



Dr. Blosa Science

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NAME:..... STREAM.....

SENIOR FOUR

553/1

BIOLOGY

PAPER 1

EXAM 5

FOR CONSULTATION CALL 0776802709

2 hours.

INSTRUCTIONS TO CANDIDATES:

- Answer **all** questions in sections **A** and **B** PLUS only one question in section **C**
- Answer section **A** by encircling the most correct alternative, answers to Section **B** in the space provided and answers for section **C** in the answer sheets provided.

For Examiner's Use Only		
Section	Marks	Examiner's Signature
A		
B		
C		
TOTAL		

SECTION A

1. In the classification of organisms which of the following is the correct hierarchy of the taxonomic groups?

- A. family, genus, kingdom, class, order, phylum
- B. family, genus , order, phylum, kingdom, class**
- C genus, family, order, class, phylum, kingdom
- D kingdom, genus, phylum, order, family, class

2. Which one of the following fruits has parietal placentation?

- A. Pawpaw. B. Red pepper. C. Lemon D. pineapple**

3. Which of the following tissues transports manufactured food?
A. cortex B. Cambium C. xylem **D. phloem**
4. Which one of the following has scale leaves?
A. Cassava B. Irish potato C. carrot **D. Onion**
5. In flowering plants, onion leaves are modified for
A. reproduction B. protection **C. storage** D. climbing
6. Which of the following is a set of characteristics common to all Arthropods?
A. Segmented body, 3pairs of legs, 3 body divisions.
B. Segmented body, jointed legs, jointed antennae.
C. Segmented body, jointed appendages, exoskeleton.
D. Segmented body, jointed legs, mandibular mouth parts.
7. Which of the following suits an antelope?
A. Class Amphibia **B. Class Mammalia** C. Class Reptilia D. Class Aves.
8. Which one of the following has fur?
A. Fish B. Amphibian. C. Reptile. **D. Mammals.**
9. A collection of flowers on the same axis is
A. A simple flower
B. An inflorescence
C. Syncarpous pistil
D. Apocarpous pistil
10. Which of the following flowering plants has tendrils?
A. Pumpkin B. Cassava C. Maize D. Cassia

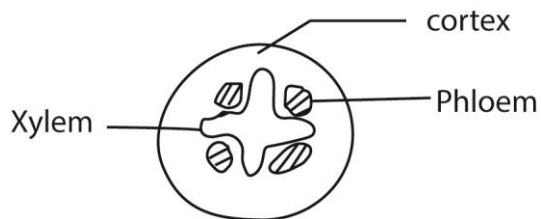
11. To which of the following does the star fish belong?

- A. Chordata. B. Nematoda. C. Echinodermata. **D. Coelenterata**

12. Which of the following fruits is an example of a drupe?

- A. Tridax B. tomato C. passion fruit **D. avocado**

13. Which part of the flowering plant is represented in the figure below?



- A. Dicot root** B. Dicot stem C. monocot stem D. monocot root

14. Which of the following is not a plant organ?

- A. xylem vessel** B. tap root C. flower D. foliage leaf

15. The essential parts of the flower are;

- A. calyx and sepals **B. gynoecium and androecium**
C. ovary and stigma D. corolla and filament

16. Which of the following does not require a circulatory system?

- A. frog B. earth worm **C. Amoeba** D. snail

17. Which of the following features differentiates a housefly from spider?

- A. segmented body B. jointed legs
C. number of body parts D. possession of exoskeleton

18. Which of the following plant organs can be used in vegetative reproduction?

- A. stem tuber of Irish potato** B. root tuber of cassava
C. tap root of carrot D. leaves of onion

19. Which one of the following types of fruits is a pineapple?

- A. c **B. multiple fruit** C. indehiscent fruit D. Berry

Other examples of multiple fruits **fig, mulberry, osage-orange, and jackfruit.**

Example of multiple fruits



Pineapple



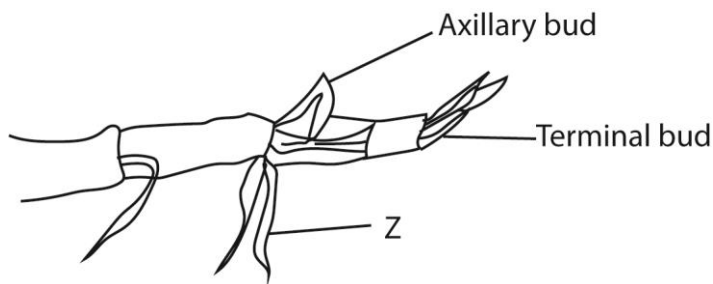
Jackfruit

A type of fruit that develops from a single flower of many simple pistils. Examples are **blackberries, strawberries and raspberries** where each fleshy lobe is actually an individual fruit joined at their bases.

Example of multiple fruits



20. Which of the following plant organs has a scattered arrangement of vascular bundles?
- A. root of monocotyledonous plant **B. stem of monocotyledonous plant**
 C. stem of dicotyledonous plants D. root of dicotyledonous
21. The type of roots labeled Z in the figure below are called

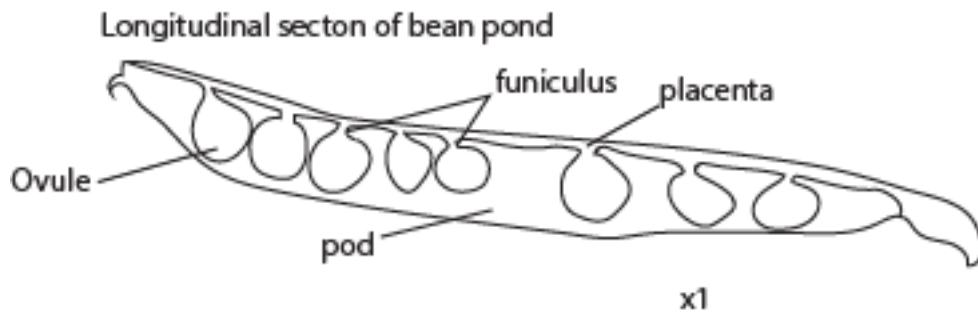


- A. Prop roots B. lateral roots. **C. adventitious roots** D. clasping roots
22. Which of the following are characteristics of insect pollinated flowers?
- A. feathery stigma, light pollen grains.
B. sticky stigma, heavy pollen grains.
 C. Light pollen grain, dull coloured petals.
 D. long filaments, much pollen grains
23. The part of the microscope used to make the image clear is the
- A. objective lens. B. eye piece. C. coarse adjustment. **D. fine adjustment**
24. The main function of buttress roots is to
- A. provide additional support.**
 B. store food for the plant
 C. enable food plant to clasp firmly on to the others.
 D. store water for the plant

25. Which one of the following occurs in a flower after fertilization?
- A. petals, stigma and style remain.
 - B. ovary, petals and sepals dry and fall off.
 - C. ovary develops into seed coat.
 - D. ovules develop into seeds.**
26. Which of the following are not social insects?
- A. ants
 - B. butter flies**
 - C. termites
 - D. Bees
27. Which one of the following organisms has the largest surface area to volume ratio?
- A. bat
 - B. frog
 - C. amoeba**
 - D. cockroach
28. Which one of the structures of the dicotyledonous seed is correctly matched with it's function?
- | Structure | function |
|----------------------|---------------------|
| A. Micropyle | protection |
| B. Radicle | develops into shoot |
| C. Testa | Allows in air |
| D. Cotyledons | Store food |
29. Which one of the following cell structure is possessed by both animal and plant cells?
- A. chloroplasts
 - B. cell wall
 - C. cell membrane**
 - D. flagellum
30. Which of the following sets of characteristics of leaves enables them to absorb maximum sunlight?
- A. broad lamina, tightly packed palisade cells**
 - B. being thin and has numerous stomata
 - C. Has numerous stomata and waxy cuticle
 - D. Being thin, large intracellular spaces.

SECTION B (answer in the spaces provided)

31.a) Draw and Label the diagram of the longitudinal section of a bean fruit.(05marks)



b) Give five characteristics of wind pollinated flowers. (05marks)

- a. Large production of pollen grains.
- b. Flowers are not attractive and scent emitting.
- c. Feathery and sticky stigma.
- d. The pollen grains are light and non-sticky so that they can be transported in wind currents.
- e. Flowers do not possess nectar.
- f. Anthers is well exposed e.g. maize flower.

c) Give five characteristics of insect pollinated flowers. (05marks)

- (i) brightly colored petals
- (ii) scented
- (iii) Have nectar
- (iv) Flowers have nectar
- (v) Flower have sticky pollen grains

32a) You are given an organism with two names; Periplaneta americana Which of the two names is the:

- i) Genus name?.....
- ii) Species name?.....

(02marks)

b) Write down the scientific name of man. (01mark)

.....

c) Mention 7 Phyla found in the Kingdom A (03^{1/2}marks)

- i)

- ii)
- iii)
- iv)
- v)
- vi)
- vii)

d) List down the seven taxa or groups used in classification of living organisms from the largest to the smallest group. (03_{1/2}marks)

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SECTION C (Attempt any 1 question from this section)

33 a) Define the term autotrophic nutrition? (01marks)

b) Briefly describe the types of autotrophic nutrition and give examples of organisms in each case. (05marks)

c) Giving examples in each case define the following terms. (09marks)

- i) Herbivores.
- ii) Carnivores.
- iii) Saprophytes.

34a) Briefly describe the different types of carbohydrates and each case give examples. (10mks)

b) Give any 5 functions of proteins in the human body. (05marks)

END * Merry x-mass and a happy new year!**