

BIOLOGY 2A MARKING SCHEME

FOOD TESTED	PROCEDURE	OBSERVATION	INFERENCE
Starch (0.5 mark)	To 2cm ³ of solution K added in the test tube, followed addition of two drops of iodine solution were added then shaken (01) <i>1 mark</i>	The mixture turned into brown colour of iodine solution (01)	Starch was absent (1/2)
Protein (1/2)	To 2cm ³ of solution K in the test tube, then 2cm ³ of sodium hydroxide solution was followed by two drops of 1% copper II Sulphate solution. Then shaken (01)	The blue colour copper II sulphate solution retained (01)	Protein was absent (1/2)
Lipids (fats and oil) (1/2)	To 2cm ³ of solution K in a test tube, three drops of Sudan III solution were added then shaken vigorously and left to settle for five minutes (01)	The solution forms a homogenous mixture with sudan III solution (01)	Lipid was absent (1/2)
Reducing sugar(1/2)	To 2cm ³ of solution K in the test tube, 2cm ³ of Benedict solution was added then boiled (01)	The series of colour changed from blue , green, yellow, orange and finally red observed (01)	Reducing sugar was present (1/2)
Non reducing sugar (1/2)	To 2cm ³ of solution K in a test tube, 1cm ³ of diluted Hydrochloric acid then shaken and boiled for two minutes then cooled, followed by addition of 1cm ³ of sodium hydroxide and 2cm ³ of benedict solution then boiled (01)	The series of colour change observed from blue, green, yellow, orange finally brick red (01)	Non reducing sugar was present (1/2)

b) -Reducing sugar

-Non reducing sugar @01=02 marks

c) -They provide energy to the body

(Sources of energy to the body=**01marks**

d)-Proteins

-Vitamins

-Lipids (fat and oils)

-Starch

-Minerals

-Roughage

-Water @1/2=**03marks**

e) -part in alimentary canal

- small intestine= **01 marks**

. Enzymes used

- maltase
- lactase
- sucrase

@01=**03marks**

2. Classification of living things

P-monocot leaf

Q-dicot leaf

R-earthworm @01**marks=03**

B (i) Classification of specimen provided.

Specimen/organism	kingdom	Phylum	Class
P-monocot leaf	Plantae (0.5 marks)	Angiospermophyta(0.5marks)	Monocotyledonae(0.5marks)
Q-dicot leaf	Plantae(0.5marks)	Angiospermophyta(0.5marks)	Dicotyledonae(0.5marks)
R-earthworm	Animalia(0.5marks)	Annelida(0.5marks)	Oligochaeta(0.5marks)

(ii) Differences between P and Q

P-monocot leaf	Q-Dicot leaf
1.it is long and narrow 2. Has parallel venation 0.5marks 3Has a leaf sheath 0.5 marks	. It is short and wide . Has a net /reticulate venation/veins 0.5marks . Has a petiole 0.5 marks

C (i). Diagram=02marks

. Heading=0.5marks

. Any four **lables @ 0.5=02marks**

. **Total=4.5 marks**

External diagram of specimen Q-dicot leaf

(c) (i) Adaptations of leaf

- It is broad and flat to provide surface area for light absorption
- It is thin to reduce distance of diffusion of materials
- Stomata control passage of gases
- The cuticle is water-light
- Has many air spaces for gaseous exchange
- The palisade cells contain the most chloroplast for photosynthesis
- The network of veins ensures adequate supply of water and mineral salts.

Any 4@01=04 marks

iii) Three process

1. Photosynthesis
2. Gaseous exchange
3. Transpiration@1mark=03marks

(d) Economic importance of specimen R

- A source of food to birds, fishes
- Adds fertility to the soil.
- On burrowing they aerate the soil
- The tunneling effects in the soil facilitates penetration of plant roots

Any 03@01mark=03marks (General total marks=50%)

