ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

4025/1

BIOLOGY

PAPER 1 Multiple Choice

NOVEMBER 2018 SESSION 1 hour

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

1 hour

RUCTIONS TO CANDIDATES

t open this booklet until you are told to do so.

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

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

very carefully the instructions on the answer sheet.

ORMATION FOR CANDIDATES

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

ough working should be done in this booklet.

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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

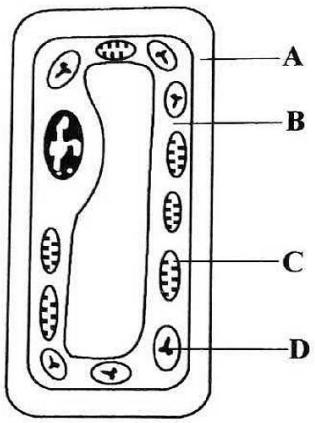
A lacks a nucleus.
B lacks mitochondria.
C has a large surface area.
D has numerous chloroplasts.

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?

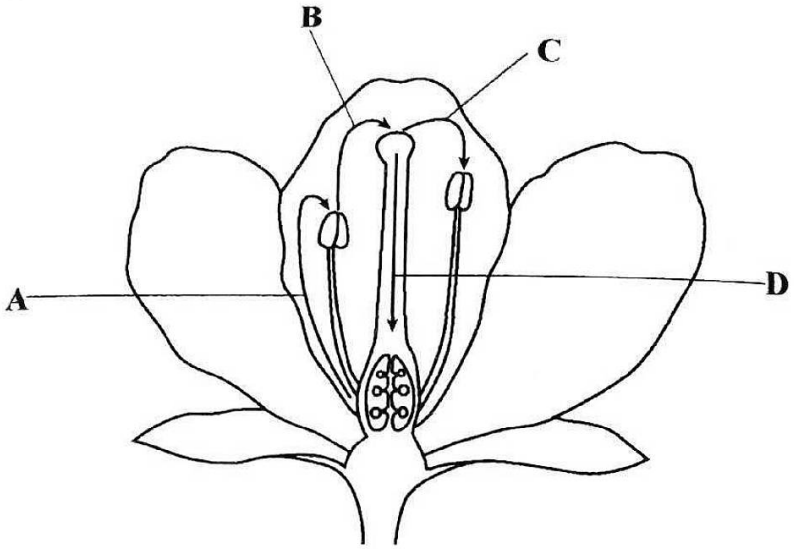
A large surface area
B presence of hairs
C thin leaf blade
D thin waxy cuticle

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.

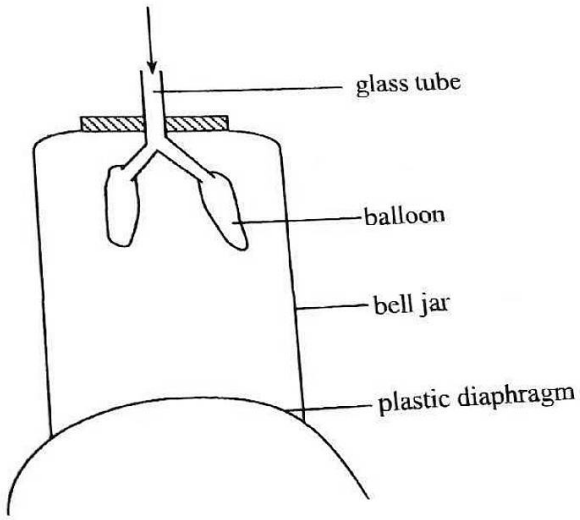
Which arrow, **A**, **B**, **C**, or **D**, represents pollination?



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?

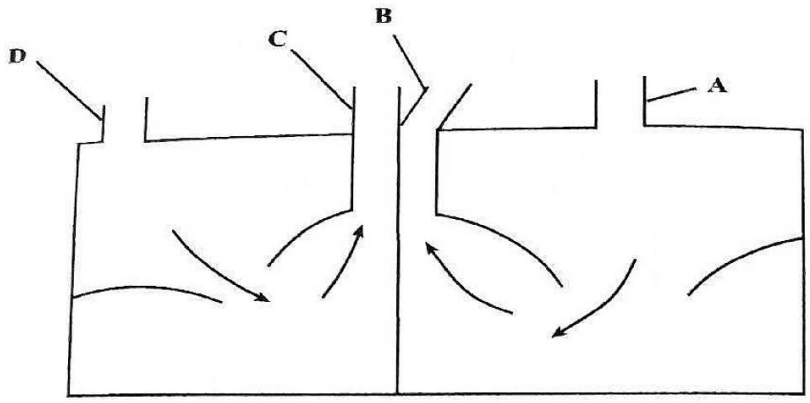
A Air moves into the balloons.
B Air moves out of the balloons.
C Air moves into the bell jar.
D Air moves out of the bell jar.

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?

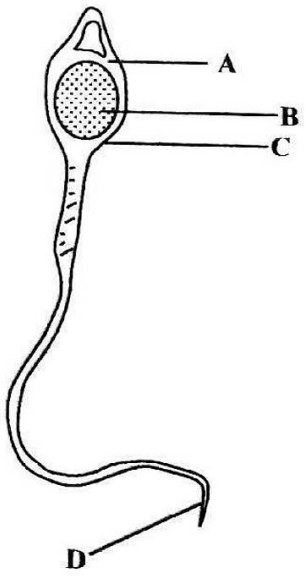


21 Which component of blood is responsible for clotting?

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?

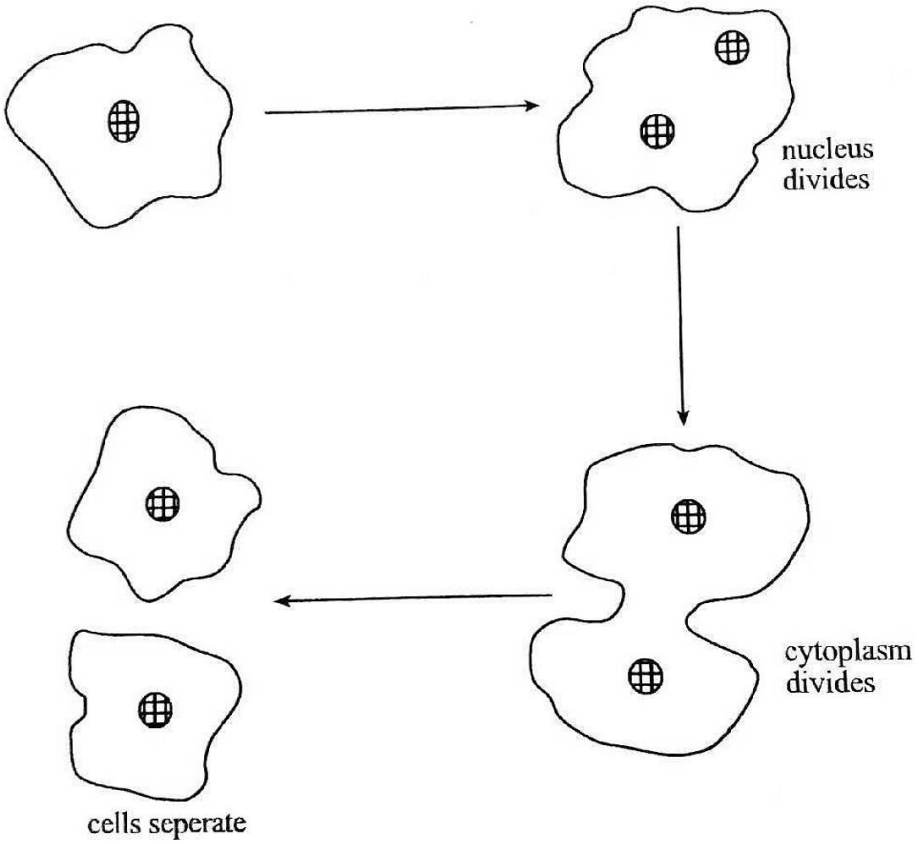
A results from effects of genes only
B it has many intermediates
C gives a normal distribution
D results from effects of the environment

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.

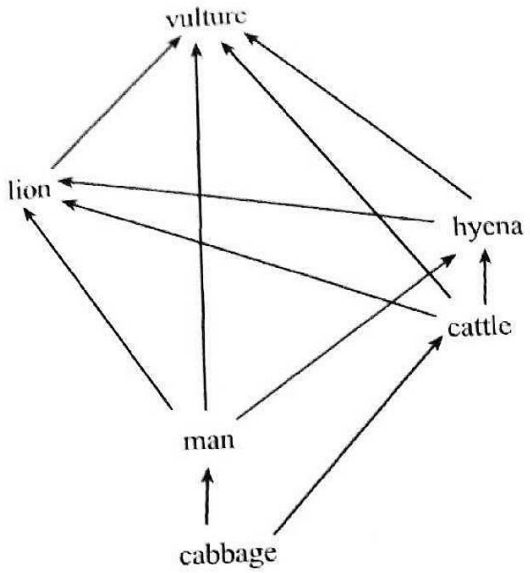
33 An ecosystem is the

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.