GHS S.2 COVID-19 HOLIDAY

BIOLOGY EXERCISE ON PLANT STRUCTURE (ROOTS, STEMS AND LEAVES)

Section A

1. The figure below is plant leave. What is it modified for?

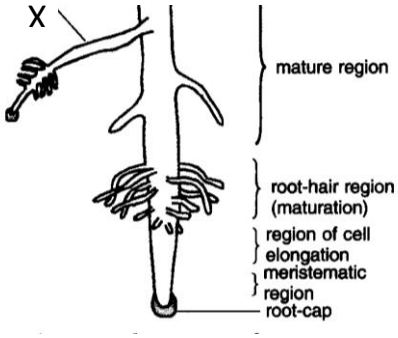
   A. Vegetative propagation
   B. Propagation
   C. Support
   D. Photosynthesis
2. An underground short condensed stem having outer dry scaly leaves and some inner thick fleshy scale leaves is
   A. Stolon
   B. Bulb
   C. Rhizome
   D. sucker
3. Which one of the following plant organs is responsible for process of photosynthesis
   A. Leaves
   B. Stems
   C. Roots
   D. flowers
4. Which part of the plant carries out the function of absorbing water for the plant
   A. Stems
   B. Leaves
   C. seeds
   D. Roots
5. The part of the stem responsible for strengthening it is
   A. Collenchyma
   B. Parenchyma
   C. Phloem
   D. Lenticels
6. Which one of the following is not an underground stem
   A. Rhizome
   B. bulb
   C. corm

D. sucker

7. Which one of the following is not a characteristic of stems
    A. Have nodes
    B. Have internodes
    C. Have veins
    D. Have root hairs
8. The part of the stem between two notes is called
    A. Internode
    B. Axil
    C. stolon
    D. Axillary
9. Which of the following is not part of the shoot system
    A. Nodes
    B. stem
    C. root hair
    D. Axil
10. Which of the following is not a characteristic of a plant stem
    A. Possession of internodes
    B. Possession of nodes
    C. Possession of prop roots
    D. Possession of leaves

11. The role of phloem in plant stem is to?
    A. Transportation of food substance from leaves to other parts of the plant
    B. Transportation of water and mineral salts from leaves to other parts of the plant
    C. Transportation of food and mineral salts from leaves to other parts of the plant
    D. Transportation of mineral salts and water from roots to other parts of the plant
12. The role of root hairs in roots is to;
    A. Give support to the plant
    B. Absorb water and mineral salts from the soil
    C. Absorb food substances which are essential for the plant
    D. Carry out photosynthesis so that plants get own food
13. Which of the following parts of the plant is used to manufacture food
    A. Leaves
    B. roots
    C. fruits
    D. flowers
14. The part of the cassava modified for food storage is?
    A. Stem
    B. Root
    C. Fruit
    D. Foliage

15. The part labeled X in the figure below is?



A. Main root
B. Lateral root
C. Axillary root
D. Prop root

16. Which of the following plants contains modified leaves
    A. Cassava
    B. sweet potato
    C. irish potato
    D. onions
17. Which of the following parts of a carrot is modified for storing food
    A. Stem
    B. Leaf
    C. root
    D. None of these
18. Which of the following is not a modification for leaves to carry out an usual function?
    A. Buds for vegetative propagation
    B. Turned into leaf tendrils for support
    C. Turned into prickle and spines for defence
    D. Possesses chloroplasts for photosynthesis
19. Which one of the following is a modified taproot?
    A. carrot tuber
    B. onion bulb
    C. cassava tuber
    D. sweet potato tuber
20. Which of the following are NOT characteristic stem features found in rhizomes
    A. Scale leaves
    B. Buds
    C. Tap roots
    D. Adventitious roots
21. The type of roots shown in the figure below is

A. Breathing roots
B. Clasping roots
C. Prop roots
D. Buttress root

22. The tissue responsible for conducting water to the leaves from the roots is……

A. Parenchyma
B. Cortex
C. Phloem
D. Xylem

25. Which part of the bulb stores food?

A. Underground roots
B. Underground stem
C. Leaves
D. Aerial stem

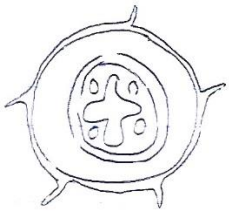
26. Which one of the following flowering plants has tendrils?

A. Pumpkin
B. Cassava
C. Maize
D. Cassia

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

A. Cactus
B. Bongainvellia
C. Passionfruit
D. Onion

28. Which part of a flowering plant is represented by the figure below?

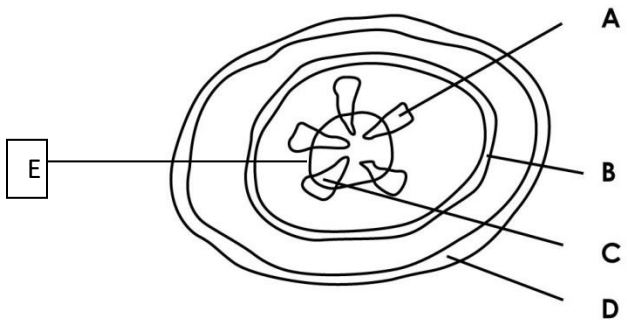


A. Monocotyledonous stem
B. Dicotyledonous
C. Monocotyledonous root
D. Dicotyledonous root

29. Which part of the stem is responsible for secondary growth
    A. Xylem
    B. Cambium
    C. Pericycle
    D. Cortex
30. The cells in the leaf with the highest number of chloroplasts is?
    A. Palisade layer cells
    B. Spongy mesophyll cells
    C. Lower epidermal cell
    D. Guard cells

Section B

31. (a) name the parts labeled in the figure below (5 marks)



b) State the functions of the parts labeled (4 marks)

A……

C……

E……

D……

c) State the possible part of the plant from which the figure above was extracted from (1 mark)

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d) Give any three functions of roots to plants (3 marks)

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(e) Give any three modifications of plant roots stating what they are modified for (6 marks)

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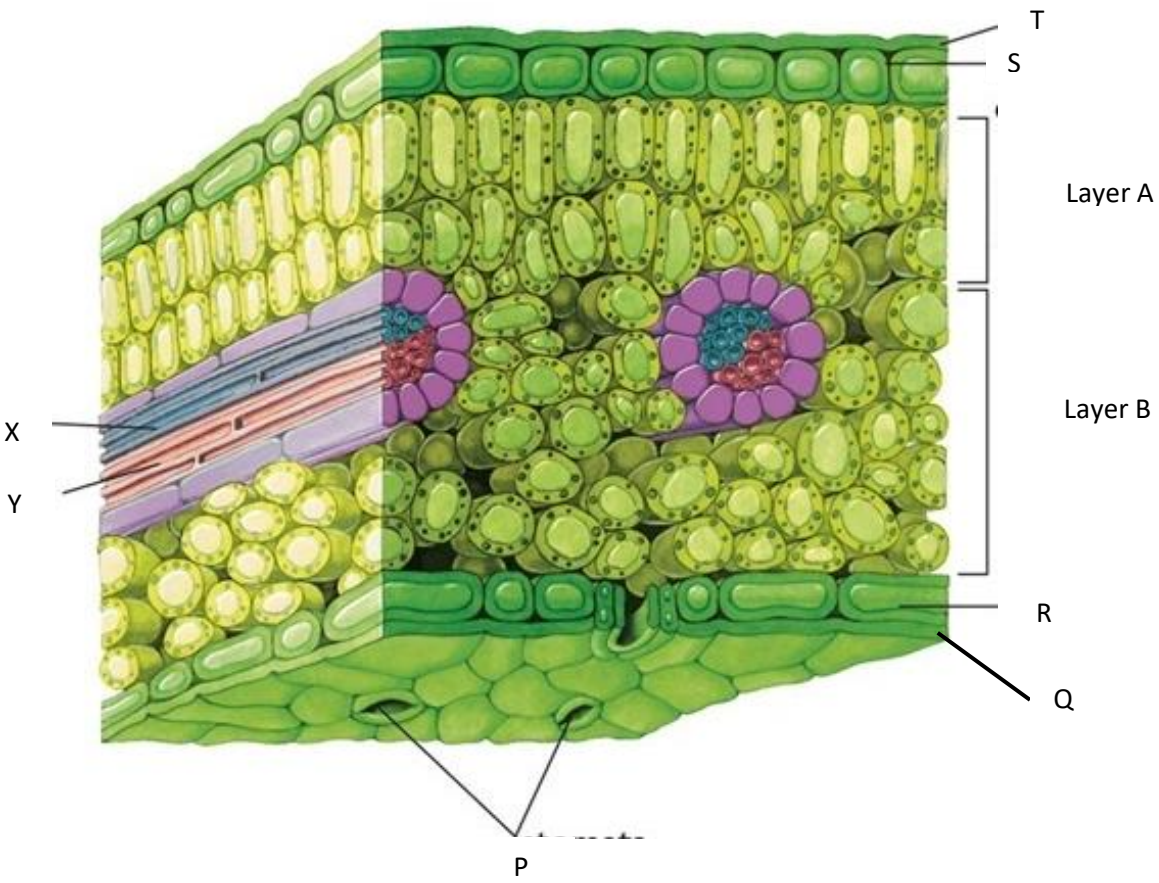
32. The figure below is an internal structure of a leaf,



(a) Parts X and Y are vascular bundles, Name them (2 marks)

X……

Y……

(b) What function is performed by each of the parts labelled (2 marks)

X……

Y……

……

(c) Name the parts (5 marks)

P……

Q……

R……

S……

T……

(d) What functions are performed by the parts labelled (2 marks)

P……

T……

(e) Give any four observable differences between layer A and layer B (4 marks)

Layer A	**Layer B**

(f) You are provided with the leaves below

A	B
	
C	D
	

Fill the table below stating the observable characteristics of the leaves A, B, C and D (12 marks)

	A	B	C	D
Venation				
Number of leaflets				
Margin				

(g) Construct a dichotomous Key to represent the leaves A, B, C and D using the features in the table above (3 marks)