FORM ONE TERM ONE EXAMS 2017

BIOLOGY
MARKING SCHEME

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1 a) objective lens- magnification of the objective/image (accept – magnification alone)

b) Diaphragm – regulates /adjusts /controls amount of light (falling on the object on microscope);

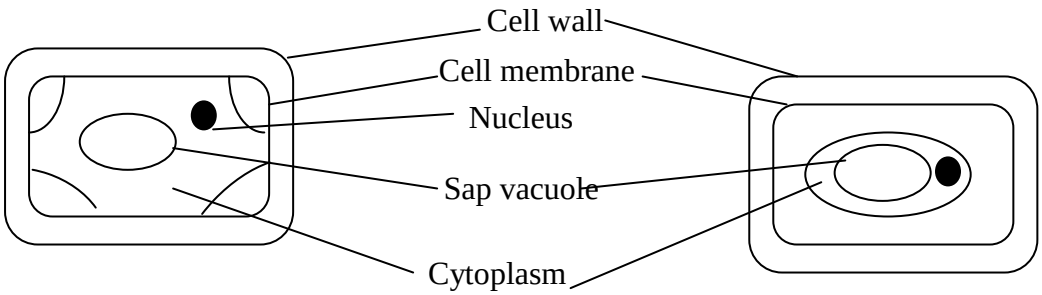
2. a) Ribosomes – protein synthesis

b) Lysosomes – Breakdown worn out cells/organelles/food materials ;

3. a) - In diffusion molecules move/along concentration gradient from a highly concentrated region to a lowly concentrated region while in active transport molecules move/against concentration gradient from a lowly concentrated region to a highly concentrated region;

- No energy is required in diffusion while energy is required in active transport;
- In diffusion no carrier molecules are required while in active transport, carrier molecules are required;
- 4. a) the red cell was placed in a hypertonic solution; it lost water by osmosis; and remained crenated;

b)



- Start of plasmolysis End of plasmolysis
-
-

5. - Presence of cell wall; which is rigid/does not stretch/tough;

6. - Secretion of substances;/hormones/enzymes/ polysaccharides /clycoproteins/synthesized proteins/carbohydrates;

Packaging of carbohydrates and proteins/glycoproteins/synthesized materals;

Modification of carbohydrates and proteins/formation of glycoproteins;

Transport of carbohydrates/proteins/ glycoprotein/lipids;

Production of lysosmes;

7. Mitochondrion;

8 a) A- Eye piece;

B- Coarse adjustment knob;

C- Fine adjustment knob;

D- arm;

E – MIRROR;

b) E – regulates the amount of light passing through condenser to illuminate the specimen;

F- objective lens – brings image into focus and magnifies it;

c) Magnification = magnification of X magnification of the

the eye piece lens objective lens

10. a) Smooth endoplasmic reticulum;

b) Lysosomes;

c) Nucleus;

d) Centrioles;

11. i) Entomology;

ii) Ecology;

12 Cytology;

13. i) Pooter - for sucking small animals from rock surfaces or banks of trees;

ii) For catching flying insects;

14 a) *Genus;*

b) The genus name should begin with Capital letter and species name with a small letter;

should be printed in italics or when handwritten should be underlined as separate words;

should be Latinized i.e made to sound like latin words;

15.

Plant cells	Animal cells
1,. Have cell wall made of cellulose	Have no cell wall;
2. have vacuoles filled with cell – sap	Rarely have vacuoles, if they do, then they are temporary and small.
3. generally have a definite shape	Have no definite shape;
4. green plants have cells with chloroplasts	Chloroplasts do not occur in animals cells.

11. - Reproduction;

- Growth, repair and replacement;
- Nutrition;
- Respond to stimuli;
- They move
- They respire;

They excrete;

18 a) Kingdom plantae;

b) Kingdom Fungi;

c) Kingdom Protoctista;

d) Kingdom Monera;

19) i) For light to pass through easily;

ii) To make the features more clear and distinguishable;

iii) For cells to remain turgid

20a) The science of classification;

b) A group of organisms that can freely/ naturally interbreed to give a fertile (viable) off spring;

21Magnify/enlarge image of objects/specimen;

To improve the resolving power/ show fine details of structures that are very close to appear separate;

21. A cell is the basic structural; and functional unit of a living organism / thing;

(b) (i) Entomology: study of insects; (1mk)

(ii) Genetics: study of inheritance; and variation.