**[10.0.0 Classification II (35 Lessons)](http://www.elimu.net/Secondary/Kenya/KCSE_Student/Biology/Form3/Classification/Classification.htm)**

1. Closed circulatory system

* 1. Endoskeleton;
  2. Scales;
  3. Streamlined body;

***Mark first three only (3 marks)***

2. (a) Fungi;

* 1. Plantae;

1. a) pteridophyta

b) Q – Adventitious roots; ***rej root alone***

R– Rhizomes;

S– Sori/sorus;

c) Function

Q – Anchorage / absorption of water;

S – Reproduction;

d) Gametophyte;

Sporophyte;

1. Angiospermaphyta; ¹

Monocotyledonae; ¹

5. Protoctista; ; ¹

Animalia; ¹

Fungi; ¹

6. (i) Insecta (1mk);

(ii) - A hard exoskeleton which reduces evaporation thus conserving water. (1mk);

* + - Excretes uric acid which requires very little water for removal thus conserving water. (1mk);
    - Has internal fertilization which eliminates the need for water to achieve successful reproduction. (1mk);
    - Is able to fly making it easier for them to spread to new areas. (1mk); (Any 3)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. Body is divided into three parts Head, thorax and abdomen;    * 1. Three pairs of jointed legs;      2. They have exoskeleton; |  |  |  | (3mks) |

1. a) A- Sori reject. sorus

B- Rhizome;

* 1. Pteridophyta

1. Nucleus lack nuclear membrane / organelles not membrane bound; nucleus not organized; mitochondria absent / most

organelles absent; cell wall made of mucoprotein;

## 10. a)

|  |  |  |
| --- | --- | --- |
| Animal | Identity | Steps followed |
| A | *Arachnida* |  |
| B | *Hymenoptera* |  |
| D | *Chilopoda* |  |
| E | *Anoplura* |  |

b) i) A- Arachnida B - Insecta;

1. Has three pairs of legs;
2. Has three body parts;

11. a) A- Capsule/ Slime/ mucuos layer. (1mark)

B- Flagellum rej flagella (1 mark)

b) Monera.

* 1. single celled

Lack mitochondria (2marks)

12. a) Bryophyta; (1mk)

* 1. K – capsule;
  2. Anchorage; Absorb water and mineral salts; (1mk)

13. (a) (i) Sporangiophore; (1mk)

(ii) (Sporangium) – produce spores; (1mk)

(b) (i) Fungi; (1mk)

(ii) Presence of Rhizoids; Mycelium; spore formation; (1mk) [(i), (ii) tied]

(c) (i) Sporulaion; (1mk)

(ii) - Binary fission;

* Budding;
* Fragmentation; (Mark first two) (2mks)

(d) Antheridia; (1mk)

14. (i) Pteridophyta; (1mk)

(ii) Bryophyta; (1mk)

1. a) **Division** Pteridophyta

**Reasons** Leaves are compound with leaflets/Pinna/frond

Presence of sori

Presence of horizontal underground stem/Rhizome

b) i) Sporangia

ii)

|  |  |
| --- | --- |
| ***Pteridophyta*** | **Spermatophyte** |
| fertilization is dependent on water | fertilization is mainly independent of water |
| Does not produce seeds | Seed bearing |

c) An eardrum is behind the eyes/gaseous occurs thru the skin, mouth and lungs /Hind limbs are longer and more muscular than the forelimbs

16.

|  |  |
| --- | --- |
| Gymnospamae | Angiospermae |
| * They do not produce flowers v They produce naked seeds. * They have xylem with vessels | * They produce flowers * They produce seed enclosed in a fruit. v Their xylem has not vessels |

17. (a) Arthropoda;

* 1. Class insecta;

Reasons: - Three body parts/Head, thorax and abdomen;

Three pairs of legs/six legs;

A pair of antennae;

A pair of wings;

* 1. Cholera;

Typhoid;

Amoebic dysentery;

* 1. Complete metamorphosis;

18. a) Kingdom Protoctista; Rej Wrong spelling

* 1. Amoeba Rej Wrong spelling
  2. Amoebic dysentery;

19. A- Archegonia;

B – Rhizoid; (2marks)

20. (i) - Body covered by scales.

- Fertilization is internal.

* + Double circulatory system.
  + They have lungs for gaseous exchange. (1mk)

(ii) Class Diplopoda. (1mk)