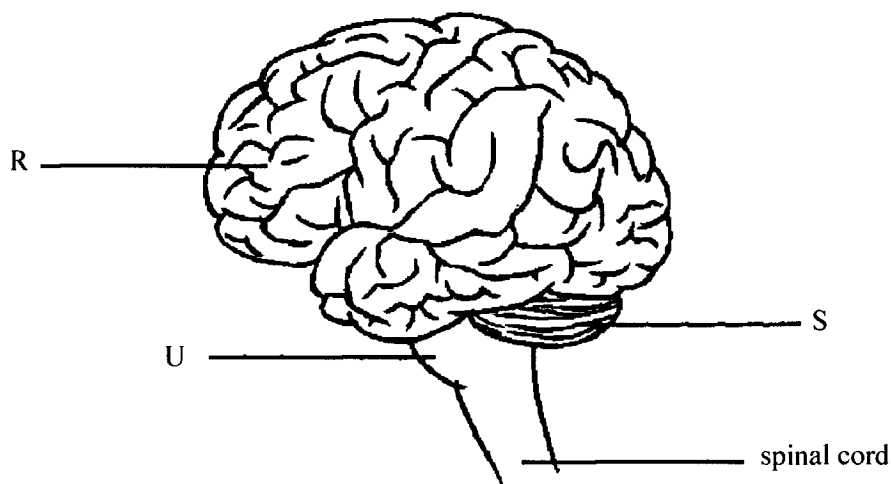
- (ii) Give a reason why is it important to feed the baby with its mother's milk?

_____ [2]

TOTAL MARKS [10]



6. The diagram shows the human brain.



- (a) Name the parts of the brain labelled **R** and **U**.

R _____

U _____ [2]

- (b) Why is the brain referred to as '**the master organ**'?

 _____ [1]

- (c) Which part of the brain is responsible for carrying out the following functions?

(i) involuntary actions, example, breathing _____

(ii) thinking and learning _____

(iii) co-ordination and balance _____ [3]

- (d) Name the organ connected to the brain by the auditory nerve?

_____ [1]

- (e) Three types of neurons are found in the human body. Name one type of neurone and state its function.

name _____

function _____ [2]

- (f) What do we call the type of response by the body which does not require the immediate use of the brain?

_____ [1]

TOTAL MARKS [10]