

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

0565 HUMAN BIOLOGY 1

JUNE 2018

ORDINARY LEVEL

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room

MULTIPLE CHOICE QUESTION PAPER

One and a half hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed "Ordinary Level – 0565 Human Biology 1"
4. Insert the information required in the spaces above.
5. Insert the information required in the spaces provided on the answer sheet using your HB pencil: Candidate Name, Exam Session, Subject Code, Center Number and Candidate Number. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination

6. Answer ALL the 50 questions in this Examination.
7. Calculators are not required.
8. Each question has FOUR suggested answers: A, B, C and D. Decide on which answer is correct. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.

For example, if C is your correct answer, mark C as shown below:

[A] [B] [C] [D]

9. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
10. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to that question later.
11. Do all rough work in this booklet using the blank spaces in the question booklet.
12. At the end of the examination the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.



Turn Over

1. What is the function of Lysosomes?
- Eliminate wastes from the cell.
 - Produce ribosomes for protein synthesis.
 - Destroys worn-out cells and tissues.
 - Transports proteins within the cell.

2. Identify two chemicals found in cigarette smoke.
- Tar and sulphur dioxide.
 - Carbon monoxide and nicotine.
 - Carbondioxide and tar.
 - Nicotine and carbon.

3. The group of bacteria in the nitrogen cycle that convert nitrogen gas into nitrates is called:
- nitrifying bacteria.
 - denitrifying bacteria.
 - decomposing bacteria.
 - nitrogen-fixing bacteria.

4. The scheme below shows how the water content of blood is regulated in humans.



Identify organ Y and hormone X.

- Brain and Antidiuretic hormone.
 - Kidney and Antidiuretic hormone.
 - Skin and Antidiuretic hormone.
 - Liver and Antidiuretic hormone.
5. Passive immunity may be acquired naturally by a young child through:
- administration of a vaccine.
 - feeding the child with a balanced diet.
 - antibodies in colostrum.
 - injection of antibodies from an external source.

6. Most sex-linked traits are transmitted from:
- mother to daughter.
 - father to son.
 - father to daughter.
 - mother to son.

7. How does roughage solve the problem of constipation?
- It is rich in cellulose fibres.
 - It contains a lot of water.
 - It reduces bulk and stretches the walls of the gut.
 - It stimulates peristalsis.

8. How many daughter cells will be produced if a single cell divides by meiosis?
- 01
 - 02
 - 03
 - 04

9. Study the signs and symptoms of a disease given below, and identify the causative agent: High fever, diarrhoea, vomiting, headache, internal and external haemorrhage (bleeding)
- Variola virus
 - Ebola virus
 - Measles virus
 - Rabies virus

10. What reflex occurs when one moves from a dark room into a room with bright light?
- Pupil reflex.
 - Raising hand to the eyes.
 - Closing the eyes.
 - Moving away from the source of light.

11. What two movements bring about the increase of the thoracic cavity during inspiration?
- Movement of the diaphragm downwards and the rib cage downwards.
 - Movement of the diaphragm upwards and the rib cage downwards.
 - Movement of the diaphragm downwards, and the rib cage outwards.
 - Movement of the diaphragm upwards and the rib cage outwards.

12. How does the skin react in conditions of over cooling?
- Blood vessels in the skin constrict.
 - Blood vessels in the skin dilate.
 - More blood transported to the skin.
 - Metabolic rate increases.

13. Study the table on blood transfusion below and select the universal donor blood group.

	Donor blood group	Recipient blood group			
		AB	B	A	O
A	AB	✓	x	x	x
B	B	✓	✓	x	x
C	A	✓	x	✓	x
D	O	✓	✓	✓	✓



14. In testing a leaf for the presence of starch, it is detached and placed in boiling water. What is the importance of this?
- To make the leaf cells more permeable to iodine.
 - To cook the starch grains.
 - To dissolve the chlorophyll.
 - To make the leaf cells transparent for easy colour change.
15. One reason why houses in the temperate regions have high pitched roofs is:
- to make it beautiful.
 - to allow direct heating by the sun.
 - to allow a snow blanket.
 - to allow snow to slide down easily.
16. What is the underlying principle of salting as a method of food preservation?
- Food becomes dehydrated.
 - Makes food tasty.
 - Destroys enzymes in food.
 - Makes food tender.
17. Which of the following will lead to inadequate ossification of bones?
- Deficiency in calcium and potassium.
 - Deficiency in calcium and vitamin D.
 - Deficiency in calcium and iron.
 - Deficiency in calcium and vitamin K.
18. Select the appropriate cause and correction of long sightedness:
- Small or short eye ball – converging lens.
 - Long or large eye ball – converging lens.
 - Small or short eye ball – diverging lens.
 - Long or large eye ball – diverging lens.
19. The part of the human ear which contains the organ of hearing is:
- semicircular canals.
 - tympanum.
 - eustachian tube.
 - cochlea.
- For questions 20 – 21 one or more of the statements are correct. Decide on which of the statement(s) is/are correct, and then choose:
- If [i], [ii], and [iii] are all correct.
 - If [i] and [ii] only are correct.
 - If [ii] and [iii] only are correct.
 - If [i] only is correct.
20. Pepsinogen is:
- Activated by hydrochloric acid.
 - Produced in an inactive form.
 - A blood clotting agent.
- -
 -
 -
21. In large scale water purification,
- Chlorination takes place in domestic reservoirs.
 - Addition of Fluorine to the water prevents dental caries.
 - Water storage tanks must be covered.
- -
 -
 -
22. $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + 2880KJ$ energy.
What amount of energy will be produced by the complete oxidation of 5 moles of glucose.
- 288kJ
 - 14.4kJ
 - 144000kJ
 - 14400kJ
23. The blood vessel which supplies oxygenated blood at high pressure to tissues and organs of the body is:
- pulmonary vein.
 - pulmonary artery.
 - aorta.
 - vena cava.
24. Which of these organs in the human body receives a double blood supply?
- Kidney
 - Heart
 - Spleen
 - Brain
25. Select the compound epithelium from the list of tissues given below:
- Transitional epithelium
 - Columnar epithelium
 - Squamous epithelium
 - Ciliated Cuboidal epithelium



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Turn over

4-/0565/1/A/MCQ

26. Study the food chain below:
algae → mosquito larvae → Tilapia → man
which organism is properly matched with its trophic level?
- A Algae decomposer
B tilapia Secondary Consumer
C Mosquito larvae Primary Producer
D Man Quaternary consumer

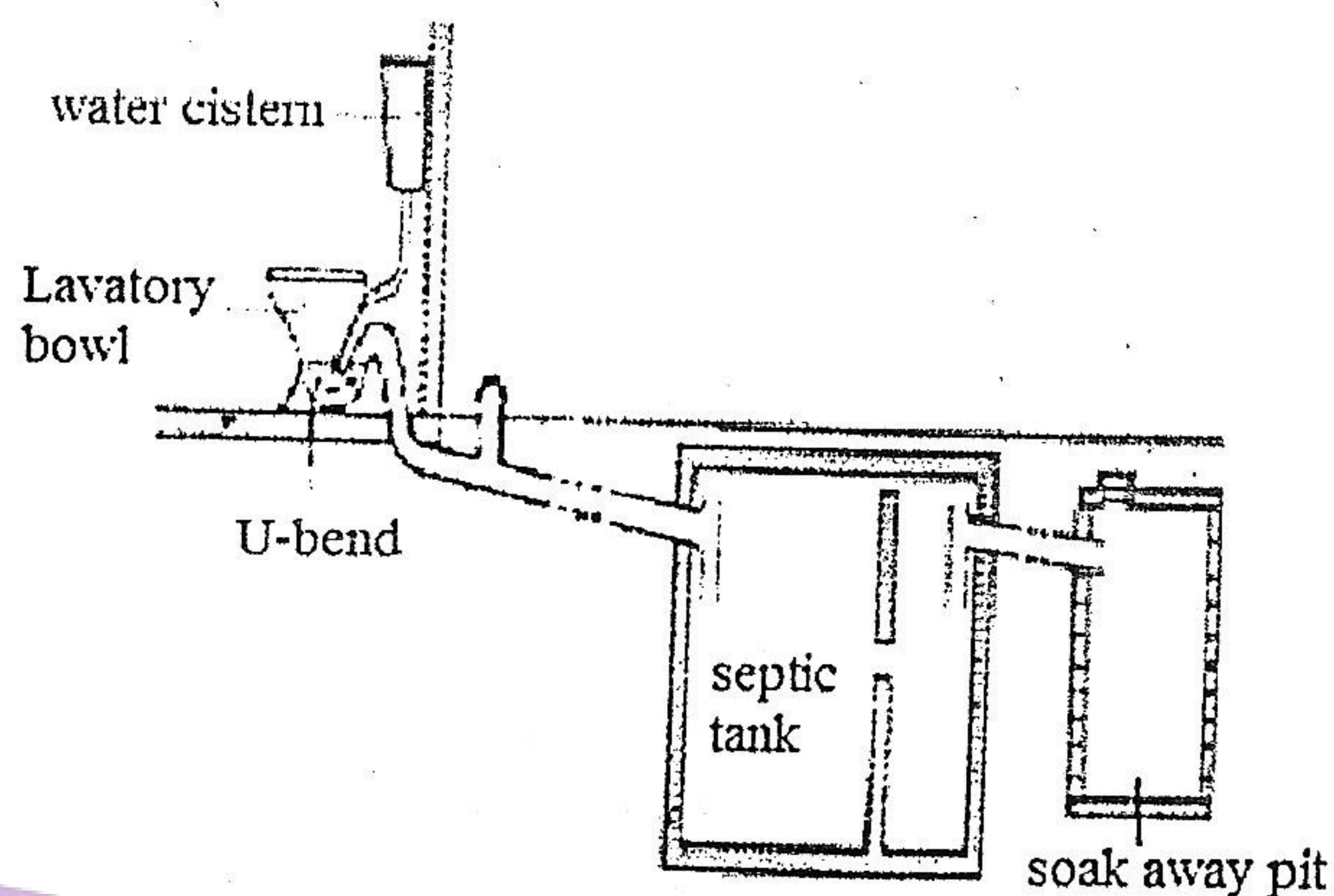
27. Where does the foetus develop in a pregnant woman?
- A Uterus
B Stomach
C Oviduct
D Ovary

- 28.. Which of the following could be a consequence of depletion of the ozone layer?
- A A rise in the level of chlorofluorocarbons in the atmosphere.
B Rise in level of greenhouse gases.
C Decrease in the average temperature of the earth.
D Increased exposure to dangerous UV radiation.

29. The small gap between adjacent Schwann cells of an axon is called:
- A Synapse.
B Node of Ranvier.
C Dendritic junction.
D Synaptic cleft.

30. Which one of the following organs is responsible for the excretion of bile pigments?
- A Gall bladder
B Kidney
C Liver
D Skin

31. The diagram below shows the layout of a flush toilet. (Diagram courtesy R. H. Stone and Cozens).



What is the purpose of the water in the U-bend of this toilet?

- A To dissolve the faeces.
B To prevent the faeces sticking to the outlet pipe.
C To stop smell from sewer entering the house.
D To dilute urine and faeces not to stain the lavatory pan.

32. A birth control method which prevents the implantation of the fertilized egg cell is called:
- A contraceptive pill.
B tubal ligation.
C intrauterine device.
D implant.

Question 33 and 34 are based on the table below which shows the composition of four different food substances.

food	Energy value/kJ	Protein /grams	Iron/ mg	Vitamin C /mg	Fats /gm
A	280	23.2	.01	130	3.5
B	500	25.0	1.5	2000	13.5
C	100	19	0.25	20	0.2
D	150	0.5	0.005	150	0.1

33. Select the food sample whose repeated consumption would lead to the development of scurvy.
- A
B
C
D

34. Identify the food type which will likely result in kwashiorkor.
- A
B
C
D



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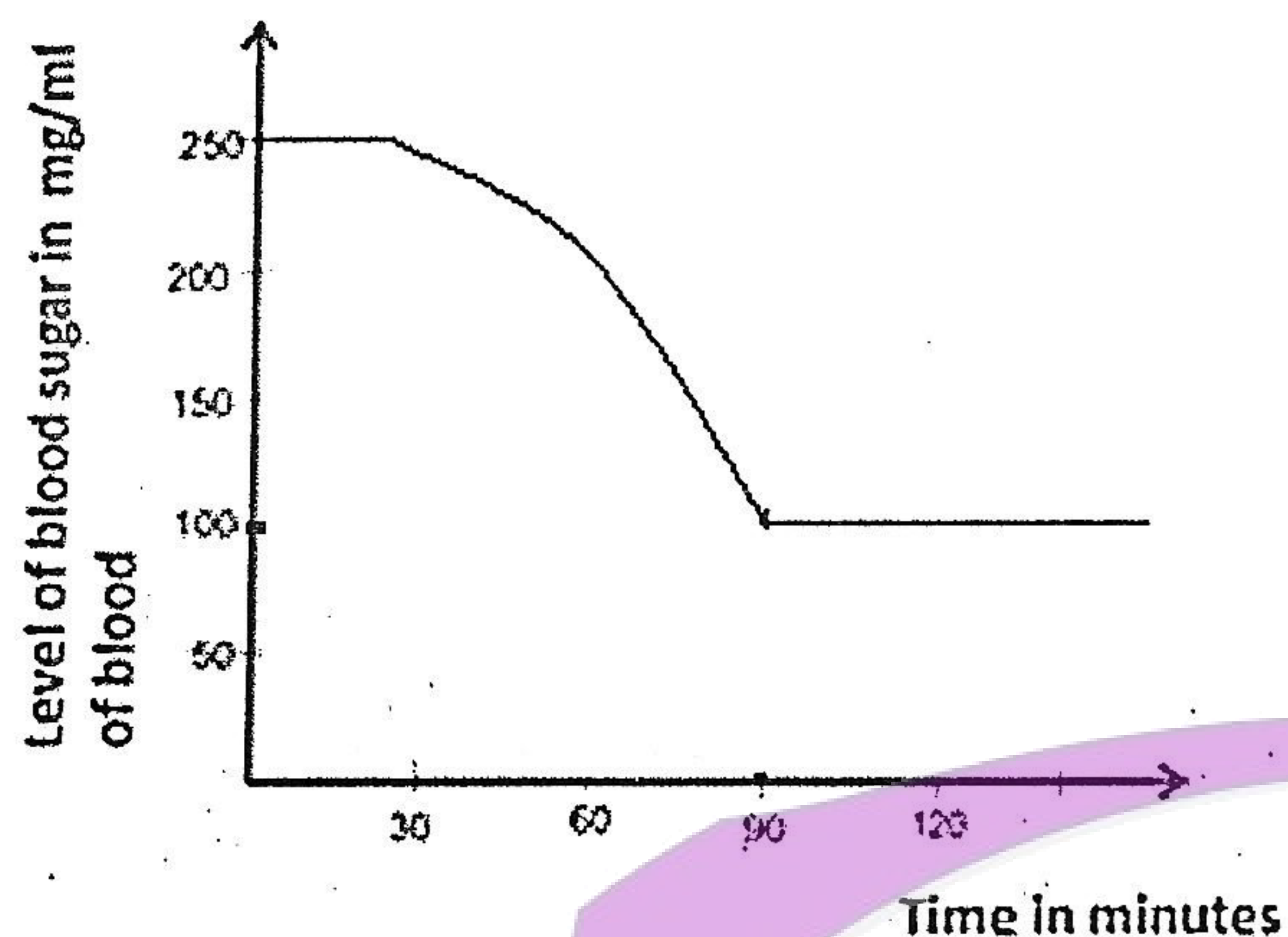
35. The phenotype of an organism refers to the:
- the physical or physiological expression of the genes of an individual.
 - genetic composition of an organism.
 - alternative forms of a gene.
 - the physical expression of the genes of an organism.
-
36. What is the name of the hormone, which stimulates ovulation in the menstrual cycle?
- Follicle stimulating hormone
 - Oestrogen
 - Lutenizing hormone
 - Progesterone
-
37. Choose the characteristic that distinguishes man from other mammals:
- Maintenance of a constant body temperature.
 - Bipedal gait.
 - Has two sets of teeth in life time.
 - They are warm-blooded.
-
38. A food sample tested with Sudan III solution turned red.
- Reducing sugar
 - Protein
 - Fats
 - Non reducing sugar
-
- Questions 39 and 40 consist of two statements. Choose A if both statements are true and the second statement is a correct explanation of the first statement. Choose B if both statements are true but the second statement is not a correct explanation of the first statement. Choose C if the first statement is true but the second statement is false. Choose D if both statements are false.
- | | First statement | Second statement |
|----|---|--|
| 39 | Red blood cells have nuclei at maturity. | Red blood cells are less numerous than white blood cells. |
| 40 | A cross between two individuals heterozygous for albinism will result in an albino. | Albinism is caused by a recessive allele resulting from gene mutation. |
-
41. A long-term effect of excessive alcohol consumption on the body is:
- liver cirrhosis.
 - liver jaundice.
 - emphysema.
 - slurred speech.
-
42. How is lymph different from tissue fluid?
- It contains more fats and more white blood cells.
 - It contains more fats and less white blood cells.
 - It contains less fats and more white blood cells.
 - It contains less fats and less white blood cells.
-
43. Smooth muscles differ from cardiac muscles in that they are:
- branched and striated.
 - striated and multinucleated.
 - spindle-shaped and multinucleated.
 - spindle-shaped and uninucleated.
-
44. Identify the beneficial effect of fungi to humans:
- Decomposition of wooden buildings.
 - Used in pickling vegetables.
 - They are used in bakeries to make bread.
 - They are parasites of humans.
-
45. Identify the type of health unit that takes care of patients with mental problems:
- Geriatric
 - Psychiatric
 - Hospital
 - Antenatal unit
-
46. The Red Cross is a non-governmental organisation. What is its primary role?
- To administer first-aid to war victims.
 - To administer first-aid to school children.
 - To control the spread of epidemic diseases.
 - To fight against female genital mutilation.
-
47. A parasitic adaptation of platyhelminthes is:
- The presence of spines on their scolex.
 - The presence of hooks on their scolex.
 - The presence of eyes on the scolex.
 - The presence of teeth in their mouth.



Turn over

4-/0565/1/A/MCQ

The graph plots the level of blood glucose after a heavy meal against time. Study the graph and answer questions 48 and 49, which are based on it.



48. How long did it take for the blood glucose level to fall to 100mg/ml?
- A 30 min
 - B 1 hour
 - C 1hr 30 min
 - D 2 hours

49. Identify the hormone that plays a key role in the regulation of blood sugar after a heavy carbohydrate meal:

- A Adrenaline
- B Glucagon
- C Cortisone
- D Insulin

50. What is the name given to pillars on which a house built in a flood-prone area is suspended?

- A Eaves
- B Stilts
- C Concrete pillars
- D Props

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