



ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

BIOLOGY

PAPER 1 Multiple Choice

4025/1

NOVEMBER 2018 SESSION

1 hour

Additional materials:

Multiple choice answer sheet

Soft clean eraser

Soft pencil (type B or HB is recommended)

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.

ADDITIONAL INFORMATION FOR CANDIDATES

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

Enough working should be done in this booklet.

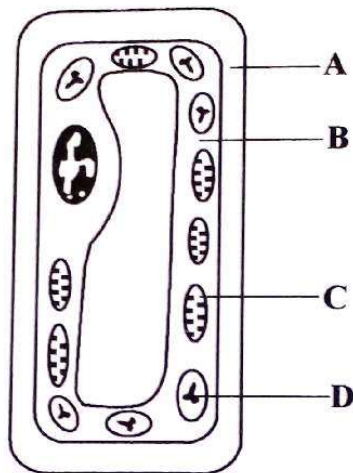
- 1 The study of body parts and their functions is called
- A anthropology.
 - B osteology.
 - C cytology.
 - D physiology.
- 2 What is the function of glucose in living organisms?
- A storage compound
 - B structural material
 - C respiratory substrate
 - D growth material
- 3 An example of a disaccharide is
- A cellulose.
 - B galactose.
 - C maltose.
 - D starch.
- 4 Which cell changes shape to perform its function?
- A neurone
 - B lymphocyte
 - C phagocyte
 - D erythrocyte
- 5 Which branch of Biology involves the production of genetically engineered organisms?
- A mycology
 - B biotechnology
 - C cytology
 - D microbiology
- 6 A root hair cell is specialized for its function in that it
- A lacks a nucleus.
 - B lacks mitochondria.
 - C has a large surface area.
 - D has numerous chloroplasts.

7 Which polysaccharide is stored in animals?

- A cellulose
- B chitin
- C glycogen
- D starch

8 The diagram shows the structure of a plant cell.

In which part, A, B, C or D, is the most energy produced?



9 Which enzyme, in a bio-detergent, would remove a fatty stain?

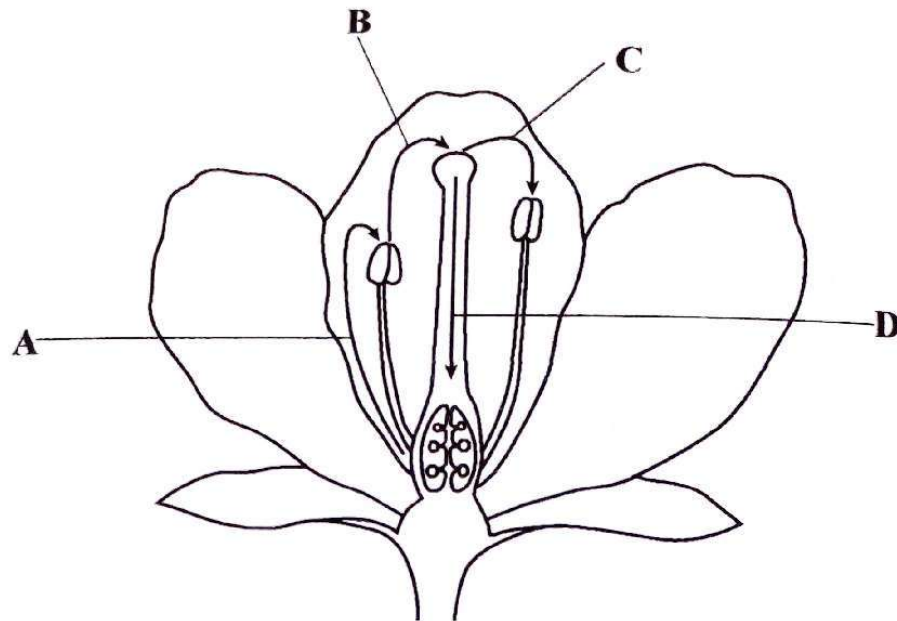
- A amylase
- B cellulase
- C lipase
- D protease

10 Which one is an adaptation of a leaf for photosynthesis?

- A shiny surface
- B presence of stomata
- C presence of hairs
- D waxy cuticle

- 11 Which element is essential for osmotic balance in plants?
- A calcium
 - B nitrogen
 - C phosphorus
 - D potassium
- 12 Which factor reduces plant productivity?
- A high light intensity
 - B low water availability
 - C presence of mineral ions
 - D absence of pests and diseases
- 13 Which plant tissue is responsible for translocation?
- A cortex
 - B epidermis
 - C phloem
 - D xylem
- 14 Which feature of a leaf minimises water loss?
- A large surface area
 - B presence of hairs
 - C thin leaf blade
 - D thin waxy cuticle
- 15 Which plant can be propagated by rhizomes?
- A banana
 - B runner grass
 - C sugar cane
 - D sweet potato

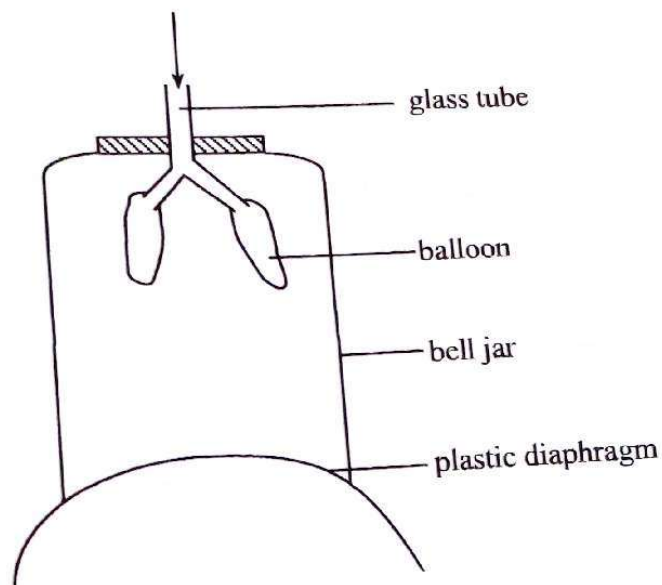
- 16 The diagram shows a section through a flower.
Which arrow, **A**, **B**, **C**, or **D**, represents pollination?



- 17 Which disease is a result of iron deficiency?

- A** scurvy
- B** rickets
- C** kwashiokor
- D** anaemia

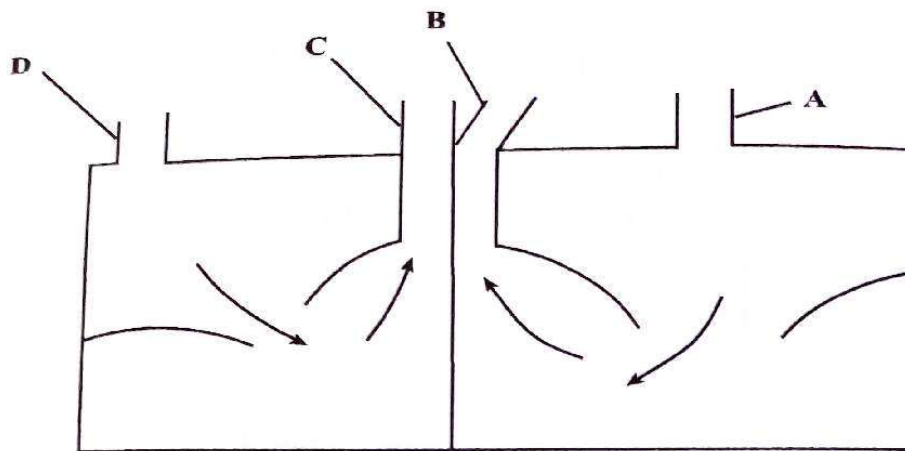
- 18 The diagram shows a model of the chest organs illustrating breathing mechanism.



What is the effect of pulling the plastic diaphragm downwards?

- A Air moves into the balloons.
 - B Air moves out of the balloons.
 - C Air moves into the bell jar.
 - D Air moves out of the bell jar.
- 19 What are the by-products of anaerobic respiration in plants?
- A carbon dioxide and lactic acid
 - B carbon dioxide and water vapour
 - C ethanol and carbon dioxide
 - D ethanol and water vapour

- 20 The diagram is a model mammalian heart.
Which part, **A**, **B**, **C**, or **D**, represents the pulmonary vein?

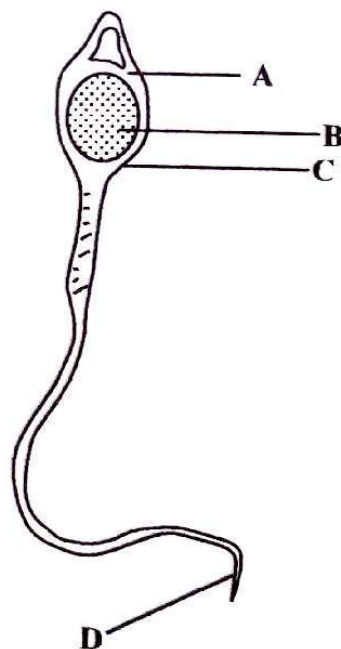


- 21 Which component of blood is responsible for clotting?

- A** plasma
- B** platelets
- C** red blood cells
- D** white blood cells

- 22 The diagram shows the structure of a sperm.

Which part, **A**, **B**, **C**, or **D**, is responsible for mobility?



- 23 Which hormone is secreted in response to low blood glucose level?
- A adrenaline
 - B glucagon
 - C insulin
 - D oestrogen
- 24 One benefit of recombinant DNA technology is the production of
- A bread.
 - B cheese.
 - C insulin.
 - D yoghurt.
- 25 The word that describes the observable characteristics of an organism is
- A allele.
 - B chromosome.
 - C genotype.
 - D phenotype.
- 26 Two parents are heterozygous for albinism.
- What is the probability of the parents, producing an albino child?
- A 25 %
 - B 50 %
 - C 75 %
 - D 100 %
- 27 Down's syndrome is caused by
- A carcinogens.
 - B radiation.
 - C gene mutation.
 - D chromosome mutation.
- 28 Which statement is correct about discontinuous variation?
- A results from effects of genes only
 - B it has many intermediates
 - C gives a normal distribution
 - D results from effects of the environment

29

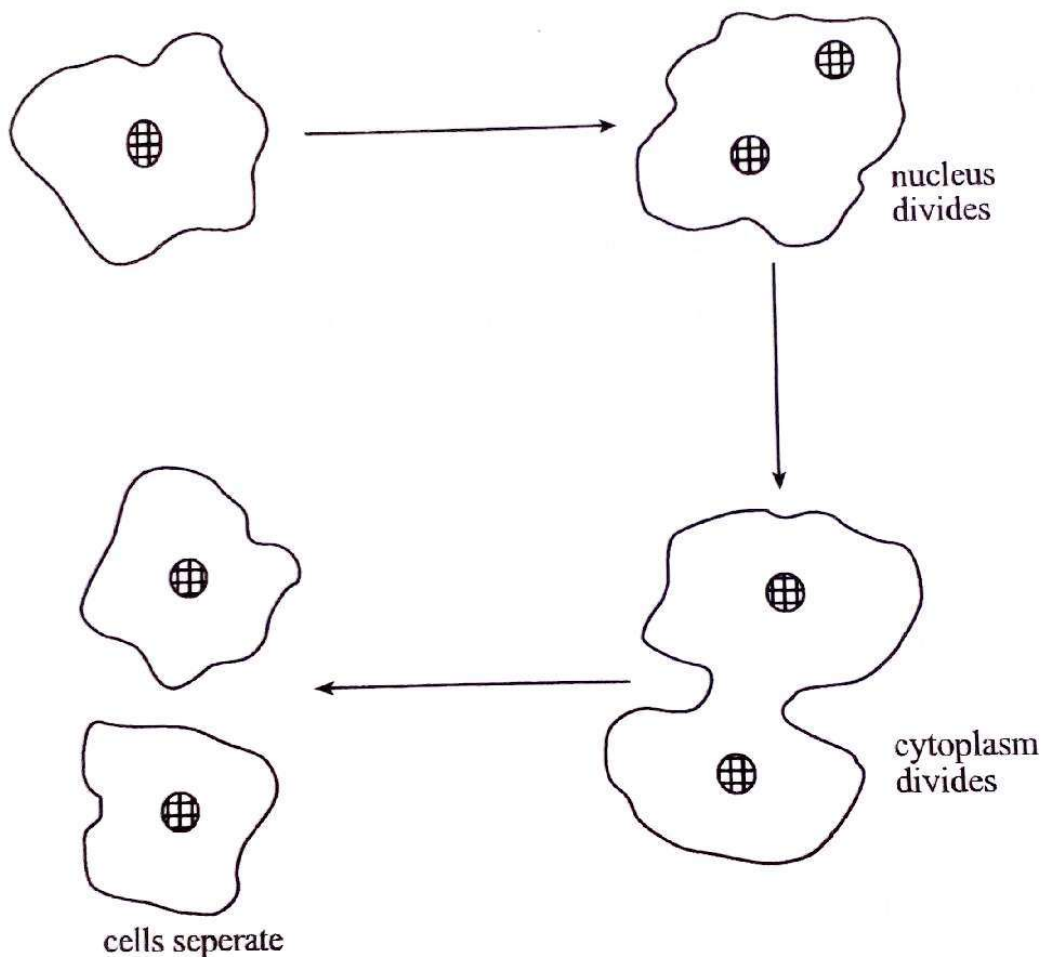
Which kingdom does the organism shown belong to?



- A plantae
- B prokaryotae
- C fungi
- D animalia

30

The diagram shows reproduction stages in amoeba.



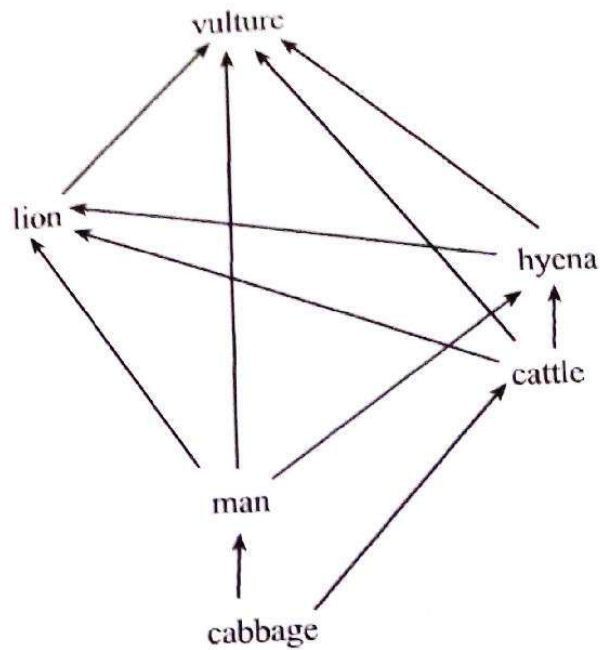
What type of reproduction is shown?

- A spore production
- B binary fission
- C budding
- D meiosis

- 31 In which organisms are eggs fertilised externally?
- A birds
 - B reptiles
 - C mammals
 - D amphibians
- 32 An organism which digests dead organic matter belongs to the kingdom
- A animalia.
 - B fungi.
 - C plantae.
 - D protoctista.
- 33 An ecosystem is the
- A place where an organism lives.
 - B organisms which live in a particular habitat.
 - C level in a food chain at which an organism feeds.
 - D interdependence of living organism and their environment.
- 34 Which one is a physical component of an ecosystem?
- A bacteria
 - B nematodes
 - C termites
 - D water.

35

The diagram shows a food web.



Which organism has the highest amount of energy?

- A cabbage
- B cattle
- C lion
- D vulture

36

What is the effect of exceeding the carrying capacity of land?

- A soil erosion
- B increased birth rate
- C high productivity
- D increased species diversity

37

Which method is effective in destroying mosquitoes at the larval stage of development?

- A burning mosquito coils
- B killing by hand
- C spreading oil on water
- D using mosquito repellents

- 38 Use of prophylactic drugs is one method of preventing
- A bilharzia.
 - B cholera.
 - C malaria.
 - D typhoid.
- 39 The organism that causes cholera is a
- A bacterium.
 - B fungus.
 - C protozoan.
 - D worm.
- 40 Typhoid is transmitted by
- A sexual contact.
 - B droplet infection.
 - C sharing bath towels.
 - D drinking contaminated water.