FOCUS A365

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FORM 3 TERM 1 Biology pp1 EXAMINATIONS 2018

NAME: _____ADM NO: _____ CLASS: _____

1. **Write your name and admission number in the above spaces provided.**
2. **Answer all the questions in this paper in the spaces provided.**
3. **This paper contains 9 printed pages,26 questions,80 marks.**

1. State the functions of the following cell organelles
   a) Golgi apparatus (1mk)

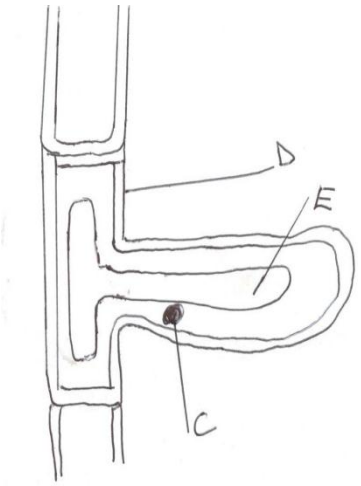
   b) Ribosomes (1mk)

2. State the functions of the following parts of a light microscope (2mks)
   a) Objective lens

   b) Diaphragm

3. A student drew a 8cm long diagram of an insect. If the actual length of the insect was 16cm, calculate the magnification of the drawing made by the student. Show your working. (2mks)

4. The diagram below shows a specialized plant cell.



a) i) Name the cell (1mk)

ii) Name the parts labeled D and E (2mks)

b) State the function of the part labeled C (1mk)

5. State three factors that affect the rate of diffusion (3mks)

6. State two ways in which osmosis is significant to plants'. (2mks)

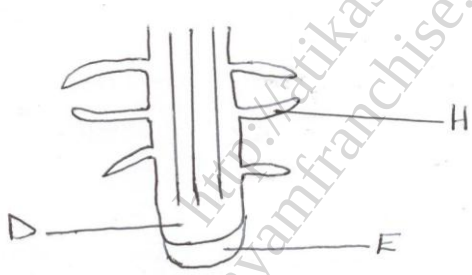
7. Name a disease caused by lack of each of the following in human diet. (2mks)

   Vitamin

   Iodine

8. Distinguish between transpiration and guttation. (2mks)

9. The following diagram shows a longitudinal section through a root apex.



   a) Identify the part labeled H and D (2mks)

      H

      D

   b) State the function of E (1mk)

10. The graph below shows the effect of temperature on an enzyme catalyzed reaction. Study it and answer the questions that follow.

a) Account for the shape of the curve between point A and B (3mks)

b) What does point marked X represent? (1mk)

c) Explain the curve beyond point C (2mks)

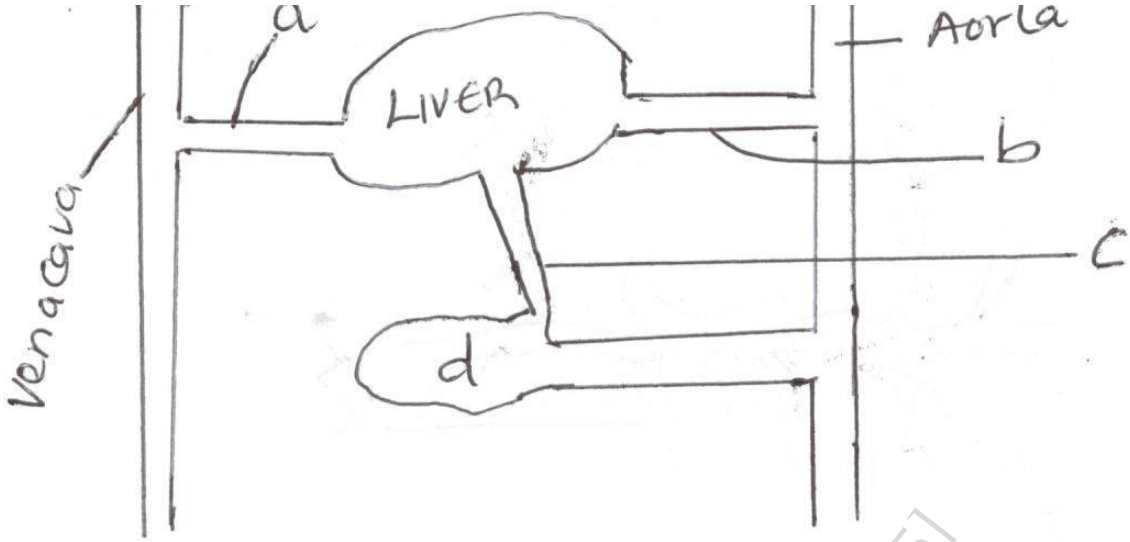
11. a) Name carbohydrate that is: (3mks)

i) Abundant in mammalian blood

ii) Stored in the liver

iii) Stored in seeds

12. Study the diagram below



i) Name the organ labeled d (1mk)

ii) Name vessels labeled a, b and c (3mks)

a

b

c

iii) State one difference in composition of blood carried in vessels a and c (2mks)

iv) Name the blood vessel which provides nourishment to the heart. (1mk)

13. a) Name the gland involved in blood sugar regulation (1mk)

b) Name the main organ involved in blood sugar regulation. (1mk)

c) Name two major hormones involved with blood sugar regulation. (2mks)

14. The diagram below illustrated the structure of bread mould.

a) Name the part labeled J (1mk)

b) State the functions of the structure labeled K (2mks)

c) Name the kingdom of the above organism (1mk)

d) State two economic importance of the above organism. (2mks)

15. A student collected a plant with the following feature:
    - Vascular bundles in the stem were scattered and no cambium
    - Fibrous root system

(2mks)

16. Write the kingdoms to which the following organisms belong (3mks)
    Plasmodium
    Bat
    Yeast

17. What is the meaning of the following ecological terms? (3mks)
    a) Population

    b) Community

    c) Ecosystem

18. a) Name the fluid that is produced by sebaceous glands (1mk)

b) What is the role of sweat in human skin (2mks)

19. a) Name the site of anaerobic respiration in a cell (1mk)

b) Give two differences in the products of anaerobic respiration between plants and animals.
(2mks)

Anaerobic in plants	Anaerobic in animals

20. When are two organisms considered to belong to the same species (2mks)

21. State two external features found in class mammalian only. (2mks)

22. Explain why the respiratory surface should be (3mks)

a) Highly folded

b) Moist

c) Thin

23. a) Name the sites where light and dark reactions of photosynthesis take place (2mks)

Light stage

Dark stage

b) Describe what happens during light stage of photosynthesis (3mks)

24. Distinguish between interspecific and intraspecific competition. (2mks)

25. Name the instrument used to measure; (2mks)

i) light intensity

ii) atmospheric pressure

26. State two components of an ecosystem. (2mks)