Candidate Name	Centre Number	Candidate Number

ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

BIOLOGY 4025/1

PAPER 1 Multiple Choice

SPECIMEN PAPER 1 hour

Additional materials:
- Multiple choice answer sheet
- Soft clean eraser
- Soft pencil (type B or HB is recommended)

TIME 1 hour

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Write your name, centre number and candidate number on the answer sheet in the spaces provided unless this has already been done for you.

There are **forty** questions in this paper. Answer **all** questions. For each question there are four possible answers, **A, B, C** and **D**. Choose the **one** you consider correct and record your choice in soft pencil on the separate answer sheet.

Read very carefully the instructions on the answer sheet.

INFORMATION FOR CANDIDATES

Each correct answer will score one mark. A mark will not be deducted for a wrong answer.

Any rough working should be done in this booklet.

This question paper consists of 12 printed pages.

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1 A first aid kit contains

A antibiotics.
B antiseptic lotion.
C fire blanket.
D razor blade.

2 A career **not** related to Biology is

A Conservationist.
B Dietician.
C Ecologist.
D Electrician.

3 Which property of water enables the provision of a constant internal environment in the body?

A It has a cooling effect.
B It acts as an insulator.
C It has a high heat of vaporisation.
D It has a high specific heat capacity.

4 Which of the following is a function of proteins?

A They provide energy.
B They make up enzymes.
C They control osmotic potential in cells.
D They protect delicate organs from damage.

5 Which polysaccharide has a structural role in living organisms?

A cellulose
B glycogen
C sucrose
D starch

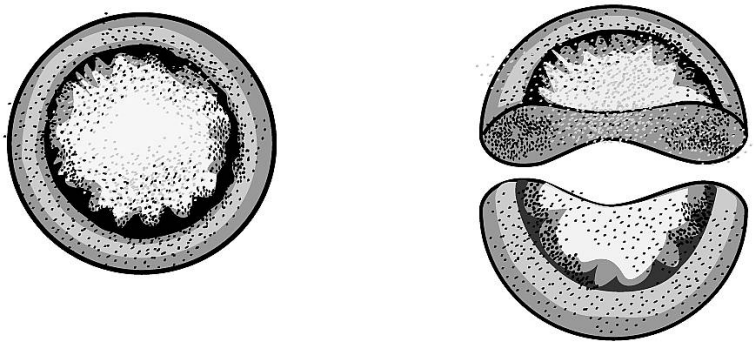
6 Which is the site for anaerobic respiration in a cell.

A chloroplast
B cytoplasm
C nucleus
D vacuole

7 Which element is **not** found in glycogen?

A carbon
B hydrogen
C oxygen
D nitrogen

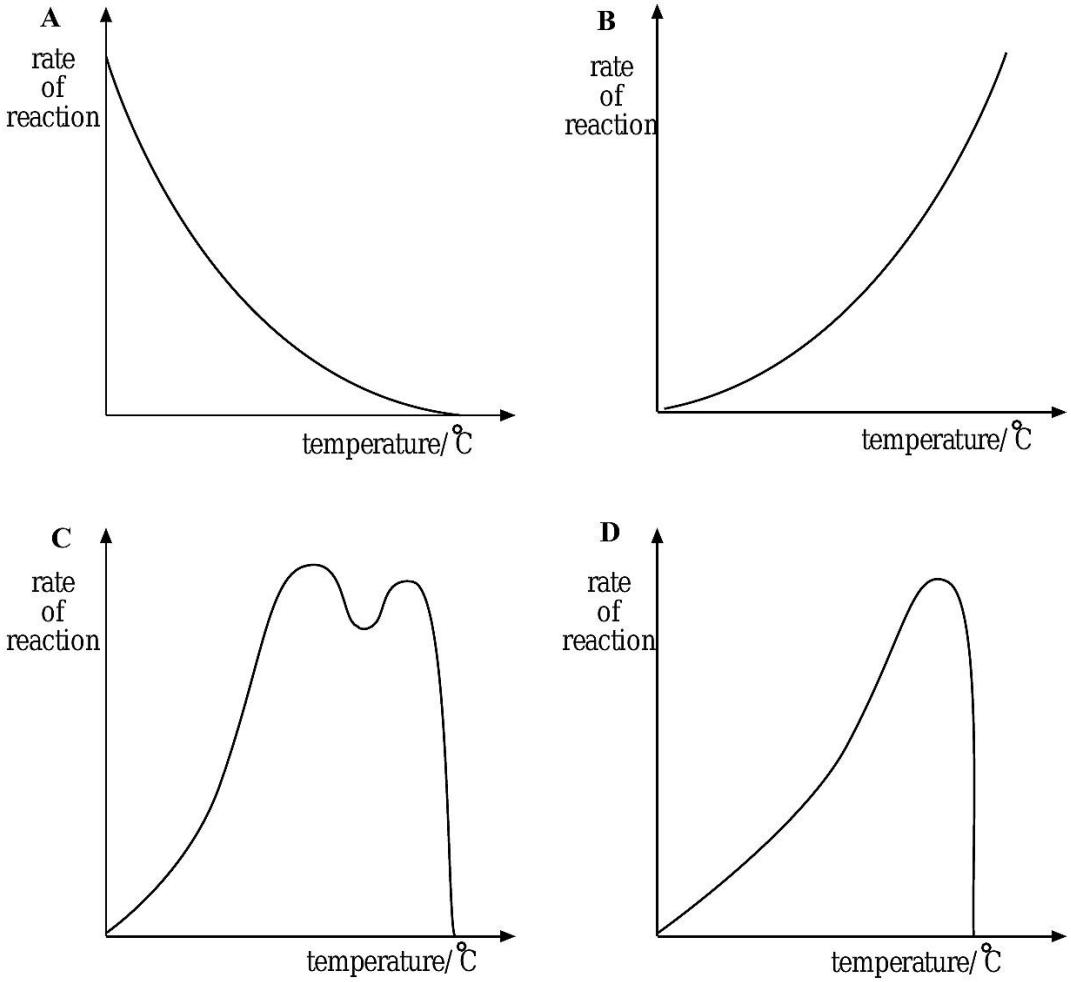
8 The diagram shows red blood cells.



The advantage of the shape is that it

A enables the cell to transport oxygen.
B increases surface area to volume ratio.
C decreases rate of diffusion of oxygen.
D allows cells to form haemoglobin.

9 Which graph shows the effect temperature has on enzyme – catalysed reactions?



10 The equation for photosynthesis is

A carbon dioxide + glucose ⟶ oxygen + water
B carbon dioxide + water ⟶ glucose + oxygen
C glucose + oxygen ⟶ carbon dioxide + water
D glucose + water ⟶ carbon dioxide + oxygen

11 Which mineral deficiency results in stunted root growth?

A magnesium
B nitrogen
C phosphorus
D potassium

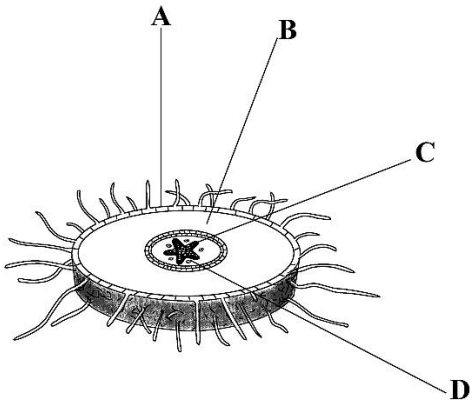
12 What is the advantage of biological pest control?

A It is specific to one type of pest
B It is efficient
C It is environmentally friendly
D It reduces biodiversity

13 Which adaption helps plant leaves reduce the rate of transpiration?

A thin cuticle
B large surface area
C presence of hairs
D stomata on the upper surface

14 The diagram shows a cross section of a dicotyledonous root.

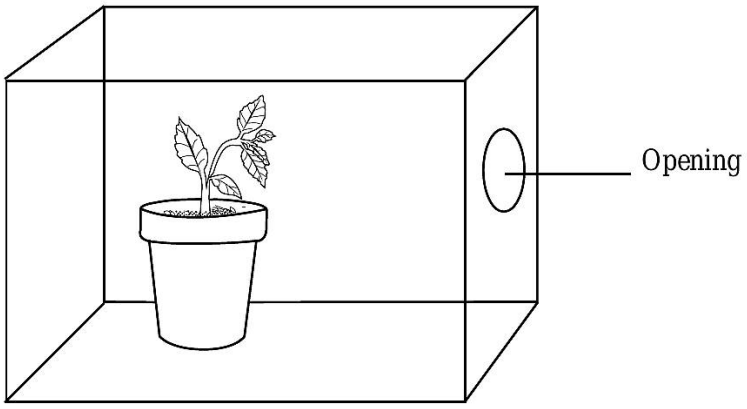


Which part **A**, **B**, **C** or **D** transports water and mineral salts?

15 The advantage of asexual reproduction is

A reduction in overcrowding of offspring.
B increased genetic variation in offspring.
C rapid colonisation of new areas.
D increased resistance to diseases.

16 The diagram shows a potted green plant growing inside a shoe box with a small opening.



The plant shows a response known as

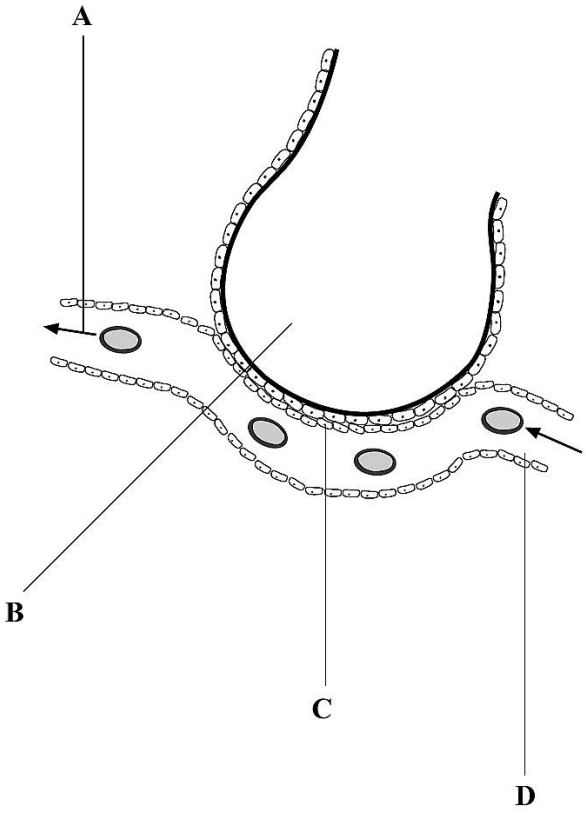
A chemotropism.
B geotropism.
C hydrotropism.
D phototropism.

17 The effect of lack of vitamin **D** is

A beri beri.
B oesteomalacia .
C rickets.
D scurvy.

18 The diagram shows the alveolus and surrounding blood capillary.

Where at **A**, **B**, C or **D** is the concentration of carbon dioxide highest?



19 What are the products of anaerobic respiration in animals?

A Alcohol and carbon dioxide
B Alcohol and lactic acid
C Energy and carbon dioxide
D Energy and lactic acid

20 Reduced supply of oxygenated blood to the heart muscle leads to

A low blood pressure.
B heart attack.
C chest pain.
D stroke.

21 The function of veins is to transport

A blood away from the heart.
B blood towards the heart.
C deoxygenated blood.
D oxygenated blood.

22 Menstruation is a result of a decrease in the levels of

A oestrogen,
B follicle stimulating hormone.
C progesterone.
D lutenising hormone.

23 The information shows change in mass of a rabbit in response to food given in a month

Initial mass of rabbit	**Mass of food given**	**Final mass**
0.5 kg	3 kg	2 kg

What is the food conversion efficiency of the rabbit?

A 0.5
B 0.67
C 2
D 4

24 Muscles are connected to bones by

A cartilage.
B ligaments.
C membranes.
D tendons.

25 Which of the following refers to observable characteristics of an organism?

A genotype
B heterozygous
C homozygous
D phenotype

26 Which blood group is a universal donor of blood?

A A
B AB
C B
D O

27 How many chromosomes does an ovum resulting in Down's syndrome have?

A 23
B 24
C 46
D 47

28 Which characteristics would show normal distribution in a class of 40 students?

A height
B earlobes
C blood groups
D tongue rolling

29 Which characteristic is common among fungi?

A Absence of chlorophyll
B Absence of a nucleus
C Presence of a flagellum
D Reproduction by binary fission

30 Saprophytes are organisms which

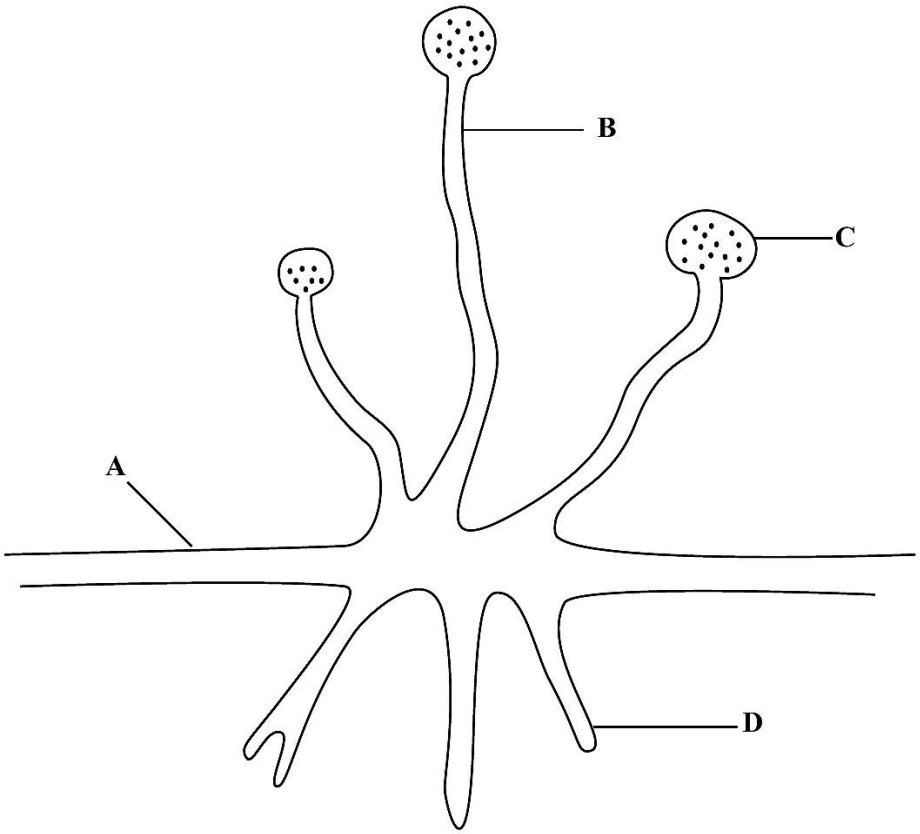
A act as vectors.
B cause diseases.
C feed on dead organic matter.
D live in or on other organisms.

31 Which organism belongs to kingdom Protoctista/Protista?

A bacteria
B mushroom
C plasmodium
D roundworm

32 The diagram shows the structure of a fungus.

Which part **A**, **B**, **C** or **D** produces reproductive cells.



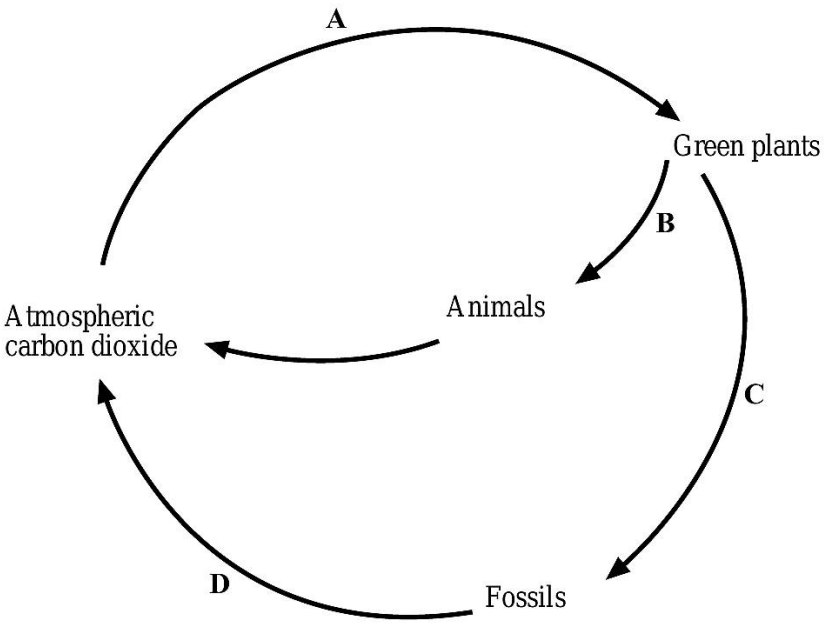
33 Which of the following is a property of clay soil?

A High air content.
B High water holding capacity.
C Good drainage.
D Good crumb structure.

34 The diagram shows part of the carbon cycle.

Which arrow **A**, **B**, **C** or **D** represents photosynthesis?

Part of a Carbon cycle



35 An advantage of maintaining ground cover is that it increases

A erosion.
B evaporation.
C runoff.
D water retention.

36 Which is a physical component of an ecosystem?

A bacteria
B fungi
C sun
D termite

37 The short term effect of solvent abuse is

A dizziness.
B low sperm count.
C increased anxiety.
D memory loss.

38 Which one is **not** an effect of smoking during pregnancy?

A Still birth
B Deformed babies
C Premature birth
D Underweight babies

39 What name is given to a substance that is administered into the body to change chemical activities?

A drug
B enzyme
C glucose
D hormone

40 The tendency to increase drug doses to achieve the same effect is called

A addiction.
B physiological dependence.
C psychological dependence.
D tolerance.