CANDIDATE – PLEASE NOTE!

PRINT your name on the line below and return this booklet with your answer sheet. Failure to do so may result in disqualification.

FORM TP 2026–084

TEST CODE **01253010**

MAY–JUNE 2026

CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN SECONDARY EDUCATION CERTIFICATE®

EXAMINATION

HUMAN AND SOCIAL BIOLOGY

Paper 01 – General Proficiency

1 hour 15 minutes

01 JUNE 2026 (a.m.)

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This test consists of 60 items. You will have 1 hour and 15 minutes to answer them.
2. In addition to this test booklet, you should have an answer sheet.
3. Each item in this test has four suggested answers lettered (A), (B), (C), (D). Read each item you are about to answer and decide which choice is best.
4. On your answer sheet, find the number which corresponds to your item and shade the space having the same letter as the answer you have chosen. Look at the sample item below.

Sample Item

Abnormally high blood pressure is called

(A) distension
(B) hypotension
(C) hypertension
(D) hyperglycaemia

Sample Answer



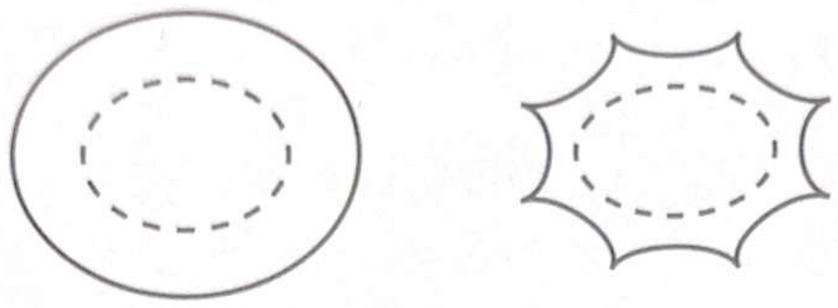
The best answer to this item is "hypertension", so (C) has been shaded.

5. If you want to change your answer, erase it completely before you fill in your new choice.
6. When you are told to begin, turn the page and work as quickly and as carefully as you can. If you cannot answer an item, go on to the next one. You may return to that item later.
7. Figures are not necessarily drawn to scale.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

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Item 1 refers to the following diagrams which show a red blood cell before and after being placed in a concentrated salt solution for one hour.



Before one hour **After one hour**
I **II**

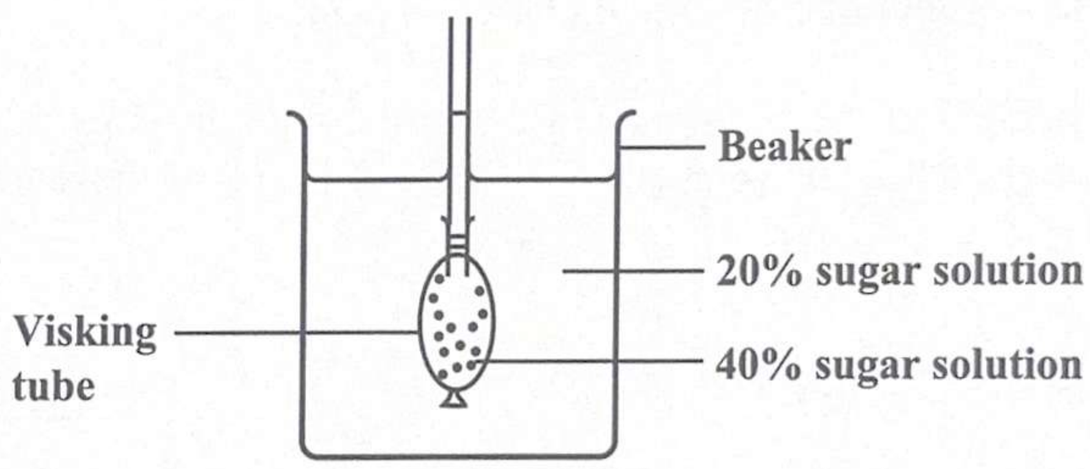
1. The change in the red blood cell shown in II occurs because water

(A) enters the cell by osmosis
(B) leaves the cell by osmosis
(C) enters the cell by diffusion
(D) leaves the cell by diffusion

2. Which of the following features is NOT common to all living organisms?

(A) Using food to produce energy
(B) Producing identical cells in reproduction
(C) Getting rid of metabolic waste products
(D) Releasing energy by a process of respiration

Item 3 refers to the following diagram in which osmosis is demonstrated.



3. The MAIN function of the visking tube is to act as a

(A) plastic barrier
(B) impermeable barrier
(C) permeable membrane
(D) semipermeable membrane

4. Which of the following factors is NOT necessary for photosynthesis to take place?

(A) Water
(B) Oxygen
(C) Sunlight
(D) Carbon dioxide

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5. Which organelle in muscle cells provides energy for contraction?

(A) Nucleus
(B) Myofibril
(C) Ribosome
(D) Mitochondrion

6. Which of the following statements is NOT true of anaemia?

(A) It is caused by the presence of an extra chromosome.
(B) It is caused by a lack of iron compounds in the diet.
(C) It can be treated by eating green vegetables, liver and egg yolk.
(D) It results from the manufacture of an inadequate number of red blood cells.

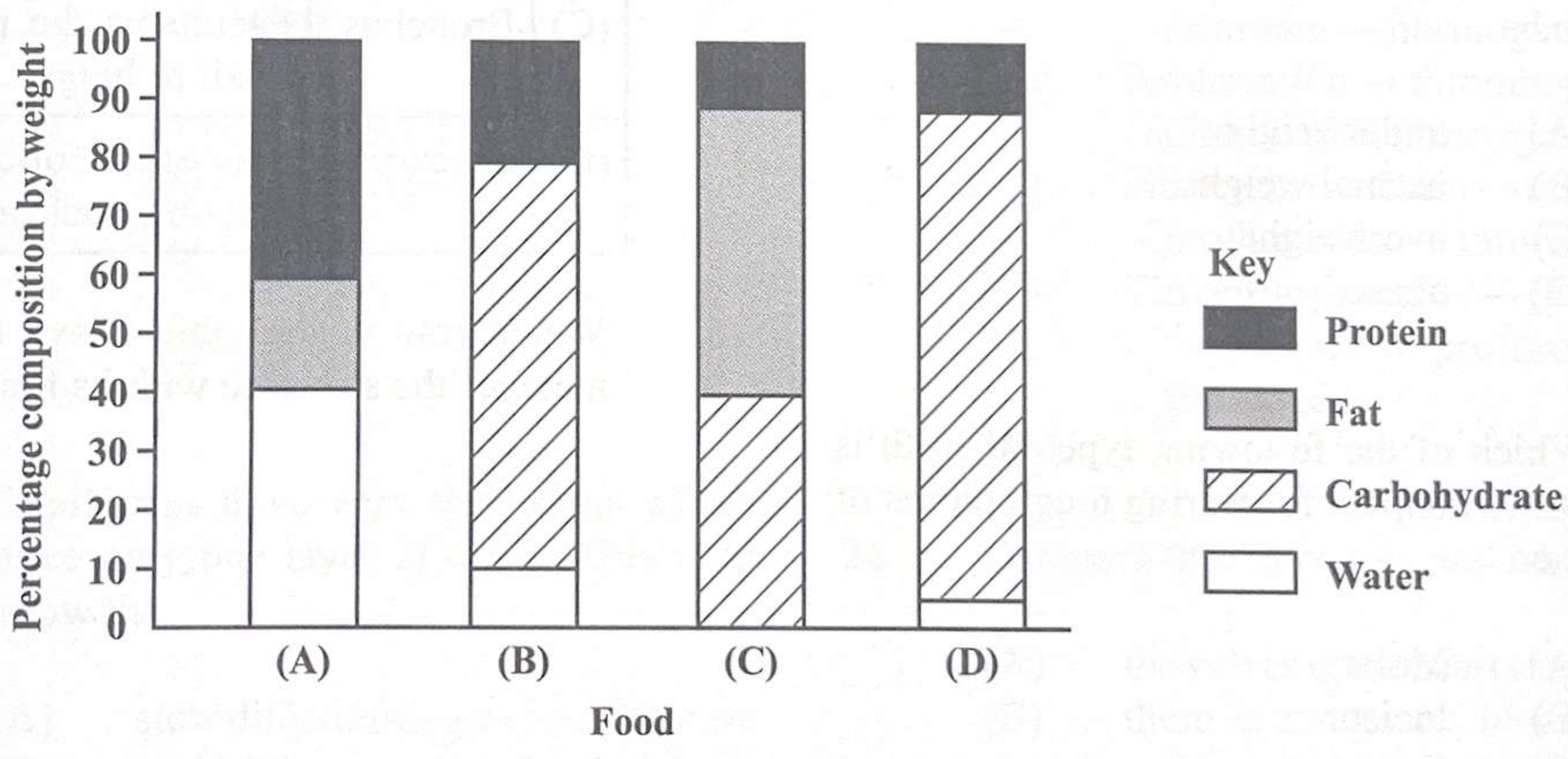
7. Which of the following reagents gives a positive test for the **main** food present in a slice of baked potato?

(A) Biuret
(B) Ethanol
(C) Iodide solution
(D) Benedict's solution

8. Which of the following foods would BEST prevent constipation?

(A) Chicken soup
(B) Vegetable rice and fish
(C) Fruit and vegetable salad
(D) Wholewheat bread and cheese

Items **9** and **10** refer to the following bar chart which shows the composition of four foods.



9. Which of the foods above is MOST likely a cereal?

10. Which of the foods above is NOT suitable for a person suffering from arteriosclerosis?

11. Which of the following are properties of enzymes?

I. They mostly work on only one substrate.
II. They are not affected by temperature.
III. They work best at a particular pH.

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

Item **12** refers to the following table which shows categories of body mass index (BMI).

The BMI categories are as follows.

Underweight	<18.5
Normal weight	18.5–24.9
Overweight	25–29.9
Obese	>30

12. Lisa has BMI of 24.5. She is considered to be

(A) underweight
(B) normal weight
(C) overweight
(D) obese

13. Which of the following types of teeth is BEST adapted for tearing tough pieces of food?

(A) Molar
(B) Incisor
(C) Canine
(D) Premolar

14. Which of the following vitamins is water-soluble?

(A) Vitamin A
(B) Vitamin C
(C) Vitamin D
(D) Vitamin E

15. The process of egestion is defined as the removal of

(A) toxic waste
(B) non-toxic waste
(C) metabolic waste
(D) undigested waste

Item **16** refers to the following table which shows functions of some of the structures of the respiratory system.

	Structure	Function
(A)	Epiglottis	Vibrates to make sounds
(B)	Larynx	Protects lungs and heart
(C)	Bronchus	Facilitates the passage of air to lungs
(D)	Ribcage	Prevents food from entering trachea

16. Which row in the table above correctly matches the structure with its function?

17. While climbing up a mountain, a group of hikers finds that breathing becomes difficult. This is MOST likely because

(A) the air is colder
(B) the air pressure decreases
(C) they become tired from the long walk
(D) they lose too much water by sweating

18. The equation for **aerobic** respiration is

(A) $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O +$ energy

(B) $C_6H_{12}O_6 + 6CO_2 \rightarrow 6O_2 + 6H_2O +$ energy

(C) $C_6H_{12}O_6 \rightarrow 2C_2H_5OH + 2CO_2 +$ energy

(D) $C_6H_{12}O_6 \rightarrow 2C_3H_6O_3 +$ energy

19. During respiration, the release of energy in a cell occurs when

(A) ATP is converted to ADP
(B) ADP is converted to ATP
(C) ADP is converted to lactic acid
(D) ATP and oxygen form oxyhaemoglobin

20. Capillaries have very thin walls which have only one layer of cells. This is to allow the

(A) slow diffusion of gases and glucose
(B) rapid diffusion of gases and glucose
(C) rapid diffusion of protein and fats
(D) slow diffusion of protein and fats

21. Which of the following are true about phagocytes?

I. Have a rounded nucleus
II. Engulf and ingest bacteria
III. Are a type of white blood cell

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

22. The left side of the heart has a thicker muscular wall in order to

(A) pump blood to the lungs
(B) receive blood from the lungs
(C) pump blood to the rest of the body
(D) receive blood from the rest of the body

23. Which sequence of events needs to occur in order for a blood clot to form?

(A) Thromboplastin → prothrombin → thrombin → fibrinogen → fibrin
(B) Prothrombin → thromboplastin → thrombin → fibrinogen → fibrin
(C) Fibrinogen → fibrin → thrombin → prothrombin → thromboplastin
(D) Thromboplastin → thrombin → fibrin → prothrombin → fibrinogen

24. Coronary thrombosis occurs when

(A) the valves in the heart stop working
(B) there is too much blood flowing through the heart
(C) a coronary artery becomes blocked with a blood clot
(D) the coronary vein becomes blocked with a blood clot

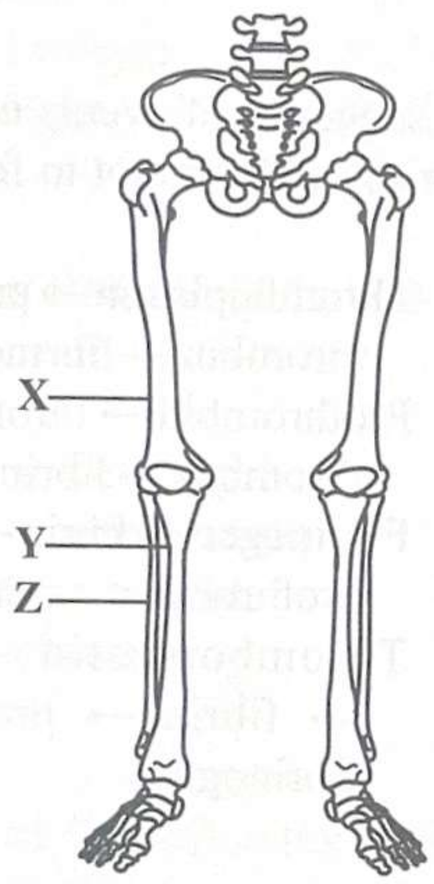
25. Which of the following is a tough, flexible, fibrous connective tissue that joins two bones to form a stable joint?

(A) Muscle
(B) Tendon
(C) Cartilage
(D) Ligament

26. Which of the following joints allows movement in **all** directions?

(A) Knee
(B) Ankle
(C) Elbow
(D) Shoulder

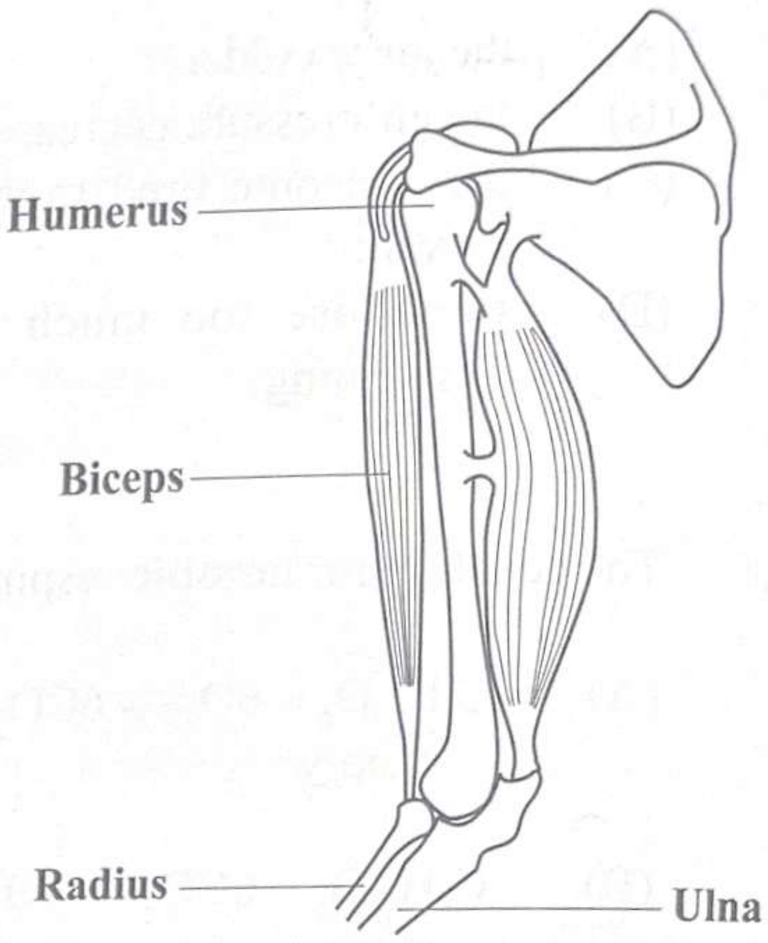
Item **27** refers to the following diagram of part of the human skeleton.



27. Which of the following combinations correctly identifies the bones labelled X, Y and Z?

	Bone X	Bone Y	Bone Z
(A)	Tibia	Femur	Fibula
(B)	Femur	Tibia	Fibula
(C)	Fibula	Tibia	Femur
(D)	Femur	Fibula	Tibia

Item **28** refers to the following diagram which shows the biceps attached to the top and bottom of a bone.



28. The biceps are attached to the radius in the area known as the

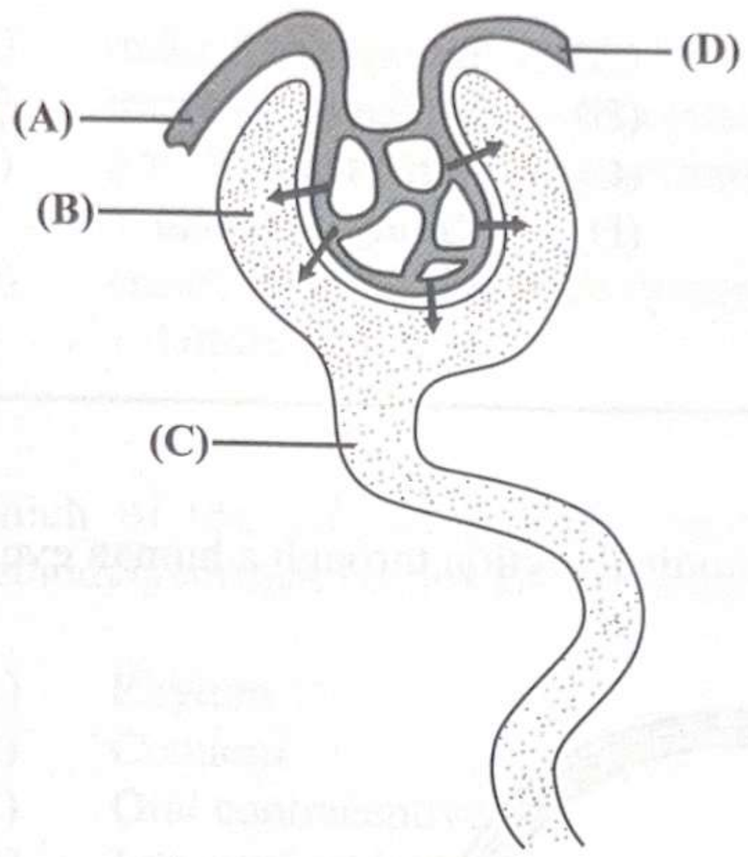
(A) point of insertion
(B) point of origin
(C) ligament
(D) tendon

29. Liam notices that his face is flushed (red) after playing football. Which of the following processes causes his face to be flushed?

(A) Insulation
(B) Evaporation
(C) Vasodilation
(D) Vasoconstriction

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Items **30** and **31** refer to the following simplified diagram of a kidney tubule.

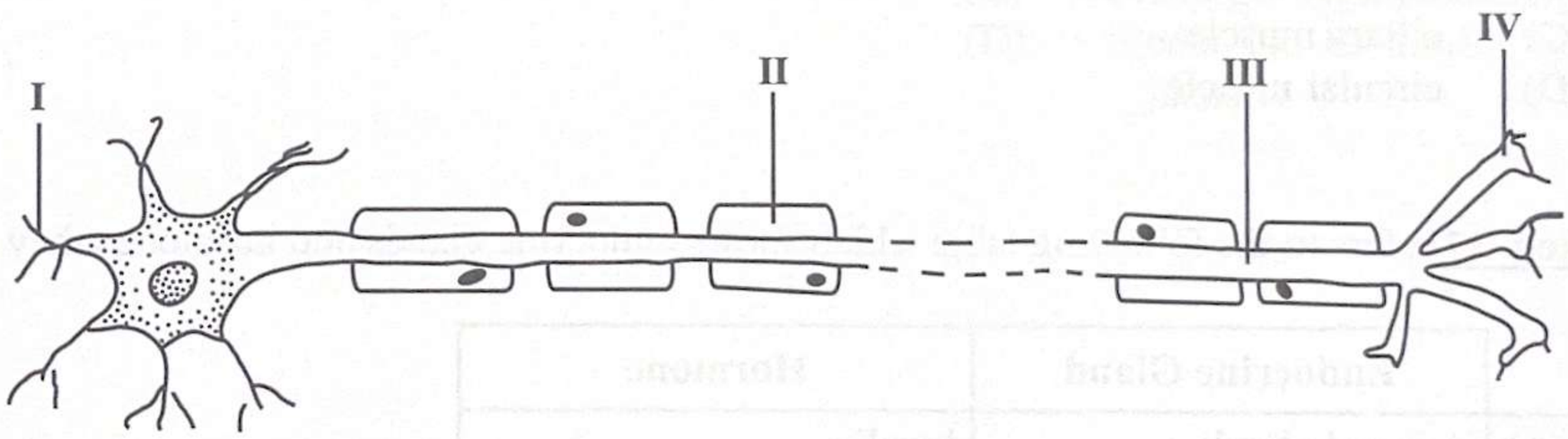


In answering Items 30 and 31, each labelled part may be used once, more than once or not at all.

30. Which labelled part collects filtrate from the glomerulus?

31. Which labelled part brings blood to the glomerulus?

Item **33** refers to the following diagram of a motor neurone.



33. Which labelled part is the axon?

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

32. Which of the following structures of the skin causes its hair to stand on end?

(A) Hair follicle
(B) Nerve ending
(C) Erector muscle
(D) Pacinian corpuscle

34. The central nervous system is made up of the

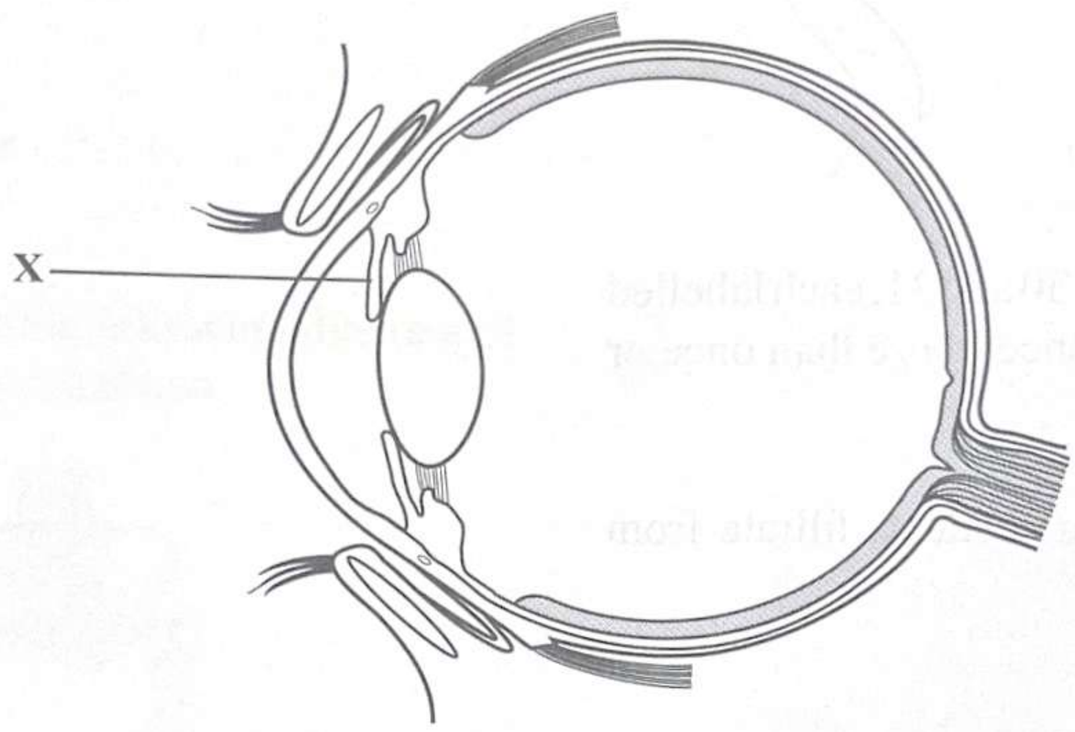
(A) brain and spinal cord
(B) brain and spinal nerves
(C) brain and cranial nerves
(D) spinal cord and cranial nerves

35. Which of the following is an involuntary action?

(A) Eating
(B) Walking
(C) Peristalsis
(D) Riding a bicycle

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Item **36** refers to the following diagram of a longitudinal section through a human eye.



36. The part labelled X is the

(A) iris
(B) cornea
(C) ciliary muscle
(D) circular muscle

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Item **37** refers to the following table which shows endocrine glands and hormones they secrete.

	Endocrine Gland	Hormone
(A)	Adrenal gland	Insulin
(B)	Pancreas	Thyroxine
(C)	Ovary	Progesterone
(D)	Thyroid	Growth hormones

37. Which row in the table above correctly matches the endocrine gland with the hormone it secretes?

38. The MAIN reason for practising family planning is to

(A) make families healthier
(B) improve the economy of a country
(C) give family members more leisure time
(D) ensure sufficient resources for each family member

39. Which of the following birth control methods is considered the LEAST reliable?

(A) Rhythm
(B) Condom
(C) Oral contraceptive
(D) Intrauterine device

40. Implantation occurs when the fertilized ovum

(A) is in the oviduct
(B) reaches the uterus
(C) reaches the cervix
(D) is embedded in the uterus wall

41. Which of the following methods of female contraception functions by preventing sperm from entering the uterus?

(A) Barrier
(B) Natural
(C) Surgical
(D) Hormonal

42. Which of the following are true about the fallopian tube?

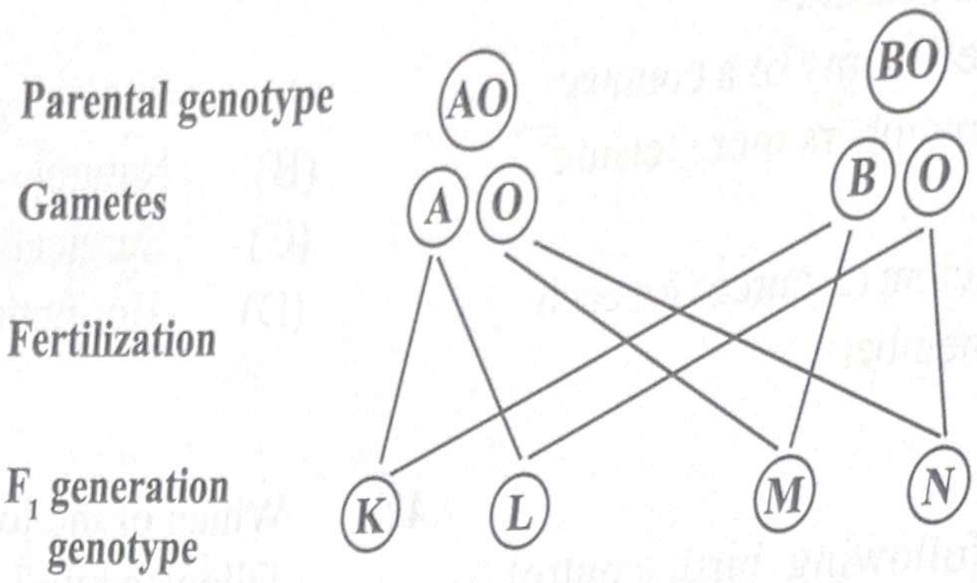
I. Produces the ovum
II. Site where fertilization of the ovum occurs
III. Facilitates the passage of the ovum to the uterus

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

43. Which of the following is an example of genetic engineering?

(A) Using stem cells to produce organs
(B) Tissue culture in banana production
(C) Cloning of high-producing animals
(D) Production of insulin by *E. coli* bacteria

Item 44 refers to the following genetic cross which shows the inheritance of blood groups in humans. Alleles A and B are codominant to each other and both are dominant to O.



44. Which of the following offspring inherited the homozygous recessive genotype?

(A) K
(B) L
(C) M
(D) N

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45. Chromosomes are made up of protein and

(A) DNA
(B) RNA
(C) starch
(D) fat

46. Which of the following occurs when a zygote receives ONE extra chromosome?

(A) A gene mutation
(B) Sex-linked inheritance
(C) Incomplete dominance
(D) A chromosomal mutation

47. Beriberi is an example of a disease that is classified as

(A) hereditary
(B) pathogenic
(C) sexually transmitted
(D) nutritional deficiency

48. Good health may be BEST defined as

(A) a state of complete physical and economic well-being
(B) a state of complete physical, social and mental well-being
(C) the absence of disease, as well as complete social well-being
(D) the absence of disease, as well as complete physical well-being

49. Which of the following organisms is the causative agent for cholera?

(A) Virus
(B) Fungus
(C) Flatworm
(D) Bacterium

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IV

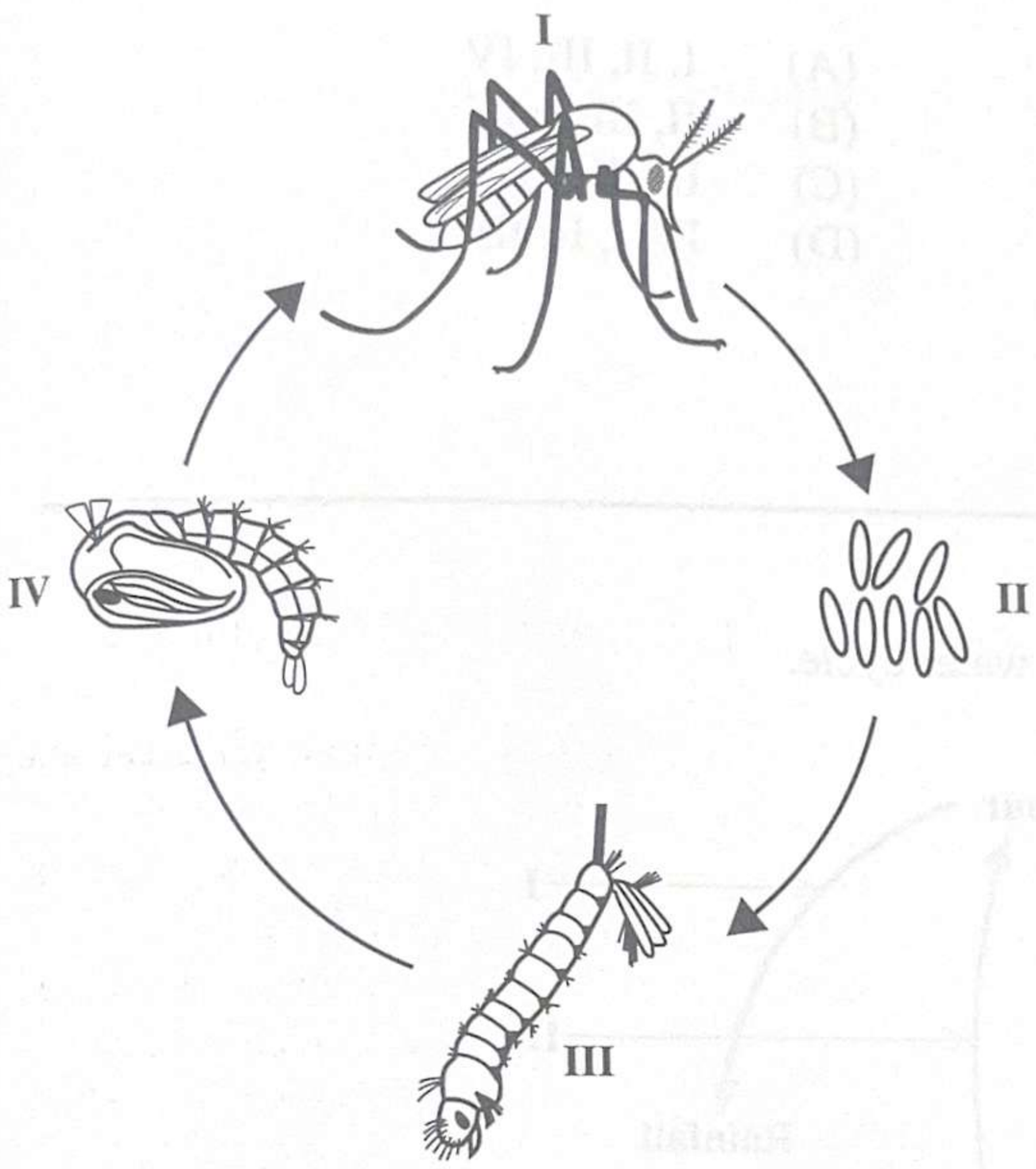
51. Which o
or on wa

(A) II
(B) III
(C) I, II
(D) II, II

50. Which of the following cells does the AIDS virus attack?

(A) Phagocytes
(B) Erythrocytes
(C) Lymphocytes
(D) Thrombocytes

Item **51** refers to the following diagram which shows the stages in the life cycle of the mosquito.



51. Which of the following stages are found in **or** on water?

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

52. Which of the following symptoms causes the MOST injury to a person suffering from dengue fever?

(A) Muscle pain
(B) Aching joint
(C) Abdominal pain
(D) Internal haemorrhaging

53. Which of the following types of immunity occurs when a baby receives antibodies from its mother before birth?

(A) Natural active
(B) Natural passive
(C) Artificial active
(D) Artificial passive

54. Contamination of water sources is detrimental to humans because of the spread of water-borne diseases such as

(A) rabies
(B) cholera
(C) influenza
(D) tuberculosis

55. Water pollution may be controlled by

(A) educating the public and implementing laws
(B) using nitrate fertilizers on crops planted near rivers
(C) washing in rivers using detergents containing phosphates
(D) pouring sewage into rivers after bacterial decomposition

56. Recycling may BEST be defined as

(A) using a collected resource over and over in the same form
(B) reprocessing a collected resource into new products
(C) reducing the use of a resource
(D) chemically altering a resource

57. What is the effect of carbon monoxide on the human body?

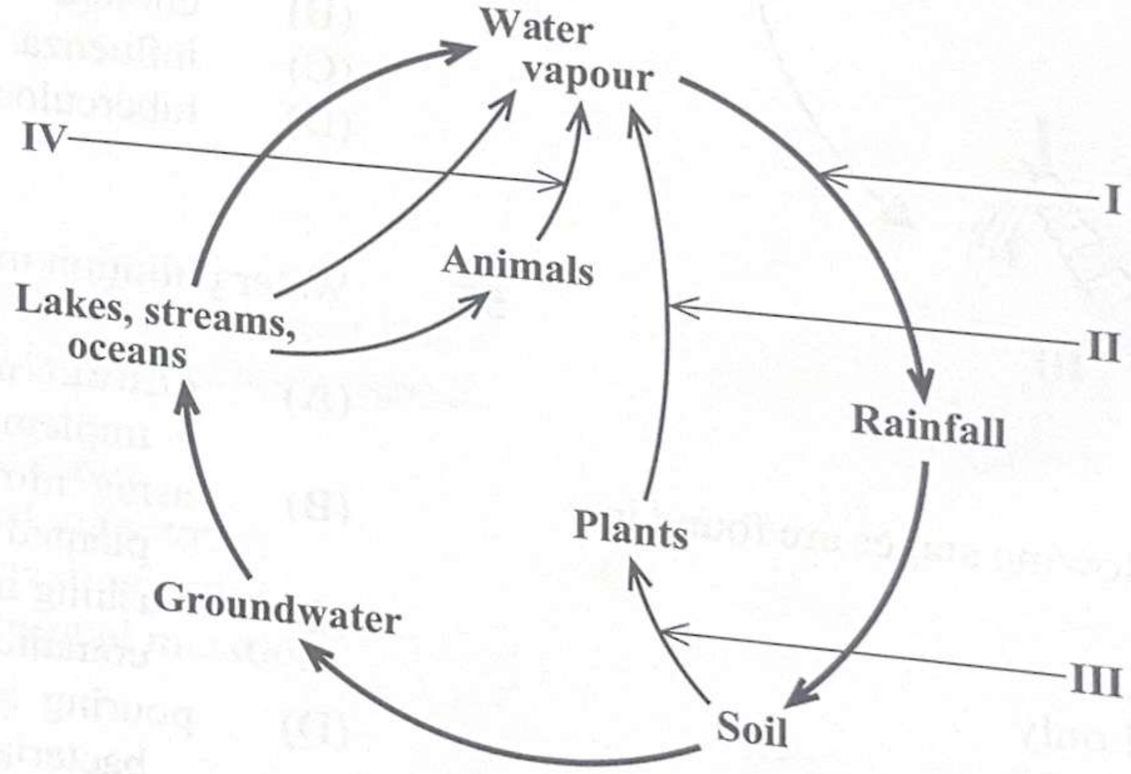
(A) Prevents oxygen uptake by blood
(B) Damages cilia present on the trachea
(C) Causes eye irritation and reduced visibility
(D) Has toxic effects on the nervous system

58. Which of the following is the correct sequence when testing water for bacteria?

I. Examine the agar in the petri dish for the presence of coliform colonies.
II. Incubate the petri dish at 35 °C for 24 hours.
III. Place collected water in a sterile bottle.
IV. Pour the water onto sterile agar in a sterile petri dish.

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

Item **59** refers to the following diagram of the water cycle.



59. Transpiration is represented by

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

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60. Which of the following is an example of a **non-biodegradable** pollutant?

(A) Lead
(B) Paper
(C) Cotton
(D) Sewage

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.