**WANGU ZONE JOINT EXAM TERM 2 2019**

**BIOLOGY PAPER 3 MARKING SCHEME**

TABLE A

|  |  |  |
| --- | --- | --- |
| Test tube | Observation | Conclusion |
| B | Blue-black/blue/black; | Starch present; |
| C | Blue black/black; | Starch present; |
| D | Blue-black/blue/black; | Starch present;  |

 (6×1/2 =3mks)

TABLE B

|  |  |  |
| --- | --- | --- |
| Test tube | Observation  | Conclusion |
| B | Blue black/blue/black; | Starch present; |
| C | Brown/yellow colour of iodine solution retained | Starch present; |
| D | Blue black/blue/black | Starch present; |

 (6×1/2 =3mks)

c) Control experiment

d (i) Diastase/enzyme/starch digesting enzyme/ptyalin/salivary amylase

 ii) - Because it converted/digested starch;

* Can be denatured by boiling/acts within a range of temperature between 35oc – 38oc/optimum temp;

e) Mouth /duodenum/ileum;

f) i) Starch absent/colour of Iodine retained; starch has been digested/hydrolysed /broken down into glucose/maltose/simple sugar;

 ii) Starch present because boiling denature enzyme A2o, thus starch not broken down/not digested

2. a) kidneys rej; Kidney

 b) Excretion

 Osmoregulation

 c) M – (inferior) vena cava

 Q – Renal vein

 d) S – Bowman’s capsule/glomerulus/distal convoluted tubule/ proximal convoluted tubule

 T – loop of Hence /collecting duct

 e) W – (Temporary) storage of urine

 R – Drainage of urine from the kidney pelvis to urinary bladder

 f) Mg = length of Image/drawing;

 Actual length

 ( Distance x-y); = x ans;

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 g) Most of the urea entering the kidney via renal artery (p) is removed through ultrafiltration and excretion in urine.

3.a) Class: Dicotyledonae

 Reasons; present of two cotyledons in specimen L

 Net venation on the plumule leaves in specimen L

 b) K - Hypogeal – cotyledons remain in the ground

 L – Epigeal – cotyledons are brought above the ground

c) H – Epicotyl

 C – Hypocotyl

d) As the bend parts are exposed to sunlight; more light on the upper side causes auxins to migrate to the lower side; increased auxins concentration on lower side stimulates faster; elongation of cells on the lower side, leading to straightening of the seedlings.

 e) Both will develop a tap root system.