NYANDARUA WEST SUB-COUNTY
CLUSTER EXAMS

Marking scheme for Biology practical July 2018

1.a) i) Visking tubing swells/ bulges/Volume of the content increases;
ii) High concentration of water molecules in the beaker/ distilled water compared to the visking tubing/ solution K; Water molecules move by osmosis from beaker into visking tubing;

b) **I VISKING TUBING**

TEST	**PROCEDURE**	**OBSERVATIONS**	**DEDUCTIONS**
STARCH	Put food sample/sample in test tube add iodine solution; (1 mark)	Dark blue/ Blue black/ Black/Blue;	Starch present; (1 mark)
REDUCING SUGAR	Put food sample in a test tube add (equal amount of Benedicts solution heat / warm / heat in a water bath (1 mark)	From blue to green to yellow/orange/red; Or just one final coluor followed by respective conclusion	Reducing sugar present; (1 mark)
II BEAKER			
STARCH	Put food sample in a test tube add iodine solution;(1 mark)	Remain yellow brown/brown colour/yellow colour	Starch absent; (1 mark)
REDUCING SUGAR	Put food sample in a test tube add (equal amount solution heat / warm/ heat in a water bath;(1 mark)	Mixture turns from blue, green, yellow/ orange/red;	Reducing sugar present; (1 mark)

NB: Procedure must be correct to precede marking observation and conclusion / deductions. The first mark occurs at the procedure while second mark occurs at the deductions.(Total 8 marks)

c)Starch molecules are large compared to glucose/molecules; Small sugar/ glucose molecules pass through the pores of visking tubing/ but not the large starch molecules;

OR

Visking tubing is semi-permeable/allows only small sugar molecules but not large starch molecules. (2 Marks)

2. a) i) R5- Marginal
R6 –Free central
ii) Student to draw diagram using required rules D= (1 Mark)
Names at least two parts=2 marks. They can name either Persistent calyx/Pappus; Scar of the receptacle found at the base of the Persistent calyx; fruit; or the scar of the fruit;

b) R1-Wind-Hair-like extensions to make the fruit buoyant in air. (2 Marks)
R2- Wind- Has wings-like structures that float in air hence easily carried away. (2 Marks)
R3-Two lines of weaknesses that rapture throwing away the seeds when the pond develops pressure.(2 Marks)

c) R4-Water- Waterproof outer covering to prevent soaking;

-Are light and hence they float in water. (2 Marks)
3 a) i)Any three named parts. (1 mark ×3). -head, neck, greater trochanter, lesser trochanter, shaft, lateral condyle, medial condyle (accept condyle). The first three parts labeled clockwise.
ii) Head-Articulate with pelvic girdle(1 Mark)
-lateral condyle, medial condyle-articulate with patella neck,
-Greater and lesser trochanter form extension for attachment of thigh muscles
-Shaft-increase surface area for attachment of thigh muscles
b) S2-Humerous; Rounded head with no neck; has greater and lesser tuberosity; has trochlea at the posterior end; (2marks)
S3-Radius and Ulna; has sigmoid notch; has olecranon process ;(2 Marks)
3 c) i) Pelvic girdle (1 Mark)
ii) -Has wide acetabulum to articulate with the head of femur with a ball and socket joint;
-Has wide orbiturator foramen forms an opening where blood vessels, nerves and muscles pass;
-extensive ilium provide large surface to which high muscles are attached; (any collect answer 1 mark)