BIOLOGY PRACTICAL

231/3

MARKING SCHEME

1.a)

Substance	Test	Procedure	Observation	Conclusion
G	Benedict's	-To $2cm^3$ Sol. G in a test tube, add equal amount of benedicts solution, heat to boil.	Colour changes from blue to green to yellow to orange. Acc-final colour	Reducing sugars present
	Biuret's	-To $2cm^3$ of Sol. G add 10% $NaOH_{(aq)}$ followed by 1% of $CuSO_4$ drop by drop	Blue colour persists/colour of $CuSO_4$r remains	Proteins absent
H	Benedict's	-To $2cm^3$ of Sol. H in a test tube, add equal amount of Benedict's solution, heat to boil.	Colour change from blue to green-yellow-orange	Reducing sugars present
	Biuret's	-To $2cm^3$ of Sol. H in a test tube, add 10% $NaOH_{(aq)}$followed by 1%$CuSO_4$ drop by drop	Purple colour formed/blue colour changes to purple	Proteins present

8mks

Note:

-Type of test must be correct to score for procedure, observation and conclusion.

-Spelling of the reagents must be correct, otherwise underline and proceed.

-If chemical symbols are used, they must be correctly written.

-Colour sequence must be followed whereby all the colours of the mixture have been stated.

b) -Diabetes mellitus

-Albuminuria/proteinuria

c) (i)-Diffusion and osmosis

(ii)-Reducing sugars have tiny molecules which diffuses through the pores in the membrane of the visking tubing; along a concentration gradient; The molecules of the proteins/proteins in solution H are larger and cannot pass through the pores of the visking tubing.

2. a)

Specimen	Type	Reason
W	Berry	Succulent pericarpp
X	Legume	-Long and narrow -Flattened sideways -Two lines of weakness
Y	Cupsela	-Persistant calyx -One seed free from the pericarp

6mks

b) The cut surface should show:

-Epicarp/exocarp

-Seed

} Laballed =2mks

-continuous outline

-double wall

-proportionality

Correct drawing

} drawing mark=1mk

c) i-fruit =1mk

ii- 2scars-(remains of style)=1mk

-(remains of leaf stalk)

d) Seeds arranged along one of the margins of the fruit.

N\B: Arrangement must be described

e) -Hooks for attachment to the bodies of moving animals

-Persistent calyx containing hooks for attachment to moving animals.

-Hairs on the pericarp for attachment to moving animals. (mark the first 2)

3. a) i K-Arachnida

L-Insecta

ii) -jointed appendages

-bilateral symmetry

b)	K	L
	-Two body parts	-three body parts
	-4 pairs of walking legs	-three pairs of walking legs
	-Lack antenna	-a pair of antennae
	-Lack segments	-segmented abdomen (first 3)

c) (i)-parasitism

(ii)-has pedipalps for sucking blood of the host

-possess structures for attachment to the skin of the host.

d) -feed on dead organic matter causing decomposition.

-Aeration of soil during burrowing.

- Food to some animals

e) 1 a) with three pairs of legs……K

b) with four pairs of legs……L

END