**9 Life Processes and Abuses**
**9.1 Types of food**

1 What functions does food such as eggs, fish and lean meat help our body to carry out ?

A To build and repair body tissues
B To build strong bones and teeth
C To improve our sight and hearing
D To protect and strength our skin

2 Energy giving foods are usually

A carbohydrates B proteins C vitamins D minerals

3 A sample of food was tested in three ways:

I It did not change colour when added to Biuret' s reagent
II It left a permanent translucent stain when rubbed on filter paper
III It produced an orange precipitate when tested with Benedict's solution

The food material contained

A fat and protein B fat and sugar C fat and glucose D protein and glucose

4 To test the presence of glucose the chemical used is

A iodine's solution B litmus solution C Benedict's solution D Millon's reagent

5 To test the presence of starch, the chemical used is

A Millon's reagent B Benedict's solution C lime water D iodine solution

6 Which of the following are not correctly matched ?

I carbohydrate - rice
II protein - potato
III vitamin C – orange juice
IV fats and oil – cooking oil
V starch - eggs

A I and II II and III B II and IV C II and V D II and IV

7 Which of the following is **not** an energy-giving food?

A Carbohydrates B Proteins C Fats D Water

**9.1 Types of food**

8 An experiment was set up as shown in the figure. After an hour, the water in the beaker was boiled with a few drops of Benedict's solution. As a result a red precipitate was obtained. The result showed that (96)

96Q 29

A fat had diffused out of the visking tubing
B glucose had diffused out of the visking tubing
C protein had decomposed into amino acids
D starch had decomposed into sugar

9 Figure shows an experiment to study the action of amylase on starch solution. (97BJCE)

97 BJCE Q 16

At the beginning of the experiment, a few drops of liquid from A is tested for sugar and starch. After 20 minutes, the liquid from A is tested again for sugar and starch. Which of the following is the most likely results obtained?

| | At the beginning | After 20 minutes |
|---|---|---|
| A | Only starch present | Only starch present |
| B | Only starch present | Sugar and starch present |
| C | Sugar and starch present | Only starch present |
| D | Sugar and starch present | Only sugar present |

10 A sample of food mixed with water was tested to find out its contents. The observations are shown in the table below. (98)

| Test | Observation |
|---|---|
| Iodine solution was added to the sample | The solution became yellow |
| Benedict's solution was added to the sample and the mixture was heated | Orange precipitate was formed |
| The sample was rubbed on filter paper | It left an oily mark on the filter paper |

What does the food contain?

A Fat and glucose
B Fat and starch
C Glucose and protein
D Starch only

11 A 12 D 13 D

## 9.2 (a) Dentition

1 The type of teeth for tearing food is

A incisors B molars C premolars D canine

2 In the figure shown, the part of the tooth numbered ….. is made of the hardest material in the body.

Section 12 Q 15

A 1 B 2 C 3 D 4

3 A dentist is fixing false teeth to a dental plate. If X = incisors, Y = molars and Z = canine, in which order (front, side, back) would he fix them?

A XYZ B XZY C ZXY D YZX

4 Which of the following describes the function of the incisor tooth of humans?

A Chewing food B Cutting food C Grinding food D Tearing food

5 The following diagram shows a section of a human tooth. Which one of the labelled parts A, B, C or D is the enamel?

Pure bio N84Q21
Or SAP(1,6)2

6 The following diagram shows a human jaw.

Pure bio N94Q9
Or SAP (1.6)6

What are the numbered types of teeth?

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| A | Canine | Incisor | Molar | Premolar |
| B | Incisor | Canine | Premolar | Molar |
| C | Canine | Incisor | Premolar | Molar |
| D | Incisor | Canine | Molar | Premolar |

7 A dentist is is fixing false teeth to a dental plate. Starting from the front to the back, in which order would he fit them? (PMB 97)

A canines, molars, incisors
B incisors, canines, molars
C incisors, molars, canines
D molars, incisors, canines

8 D 9 A

## 9.2 (b) Digestion in animals

1 Which of the secretions below contain the enzyme amylase?

I Bile II Gastric juice III Pancreatic juice IV Saliva

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

2 The enzyme responsible for the digestion of starch is

A amylase B lipase C trypsin D rennin

3 An experiment was set up as shown in the figure. At the beginning, the water in the beaker was tested for glucose and starch but both were not present. After 20 minutes, the water was tested again. What should be the result?

Section 12 Q23

A Only starch present
B Only glucose present
C Both glucose and starch present
D Glucose and starch are not present

4 The figure shows the human digestive system. Organ Y produces a substance that helps in the digestion of food. The substance produced is

A bile B gastric juice C intestinal juice D saliva

5 Digestion in man starts at the

A mouth B stomach C small intestine D large intestine

6 Which of the following is not true of the digestive process? (95)

| Digestive organs | Food digested | Enzymes present |
|---|---|---|
| A Liver | Fish meat | pepsin |
| B Mouth | rice | amylase |
| C Pancreas | butter | lipase |
| D Small intestine | sugar | sucrase |
| E Stomach | milk | renin |

Note:
In the liver, bile (which has no enzyme) is produced. It is used for emulsifying fats.
Lipase is present in pancreatic juice.

7 The enzyme present in our saliva is called (96)

A amylase B pepsin C renin D trypsin

8 What is produced when the enzyme amylase acts on starch? (98)

A Amino acid B Fatty acid C Glucose D Maltose

**9.2 (b) Digestion in animals**

9 Figure shows the digestion of a nutrient. (2000S)

2000S Q6

What do W, X and Y stand for?

| | W | X | Y |
|---|---|---|---|
| A | Fats | Bile | Fatty acids |
| B | Fats | Lipase | Glycerol |
| C | Protein | Protease | Amino acids |
| D | Starch | Carbohydrate | Glucose |

10 Figure shows a diagram of the human digestive system. (2000IS)

2000IS Q30

Which part labelled A, B, C or D produces enzyme amylase which acts on starch to produce maltose?

11 C 12 D

## 9.3 Plant Nutrition

1 Ali wanted to test a leaf for starch. Which of the following procedure is used to remove Chlorophyll from the leaf?

A Cutting the leaf into pieces
B Boiling the leaf pieces in water
C Boiling the leaf pieces in alcohol
D Adding iodine solution to the leaf pieces

2 The by-product of photosynthesis is

A water B carbon dioxide C oxygen D nitrogen

3 When water is heated in a beaker, some small bubbles escape before the water begins to boil because

A the water contains dissolved air
B the water contains micro-organisms
C the bubbles are tiny drops of water
D micro-organisms give out tiny bubbles

4 Which process reduces the percentage of carbon dioxide and increase the percentage of oxygen in the atmosphere?

A Respiration B Transpiration C Photosynthesis D Osmosis

5 Fish of same species and sizes are placed in 5 glass vessels P,Q,R,S and T as shown in the figure. Each vessel contains sufficient food for the fish. In which vessel will the fish live longer? (95)

95Q 34

A Vessel P B Vessel Q C Vessel R D Vessel S E Vessel T

6 During the day, green plants produce mostly (97BJCE)

A carbon dioxide
B nitrogen and carbon dioxide
C oxygen and water vapour
D oxygen, water vapour and carbon dioxide

7 The following equation for photosynthesis is incomplete. (98)

98 Q 20

What do the numbers 1 and 2 represent?

| | 1 | 2 |
|---|---|---|
| A | Carbon dioxide | nitrogen |
| B | Carbon dioxide | oxygen |
| C | Oxygen | carbon dioxide |
| D | Oxygen | nitrogen |

Mnemonics:

EC WATER → GO
E = Energy (solar)
C = $CO_2$
= Chlorophyll
G = Glucose
O = Oxygen

8 Which of the following is not required for photosynthesis? (2000IS)

A Carbon dioxide B Light C Oxygen D Water

9 There is **no answer**.
**Both** leaf 1 and 3 contain no starch.
Reason:

| | | | |
|---|---|---|---|
| Leaf 1 | $CO_2$ ABSENT | NO photosynthesis | NO starch |
| Leaf 2 | $CO_2$ PRESENT | photosynthesis occurred | starch PRESENT |
| Leaf 3 | $CO_2$ ABSENT | NO photosynthesis | NO starch |

(**Both** *soda lime* **and** *sodium hydroxide* **can** absorb carbon dioxide)

10 D

| | | | |
|---|---|---|---|
| Area 1 | light YES, chlorophyll NO | photosynthesis NO | yellow |
| Area 2 | light NO, chlorophyll NO | photosynthesis NO | yellow |
| Area 3 | light NO, chlorophyll YES | photosynthesis NO | yellow |
| Area 4 | light YES, chlorophyll YES | photosynthesis YES | dark blue |

## 9.4 Respiration

1 The waste products during respiration are

A urea and water
B ammonia and water
C carbon dioxide and water
D mineral salts and carbon dioxide

2 What are produced when starch is burnt in oxygen ? (98)

A Carbon and hydrogen
B Carbon dioxide and water
C Carbohydrates and water
D Nitrogen and carbon dioxide

3 Figure shows the respiratory system of man. (98)

98 Q 19

Which part makes the lungs work? Ans: D

4 The following equation shows an aerobic respiration

Glucose + P ⟶ Q + Water + Energy

What do the letters P and Q stand for? (2000S)

| | P | Q |
|---|---|---|
| A | Carbon dioxide | Nitrogen |
| B | Carbon dioxide | Oxygen |
| C | Oxygen | Carbon dioxide |
| D | Oxygen | Nitrogen |

Mnemonics:

GO → EC WATER
G = Glucose
O = Oxygen
E = Energy (in your body cells)
C = $CO_2$

5 The apparatus as shown in the figure is used to investigate the presence of carbon dioxide that we breathe in and we breathe out. (2000S)

2000S Q 12

What would happen to the limewater in test tubes A and B if a student breathes in and out through the tube several times ?

| | Test tube A | Test tube B |
|---|---|---|
| A | Remains clear | Remains clear |
| B | Remains clear | Turns cloudy |
| C | Turns cloudy | Remains clear |
| D | Turns cloudy | Turns cloudy |

6 During breathing and respiration, the exchange of gases occurs in the (2000IS)

A air tubes B alveoli C bronchioles D windpipe

8 D 7 C 8 D
(Note the wrong numbering of questions which follows the book)

**9.5 (a) Transport in plants**

1 Figure shows the cross section of a young dicot stem. The part marked X is

A xylem cell B phloem cell C cambium cell D pith

2 Figure shows a freshly cut twig in a red solution. It is left for one day. (97PMB)

97PMB Q 13

Which tissues will be stained red?

A Cambium B Phloem C Pith D Xylem

3 Figure shows the section of a young dicotyledon stem of a plant. (99)

99Q30

What is the function of the part marked T ?

A To absorb carbon dioxide during photosynthesis
B To absorb water and minerals from the soil
C To transport manufactured food from the leaves to all parts of the plant
D To transport water and minerals from the roots to all parts of the plant

4 The function of phloem is to transport (2000S)

A manufactured food from the leaves to all parts of the plant
B manufactured food from the leaves to the young shoots only
C water and mineral salts from the leaves to the roots
D water and mineral salts from the roots to the leaves

Q.1-6, 8
PHLOEM→ FOOD
XYLEM→WATER + mineral

**For STEMS and ROOTS**
Phloem is on the OUTSIDE
Xylem is at the CENTRE

5 Water and mineral salts are transported to the leaves by

A cambium B xylem C phloem D pith

6 How are water and mineral salts transported?

A By xylem from ROOTS to leaves
B By phloem from roots to leaves
C By xylem from leaves to other parts of the plant
D By phloem from leaves to other parts of the plant

Q.9
PHLOEM→ FOOD
XYLEM→WATER + mineral

**For LEAVES**
PHLOEM is BELOW
XYLEM is ON TOP

7 By what process is glucose in the leaves formed?

A respiration B photosynthesis C digestion D transpiration

8 D 9 C

**9.5 (b) Transport in animals**

1 How does our body absorb oxygen into the blood? (95)

A Through the moist surface of the air sacs in the lungs
B Through the skin pores
C Through the walls of the inner chambers of the ear
D Through the walls of the large intestine

2 Figure shows the blood circulation system in a human body. (95)

95 Q 28

What is the blood vessel X ?

A Aorta B Hepatic vein C Pulmonary artery D Portal vein

3 From which part of the respiratory system of man do the blood capillaries take in oxygen? (96)

A Alveoli B Bronchioles C Nose D Trachea

4 Valves can be found in the (97BJCE)

I arteries II capillaries III heart IV veins

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

Q.4
Capillaries do NOT have valves
VEINS and PULMONARY ARTERIES have valves.

5 Which part of the heart, in the figure has the thickest wall? (97PMB)

97PMBQ40 Ans: D

6 Figure shows the diagram of the human heart. (99)

99Q37

Which chamber receives blood directly from the lungs? Ans: B

7 C

**9.6 Drugs**

1 Which of the following is an example of a useful drug?

A heroin B cannabis C antibiotic D cigarette

2 Which of the following drug is used to kill bacteria in the body ?

A Alcohol B Aspirin C Heroin D Penicillin

3 A person who is addicted to heroin becomes

A very active in sport
B an attentive student
C tired easily
D a loving family member

4 What happens to a drug addict after the drug is withdrawn?

A Desire for the drug is reduced
B The addict is cured
C Vomiting, sweating and cramp occur
D The addict becomes an alcoholic

5 A drug addict who injects drugs directly into his body faces the possibility of getting

A high blood pressure
B muscle cramp
C heart attack
D AIDS

6 Which of the following could be the characteristic of an alcohol addict?

A slow in response
B an active athlete
C alert to the environment
D no difficulties in speaking

7 Which of the following is the effect on a person consuming excessive amounts of alcohol?

A Always cheerful
B Work efficiently
C Dangerous driving
D Constant headaches

8 An alcoholic becomes quarrelsome after drinking because he

A cannot think logically
B cannot walk straight
C has double vision
D is always sleepy

9 Which one of the following substances is present in cigarette smoke?

A Alcohol B Aspirin C Nicotine D Heroin

10 Which of the following is a harmful effect of smoking?

A Overweight B Lung disease C Normal blood pressure D Diabetic

11 When tar collects in the lungs of a smoker, it can cause

A heart attack B lung cancer C stroke D kidney failure

12 Which chemical in cigarette smoke causes a smoker to be addicted to smoking?

A Carbon monoxide B Tar C Ammonia D Nicotine

13 Which of the following is an example of passive smoking? (2000S)

A Sharing a single cigarette between friends
B Sitting next to cigarette smokers in a restaurant
C Smoking occasionally
D Still learning to smoke

14 C 15. C

## 9.7 AIDS

1 A health officer needs to introduce a campaign to reduce the spread of AIDS. Which of the following
is the best advice?

A Do not drink from cups used by other people
B Do not kiss the hands of infected people
C Do not have sexual intercourse with many partners
D Do not stay in the same room as the infected people

2 One of the signs of an AIDS patient is

A white thrush in the mouth
B abnormal weight gain
C excessive loss of fluid as urine
D the skin colour changes to yellow

3 Which form of drug abuse risk infection with the HIV (AIDS) virus?

A Cigarette smoking
B Drinking alcohol
C Injection of heroin
D Inhaling solvent fumes

4 Which of the following is a characteristic of drug addict?

A A fit and healthy person
B Responsible and hardworking
C Lazy and irresponsible
D A successful person

5 One of the ways of discouraging young people from abusing drug is

A to open more drug stores
B to educate them from time to time
C to ban the drugs altogether
D to provide alternative drugs

6 AIDS is spread through the following ways except (2000S)

A blood transfusion B heroin injection C sexual intercourse D sharing cups