

2025 END OF SEMESTER EXAMS – BIOLOGY 2

PAPER 2 (Essay)

70marks

Answer **three** questions in **all**

Do **not start** until you are told to do so. Write your **name** and **class** in **ink** in the spaces above.

Answer **two** questions from part 1 and **all** questions in part 2

Part 1

[40mks]

Answer only **two** questions

1. (a). Explain briefly the following terms and give **one** example each

i. Prokaryotic cell

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.....

ii. Eukaryotic cell

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.....

iii. Eukaryote

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.....
.....
.....
.....[9mks]

(b). i. Explain the term 'tissue'

.....
..... 2mks

ii. Mention **three** examples of tissues in

α. plants

.....
.....
.....

β. animal

.....
.....
.....

..... 6mks

iii. select **four** among the following organisms/organs and form the **levels** of organization with them.

I mango leaf,

II onion,

III paramecium,

IV spider

V hydra

.....
.....
..... 3mks



2. (a). i. distinguish between the terms; *organelle* and an *organ*

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.....
.....
.....
.....3mks

ii. Give the **shape** of each of the following organelles;

α. Chloroplast

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β. Golgi body

.....

γ. Lysosome

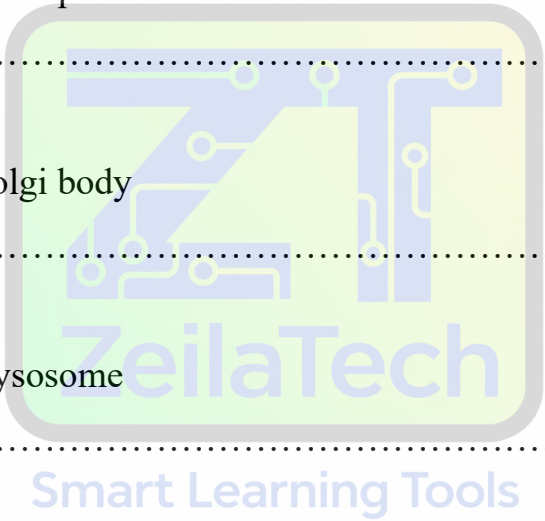
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δ. Centriole

..... **4mks**

(b) i. define the term *cell*

.....
.....
..... [2mks]



ii. Explain **briefly** how the following scientists contributed to cell discovery

α. Robert Hooke

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.....
.....
.....
..... [2mks]

β. Antonnie van Leuwenhoek

.....
.....
.....
.....
..... [2mks]

γ. Matthias Schleiden

.....
.....
.....
.....
..... [2mks]

(c) mention

i. **three** (3) features that make Amoeba able to survive in its habitat.

.....
.....
.....
.....
..... [3mks]



(b). Last Monday, during second break, the science students could no longer sit in their class due to a heavy urea smell from the urinal close to them.

i. Name the physiological process that took place above phenomenon

.....1mk

ii. Explain briefly how the physiological process named above occurred

.....
.....
.....
.....2mks

4. a. Explain the following terms as used in classification of living things;

i. Key

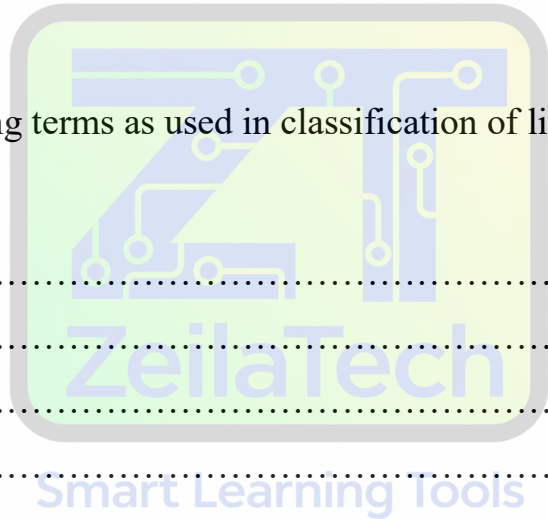
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.....2mks

ii. species

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.....
.....
.....2mks

iii. name the **two** types of keys used biological classifications

.....
.....
.....2mks



d. i. define organ system

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.....
.....2mks

ii. give **one** example of an organ system in plants

.....
.....1mk

Part 2

[30mks]

Answer **all** questions

5. (a) Name the **kingdoms** to which each of the following organisms belong

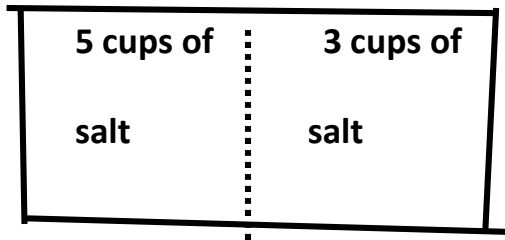
- I virus
- II euglena
- III Rhizopus
- IV moss
- V spirogyra
- VI crabs
- VII Hydra
- VIII pawpaw seed
- IX cactus
- X bacteria

.....I.....II.....
III.....IV.....
V.....VI.....
VII.....
 VIII.....IX.....
X.....,.....5 mks

(b) i. explain the term **binomial system of nomenclature**

.....
.....
.....
.....2mks

ii Study the following solutions with their concentrations carefully and answer the rest of the questions that follow. Volume water is 50cm^3 in all



α. Which solution has more osmotic pressure?

..... 1mk

Give **one** reason

..... 1mk

β. Which solution has more water potential?

..... 1mk

Give one reason.....

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..... 1mk

γ. Which solution has more solute relative to solvent?

..... 1mk

δ. Which direction is net movement of water molecules?

..... 1mk

f. Name

i. **Two** plant like features of Euglena

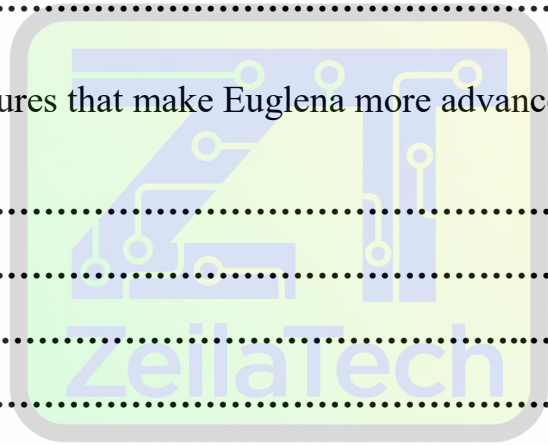
.....
.....
.....
.....**2mks**

ii. **Three** animal – like features

.....
.....**3mks**

iii. **three** features that make Euglena more advanced than paramecium

.....
.....
.....
.....**3mks**



END OF ESSAY TEST