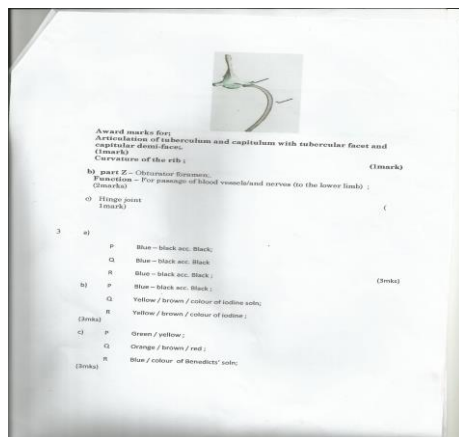


**BIOLOGY 231/3**  
**MAKING SCHEME**

- 1.(a) **Specimen**                      **Steps followed**                      **Identity**
- |    |                |             |
|----|----------------|-------------|
| D1 | 1b, 3a, 4b, 6a | bignonaceae |
| D3 | 1a,2a          | pinaceae    |
| D5 | 1b, 3b, 7a,8b  | graminaceae |
| D6 | 1b,3b,7a,8a    | graminaceae |
| D7 | 1b,3a,4b6b     | compositae  |
- (b) (i) Semi-arid / dry / desert arid (1mk)  
(ii) Small reduced needle – like leaves / presence of thorns/spikes (1mk)  
(iii)Thorns / spikes provided protectors against injury by browsers/ herbivorous (1mk)
- (c) (i) The stem crushes/squashes and a clear slimly all sap oozes out (1mks)  
(ii)The stem stores water and uses turgidity of its cells for support (2mk)
- 2.(a) **Bone**                      **Identity**                      **Where found**
- |   |                    |                             |
|---|--------------------|-----------------------------|
| R | Rib;               | Rib cage / thoracic region; |
| S | pelvic girdle;     | pelvic/ hip region;         |
| T | Femur;             | Upper hind limb / leg;      |
| V | Thoracic vertebra; | Thoracic/chest region;      |
- (4mks)
- (b) (i)Ball and socket joint;  
(ii) Permits movement of limb in all planes/ direction/ 360<sup>0</sup>. (1mk)  
Acc: Permits bone to move in more than one plane/all planes / direction;
- (c)(i) Sacrum  
(ii)Provides the surface for muscle attachment of pelvic girdle  
Transmits the weight of the body of a stationery animal to pelvic girdle and legs  
Distributes the weight of the body to all parts of vertebral column during movement; (1mk)
- Acc: any first one.
- (d)i) – Long to increase surface area for attachment of intercostals muscles:  
- Curved to increase space in the thoracic cavity;  
- Tuberculum and capitulum for articulation with the thoracic verbra/ tubacular facet and capitalardem facet respectivel; (2mks)



- (ii) **Award marks for;**  
**Articulation of tuberculum and capitulum with tubercular facet and capitular demi- face;**  
**(1mk)**  
**Curvature of the rib;**  
**(1MK)**
- (b) Part Z – Obturator foramen;**  
**Function – for passage of blood vessels/ and nerves (to the lower limb:)** (2mks)
- (c) Hinger joint** (1mk)
3. (a)

- P Blue – black acc. Black;  
Q Blue – black acc. Black  
R Blue – black acc. Black;
- (b) P Blue – black acc. Black;  
Q Yellow/brown/colour of iodine sol;  
R Yellow/brown/colour of iodine; (3mks)
- (c) P Green / yellow;  
Q Orange/ brown / red;  
R Blue/color of Benedicts soln;
- (d) control; (1mk)
- (e) (i) Q  
Small / little / traces of reducing sugars; due to lower concentration of sodium ion / Na+/  
enzymes co – factors; (2mks)
- (ii) R  
High/ large amount of reducing sugar; due to higher/ optimum concentration of  
sodium ion / Na+ / enzyme co – factor; (1mk)  
Rej. Nacl for Na+
- (f) Enzyme / Diastase/ Amylase/ptyalin; (1mk)

