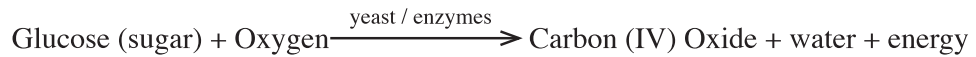


4.4.3 Biology Paper 3 (231/3)

1. (a) (i) Bubbles / gas formed/effervescence/foam/frith;
lime water turns white/white ppt/milky/cloudy; (2 marks)
- (ii) Gas produced is carbon (IV) Oxide/Co₂/carbon dioxide;
which reacts with lime water to form a white precipitate/calcium carbonate/
insoluble sent; (2 marks)
- (iii) Respiration / anaerobic respiration / fermentation/ aerobic respiration; (1 mark)

(iv) Respiration



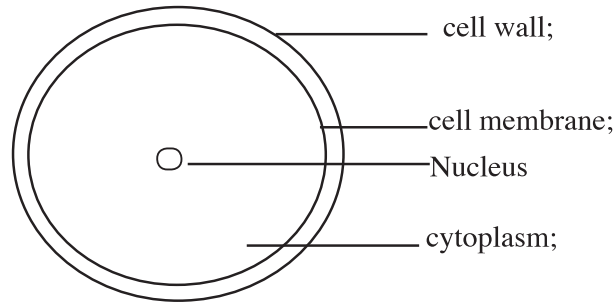
Or

Anaerobic Respiration / Fermentation



- (v) To provide optimum temperatures; for enzymes activity/action/working/
reaction; (2 marks)

(b) (i)



Labelling - 2 marks

Drawing - 1 mark

Max.

(3 marks)

- (ii) X400; (eye piece lens x high objective lens) (1 mark)
- (iii) Yeast; (1 mark)

2. (a) (i) Angiospermatophyta/Angiospermae; (1 mark)

- (ii) E - veins on leaves / flowers / seeds;
F - narrow / parallel veined leaves. (2 marks)

| | | | | |
|-----|-----|--|--|-----------|
| (b) | (i) | LEAF E Opposite Net-veined Serrated margin Rough surface Green Thin Broad Has petiole/Compact petiole Not succulent/fleshy Max. | LEAF G Alternate; Parallel veined; Smooth / entire margin; Smooth surface; Purple; Thick; Narrow; Has sheath/sheath - like petiole; Succulent/fleshy | (5 marks) |
|-----|-----|--|--|-----------|

| | | | |
|------|--|---|-----------|
| (ii) | STEM E Opposite leaves Angular/square/four sided/rectangular Pricky/thorny/spiny/spines Woody / hard Green / Grey Non-succulent Max. | STEM G Alternate leaves Round/cylindrical Smooth/hairy; Herbacious / soft Purple; Succulent/juicy fleshy | (2 marks) |
|------|--|---|-----------|

(iii) Pricky/thorny/spiny: for protection against broser/erbivourous/animals;
Woody/hard: for mechanical support;
(4 marks)

3. (a) (i) A (1 mark)

(ii) Presence of scapula/shoulder blade;
Presence of Olecranon process/ulna/radius/humerus (2 marks)

(b) J Radius
K Femur
M Metatarsals (3 marks)

(c) Pelvic girdle (1 mark)

(d) H Gliding joint
L Hinge joint (2 marks)

| | | |
|-----|--|--|
| (e) | Component Ligament; Cartilage Synovial fluid Synovial membrane; Max. | Function Attach a bone to another bone; Shock absorber/facilitate gliding/reduce friction Lubrication/reduce friction/shock absorber Secretes synovial fluid; |
|-----|--|--|