FOCUS A365

Another Manyamfranchise.Com Evaluation Test

FORM 3 TERM 1 Biology pp2 EXAMINATIONS 2018

NAME: _____ADM NO: _____ CLASS: _____

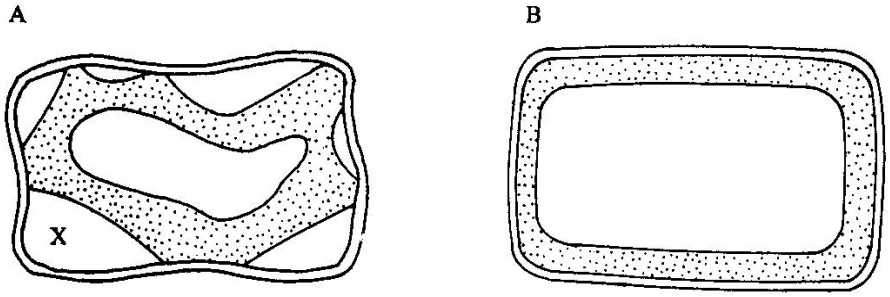
INSTRUCTIONS TO THE CANDIDATES

- *Write your **name** and **index number** in the spaces provided above.*
- *Sign and write the **date** of examination in the spaces provided above.*
- *This paper consists of **two** sections; **A** and **B**.*
- *Answer **all** the questions in Section **A** in the spaces provided.*
- *In section **B**, answer question **6(compulsory)** and either question **7** or 8 in the spaces provided after question 8.*

For Examiner's Use Only:-

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
TOTAL SCORE		**80**	

1.The diagrams below represent two plant cells A and B placed in two different solutions. Study the diagrams and answer questions that follow:



a) Identify the nature of solution into which each cell was placed. (2mk)

A ……

B ……

b) Name the physiological process responsible for the observed results. (1mk)

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c) Give the correct biological term used to describe cell A. (1mk)

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d) Describe what would happen if a red blood cell was placed in the solution in which cell B was placed. (2mk)

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e) Explain why freshwater amoeba do not burst when placed in distilled water. (2mk)

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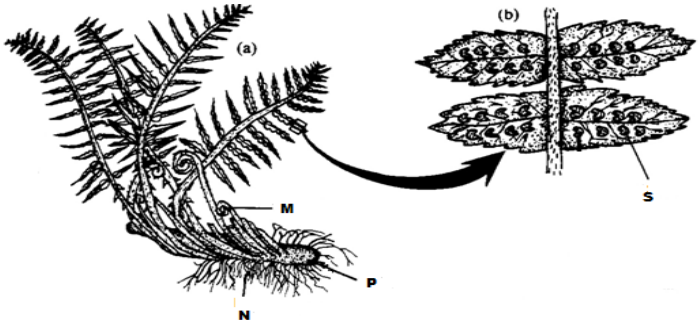
2,Use the figure below to answer questions that follow:



a) Identify the division to which the specimen belongs. (1mk)

…………………………………………………………………………………………..

b) Name the parts labeled M, N and P. (3mk)

M…………………………………………………………………………………

N…………………………………………………………………………………

P ………………………………………………………………………………..

c) Name the spore producing structures that constitute the part labeled S. (1mk)

……………………………………………………………………………………..

d) Identify three features that distinguish the specimen above from higher plants. (3mk)

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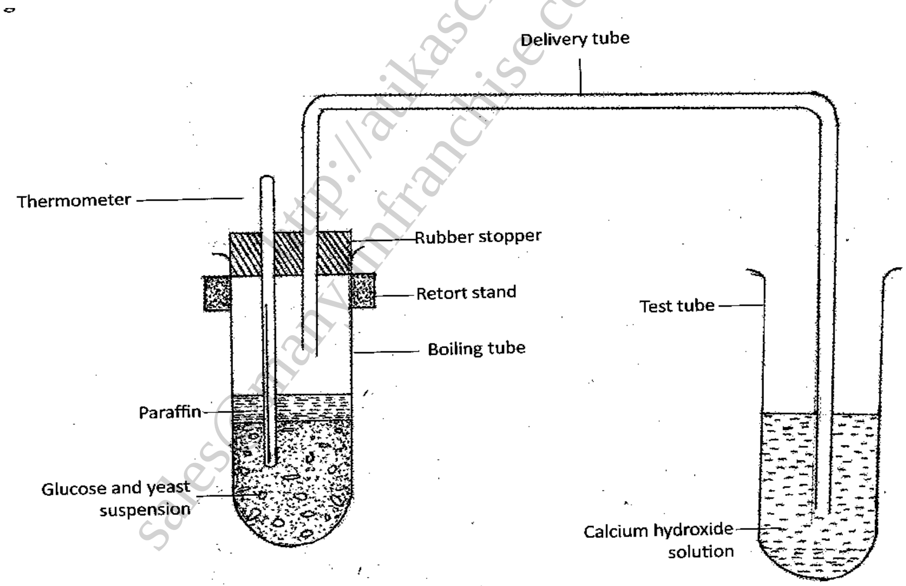
3.The set up below illustrates an experiment to demonstrate a certain biological process, before the addition of the yeast suspension the glucose solution was first boiled and then cooled at 40^{o}C.



a) What was the aim of the experiment? (1mk)

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b) What observations would you make in the tubes a few minutes after the experiment begun? (2mks)

…………………………………………………………………………………………

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c) Explain the observations made in (b) above (2mks)

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d) Why was glucose solution boiled before cooling at 40^{o}C (1 mks)

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e) What was the use paraffin in the experiment (1mks)

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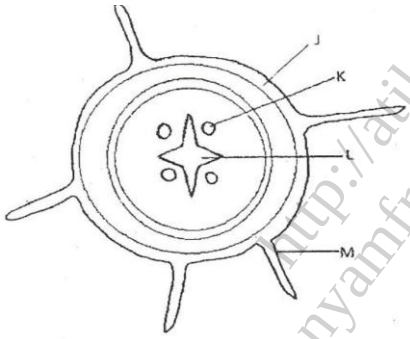
(f) How can you set up a control experiment for the above (1mk)

4. The diagram below represents a transverse section of a plant organ.



a) From which plant organ was the section obtained. (1 mark)

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b) Give two reasons for your answer in (a) above. (2 marks)

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c) Name the parts labeled J, K and L (3 marks)

J: ……

K: ……

L: ……

(d) State two functions of the part labelled M. (2 Marks)

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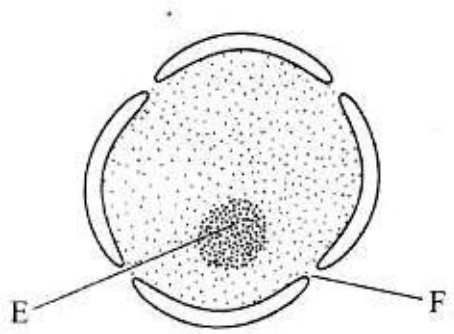
5. The diagram below represents a nucleus.



a) Name the structures labelled E and R. (2mks

i) E ……..

F ……..

ii) State the function of F (1mk

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iii) With reference to the nucleus, state **one** difference between an animal and a bacterial cell. (1mk

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b) Name the plant cell organelle:

i) that stores chlorophyll (1mk

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ii) responsible for intracellular digestion (1mk

c) State **two** main functions of the vacuole in the amoeba (2mks

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SECTION B (40MARKS) ***Answer question 6 (compulsory) and any other one question in the spaces provided after question 8.***

6. An experiment was carried out to investigate the effect of temperature on the rate of reaction catalyzed by salivary amylase. The pH was maintained slightly alkaline. The results are shown in the table below:

Temperature (°C)	**Rate of reaction(Arbitrary units)**
5	0.3
10	0.5
20	1.25
25	2.0
30	3.5
35	4.8
38	4.8
45	2.5
50	0.8

(a) On the grid, draw a graph of rate of reaction against temperature (6mks)

(a)What is the optimum temperature of this enzyme? (1mk)

……………………………………………………………………………………………………..

(b)At what temperature was the rate of reaction1.4? (1mk)

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(c)Account for the shape of the graph between:

(i) 5^0C and 35^0C (2mks)

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(ii) 38^0C and 50^{o0}C (3mks)

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(d)How is the hydrochloric acid from the stomach neutralized and where does this occur? (2mks)

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(e)Name **one** digestive enzyme in humans that works best in acidic conditions. (1mk)

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(f) State factors that causes enzymes denaturation. (2mks)

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(g)Name **two** factors that determine the amount of energy a human being requires in aday. (2mks)

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7.(a).Describe how the mammalian heart is adapted to its function (10marks)

(b) Describe the mechanism of opening and closing of stomata using the photosynthesis theory. 10mks

8.Describe the structure and function of various parts of the skin (20mks