3KNT FRATERNITY EXAMINATION – 2017 231 /1 BIOLOGY PAPER 1 MARKING SCHEME

1. a) Sweep net
   b) Pooter
   c) Fish net

2(a) The first name (genus) starts with h small letter instead of a capital letter.
- The second name (specias) starts with a capital letter instead of a small letter.
- The two names were underlined jointly instead of separately

b) Ipomes batota

3. a) i) Package synthesized materials
Transport synthesized materials
Formation of hysosomer
ii) Provide site for synthesis of lipids and steroids/transport lipids in the cell.

b) Chloroplosts
cell wall
Tomoplast

4 a) Absorption of water from the soil by root hairs
- Opening and closing of stomata
- Distribution of water from cell to cell
- feeding in insectivorous plants
- provide support in herbaccous plants

b) Haemolysis is the process by which red blood cells take in water by osmosis till they burst is when placed in a hypotonic solution compared to their cytoplasm while plosmolysis is the process where plant cells lose water by osmosis become flaccid and the cell membrane detach from the cell wall when placed in hypertonic solution compared to the cell cytoplasm.

5(a) To investigate the gas produced during photosynthesis
b) Oxygen
c) 6C0 + 6H O light energy C H o = O
Carbon(iv) oxide + water = light energy _____glucose + oxygen
chlorophyll

6. Age/sex/daily activity (occupation) basal melobolic rate body size

7(a) Process by which plants lose water in form of water vapour into the atmosphere
b) stomata
Cuticle
Lenticles

8) Thrombosis
ii) varicose veins
iii) Arteriousclerosis

9.Lenticles
Pneumatophores

-stomata
cubicle
10. Has a moist surface to allow gases to diffuse in solution form
Has a capillary network for transport of gases
Has a thin well to allow gases to diffuse across a short distance.
11. a) Anaerobic respiration
b) Brewing/beer making
Baking industry
processing of dairy products eg milk fermentation
Agriculture eg biogas production and sewage treatment
12. Some waters eg gases easily diffuse out of the plant tissues
Some waste products are mainly made from carbohydrates and hence are not as harmful proteinous materials
Waste products are formed showly thus little accumulation of waster.
Plants one less active
Some waste products eg oxygen are reused/recycled
Some waste products are stored in non-toxic forms in the leaves flowers, fruits and old barks then drop off.
13. a) Sporangism
b) Anchorage of the mould to the substratum
-Absorption of soluble substances
14. Population growth – Increase/decrease in number of individuals of a species
Population density – Number of individuals per unit area population dispassion – distribution of organism in a habitat
15 a) lack of variation/lack of hybrid vigor
Disadvantages traits are retained within the species
b) Ovary
Anthers
16. i) meiosis – 1
ii) mitosis – 4
b) testes and Ovary
17. Embryo not fully developed
Presence of chemical hibibitors that inhibit germination
low concentration of hormones and enzymes that promote germination
Lack of environmental factor eg water Co2 absence of light of certain wavelength
Hard and impliamble seed coat
18. Complete metamorphosis is where the change in body form during the life cycle of an organism is in radical phases incomplete metamporhosis is where the change in the body form during the life cycle of an organism occurs gradually the egg hatch into nymphis that resemble the adult
Complete metamorphosis – all the flies eg butterflies, houseflies mosquitoes
Incomplete – locust, cockroach
19.

DNA	RNA
Double stranded	Single stranded

Has deoxyribe sugar	Has ribote sugar
Has organic base – thymine	Has organic base uracil
Has poor nitrogen base pouring pattern	locks four nitrogen base pairing pattern

20. Homologous – have similar embryonic origin but modified to perform different functions while analogous
Structures – have different embryonic origin but modified to perform similar (some) function.
b) Fossil records/compative anatomy/comperative embryology/comparative/comparative anatomy/geographical distribution Biochemistry.
21. Exposes leaves to absorb maximum amount of light for photosynthesis.
Enable roots of plants to search for water
Enables plant stem to obtain mechanical support especially those that lock woody stems
Enables roots to grow deep in the soil for exchange
Enables pollen tube to grow towards the embryo sac to facilitate fertilization.
22 a i) sensory neurone
ii) cell body is off the axon/neurone is unpolor
Both axon and Dendron are long
b) Nxyalin sheath/neurillarra.
c) from the receptor towards the cell body
23. a) Xylem resols/xylem trachals
Sclerenchyma

24. Biceps	Gut muscles
Striated	unstriated
multimadeasted	uninucleasted
lond fibres	short fibres
cylindrical shaped	spindle shaped