

NAME: INDEX NO:ADM.
Biology form one .

**MARANDA HIGH SCHOOL
FORM ONE BIOLOGY**

CYCLE TWO

Instructions to Candidates

TIME: 2 HOURS

- ❖ Write your name, index number and admission number in the spaces provided.
- ❖ Answer all the questions in the spaces provided
- ❖ Mathematical tables and electronic calculations may be used
- ❖ All working must be clearly shown where necessary.

For examiner's use only

Question	Maximum score	Candidates score
1 -30	80	

1. Define the following sub-branches of biology (3mks)

a) Mycology

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b) Cytology

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c) Genetics

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2. List two professional occupation that require the knowledge of biology (2mks)

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3. a) Maranda high school students set up the bellow experiment to investigate a certain physiological process. after some times they observed that the level of sugar had risen.

i. What physiological process is being investigated? (1MRK)

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ii. Account for the rice in the sugar solution in the experiment (2mks)

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b) what would have happened if they used boiled pawpaw? (1mk)

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4.State three precautions that should be considered during collection and observation of specimen (3mks)

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5. Outline two reasons for classification (2mks)

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6. During biology practical, Brilliant a form one student used a hand lens to observe an insect. He found that the leg of the insect under study has a drawing length of 8cm .If the actual length of the leg was 2cm. Calculate the magnification (3mks)

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7. A student was asked to write the scientific name of tea and he wrote it as being CAMELLIA SINENSIS

a) Identify the mistakes the student made when writing the name (2mks)

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b) Rewrite the scientific name correctly (1mk)

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c) Identify Camellia and sinensis into their taxa (2mk)

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8. Give the reason for carrying out the following procedure when preparing temporary slide

a) Adding water to the section (1mk)

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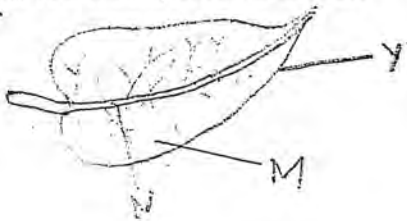
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b) Cutting a thin section (1mk)

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9. Below is a dicotyledonous leaf.



a) name the parts labeled (3MKS)

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m.....

n.....

b) what is the role of leaf veins in leaves? (1mk)

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10. State the functions of the following parts of microscope

(3MKS)

a) Fine adjustment knob

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b) The stage

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c) Diaphragm

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11. a) Draw and label the structure of cell membrane (3mks)

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c) State three properties of cell membrane (3mks)

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12. State ONE structural difference and one functional difference between rough endoplasmic reticulum and smooth endoplasmic reticulum

(2MKS)

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13.Explain how the following factors affect the rate of diffusion

a) Size of molecules (1mks)

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b) Surface area to volume ratio (1mks)

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14 State two role of active transport in human beings (2mks)

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15 Distinguish between Haemolysis and plasmolysis (2mks)

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16 .Describe what happens when animal cell is immersed in distilled water (3mks)

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17 .a) Name two instruments used in laboratory for magnification (2mks)

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18 a) Define the term species (2mks)

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b) Explain why donkey and horse produce sterile offspring yet they belong to same genus (1mk)

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19. Form one students in Maranda high school wanted to collect the following animals for study in laboratory. State the suitable apparatus they should use.

a) Flying insects (1mk)

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b) Crawling stinging insects (1mks)

c) Small animals from trees barks (1mks)

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19. a) State two products of light stage reaction during photosynthesis (2mks)

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b) List four factors that affects photosynthesis (4mks)

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20. Name any two processes in living organism that depends on diffusion (2mks)

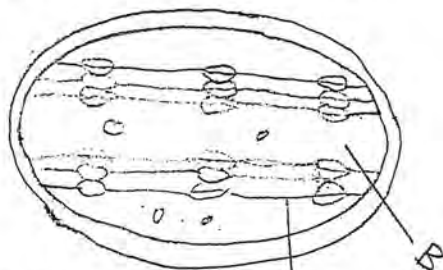
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21. Differentiate between chemosynthesis and photosynthesis (2mks)

22. The diagram below represent a plant organelle



a) Name the organelle (1mk)

b) In which part of the labelled does photolysis of water occur (1mk?)

c) Name parts labeled (2mks)

i) A.....

ii) B.....

24 Define osmosis (1mk)

b) Outline three difference between electron microscope and light microscope (3mks).

25 .Distinguish between growth and development (2mks)

26.State two functions of microscope (2mks)

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27. Name two scientific skills that one acquires through
learning biology (2mks)

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