

S.2 2014 Biology holiday work.

All the questions are compulsory

SECTION A

1. The roots of a plant transpire water.
 - A. True
 - B. False

2. Which of the following is a class?
 - A. chordata
 - B. annelid
 - C. Coelenterata
 - D. Nematoda

3. The stem of a plant holds it upright.
 - A. True
 - B. False

4. In which of the following leaves is parallel venation observed?
 - A. Banana
 - B. Hibiscus
 - C. Morning glory
 - D. Cassia

5. In which of the following leaves is reticulate venation observed?
 - A. Cowpea

- B. Maize
- C. Sorghum
- D. Wheat

6. Which of the following suits a jelly fish?

- A. Chordata
- B. Nematoda
- C. Annelida
- D. Coelenterata

7. Compound leaves are divided into several leaflets.

- A. False
- B. True

8. Which of the following plants possesses leaflets?

- A. Bean
- B. Cassava
- C. Mango
- D. Morning glory

9. Which of the following plants has leaves modified as spines?

- A. Cactus
- B. Pea
- C. Passion fruit
- D. Onion

10. Which of the following flowering plants has tendrils?

- A. Pumpkin

- B. Cassava
- C. Maize
- D. Cassia

11. What part of the plant absorbs water as the plant is growing?

- A. Root hair
- B. Stem
- C. Root cap
- D. Leaf

12. Dicots have flower parts in multiples of _____

- A. 1 B. 2 C. 3 D. 4

For questions 13-14, read the responses 1 to 4 and select the correct answer according to this code.

- A. If statements 1, 2 and 3 are correct.
- B. If statements 1 and 3 are correct.
- C. If statements 2 and 4 are correct.
- D. If statement 4 only is correct
- E. If all statements are correct

13 .Which of the following are characteristic stem structures found in corms?

- | | |
|-----------------------|--------------|
| 1. Scale leaves | 2. Buds |
| 3. Adventitious roots | 4. Tap roots |

14. Which of the following store food in a modified stem?

1. Carrot
2. Sweet potato
3. Cassava
4. Irish potato

15. Which one of the following is not a kingdom?

- A. Monera
- B. Algae
- C. Protista
- D. Animalia.

16. The part of the stem to which a leaf is attached is known as

- A. axil
- B. node
- C. internode
- D. petiole

16. A collection of flowers on the same axis is

- A. A simple flower
- B. An inflorescence
- C. Syncarpous pistil
- D. Apocarpous pistil

17. A microscope is focused under low power by

- A. moving the objective lens towards the specimen.
- B. changing the eyepiece.
- C. increasing the light intensity.
- D. moving the objective lens away from the object.

18. in the classification of organisms which of the following is the correct hierarchy of the taxonomic groups?

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

19. The humus content of cultivated soil decreases because there is _____.

- A. Consumption of organic matter by termites.
- B. continuous removal of plant material by harvesting.
- C. Pollution of the soil by pesticides.
- D. Erosion of soil materials by wind and rain.

20. Which one of the following has fur?

- A. Fish.
- B. Amphibian.
- C. Reptile.
- D. Mammals.

21. A tissue has

- A: has several cells.
- B: has many systems.
- C: has many organs.
- D: All the above.

22. Which objective lens provides a magnification of x100 with x5 eye piece lens?

- A. x50
- B. x40
- C. x20
- D. x4

23. The cell membrane _____

- A. Is 100 % permeable?
- B. Is semi permeable?
- C. Surrounds the mitochondrion.
- D. Allows materials only out of the cell.

24. The correct order of the following structures from the smallest to largest in length is _____

- A. Cells, organelles, tissues, organ system, organ.
- B. Cells, tissues, organ, organelles, organ system.
- C. organelles, Cells, tissues, organ, organ system.
- D. organelles, organ, Cells, tissues, organ system.

24. Which one of the following is the primary host of the tapeworm?

- A. Man
- B. Pig
- C. Cow
- D. Goat

25. At which of the following taxonomic groups can organisms interbreed and produce fertile offspring?

- A. Class
- B. Species
- C. Phylum
- D. Kingdom

26. Biology would best be defined as _____

- A. The study of living and lifeless things.

- B. The study of living things.
- C. The study of living plants.
- D. All the answers above are correct.

27. In a flower the female part is called

- A. androecium.
- B. gynoecium.
- C. perianth
- D. petaloid

28. Which one of the following has a monocarpous pistil?

- A. Bryophyllum.
- B. Hibiscus.
- C. Croton.
- D. Salvia

29. A Monoecious plant is one which _____

- A. has only staminate flowers.
- B. has only pistillate flowers.
- C. has both staminate and pistillate flowers on the same plant.
- D. has both staminate and pistillate flowers on different plants.

30. A dioecious plant is one which _____

- A. has only staminate flowers.
- B. has only pistillate flowers.
- C. has both staminate and pistillate flowers on the same plant.
- D. has both staminate and pistillate flowers on different plants.

31. Which of the following is a class?

- A. Crustacea
- B. Platyhelminthes

C. Annelida

D. Monera

32. Which of the following suits an antelope?

- A. Chordata
- B. Nematoda
- C. Annelida
- D. Coelenterata

33. 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.

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

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

35. Which one of the following fruits has axile placentation?

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

36. Which one of the following fruits has free central placentation?

- A. Pawpaw.
- B. Red pepper.
- C. Lemon

- D. pineapple
37. Which one of the following fruits is a multiple fruit?
- A. Pawpaw.
 - B. Red pepper.
 - C. orange
 - D. jackfruit
38. Cotton belongs to the kingdom
- A. Fungi
 - B. Protocista
 - C. animalia
 - D. plantae
39. Which of the following tissues transports manufactured food?
- A. cortex
 - B. Cambium
 - C. xylem
 - D. phloem
40. Which one of the following has scale leaves?
- A. Cassava
 - B. Irish potato
 - C. carrot
 - D. sweet potato
41. In flowering plants, onion leaves are modified for
- A. reproduction
 - B. protection
 - C. storage
 - D. climbing
42. Which one of the following absorbs water and mineral salts directly?
- A. root hairs
 - B. lateral roots
 - C. fibrous roots
 - D. tap roots
43. Which one of the following plants is an example of a root tuber?
- A. Cassava
 - B. garlic
 - C. banana
 - D. Irish potato
44. The following are conditions necessary for germination except
- A. oxygen
 - B. Moisture
 - C. Carbon dioxide
 - D. moderate temperature.
45. Which one of the following plants is an example of a corm?
- A. ginger
 - B. garlic
 - C. cocoyam
 - D. Irish potato

1	6	11	16	21	26	31	36	41
2	7	12	17	22	27	32	37	42
3	8	13	18	23	28	33	38	43
4	9	14	19	24	29	34	39	44
5	10	15	20	25	30	35	40	45

SECTION B

46.a) Draw and Label the diagram of the longitudinal section of a tomato fruit.

b) Give five characteristics of wind pollinated flowers.

1.

2.

3.

4.

5.

c) Give five characteristics of insect pollinated flowers?

1.

2.

3.

4.

5.

47. A student was given the following animals

Animal A – has eight jointed legs, two body parts, no antennae and no wings.

Animal B– has six jointed legs, three body parts one pair of antennae and one pair of wings

Animal C – has six jointed legs, three body parts, one pair of antennae and no wings

Animal D– has ten jointed legs, two body parts, head, two pairs of antennae and no wings

a) Construct a flow chart to identify the animals A,B,C and D.

b) Construct a dichotomous key to identify the animals A,B,C and D

48a) You are given an organism with two names *Musca domestica* of the two names which is the:

- i) Genus name? _____
- ii) Species name? _____
- b) List down the seven taxa or groups used in classification of living organisms from the largest to the smallest group.