

4.5.3 Biology Paper 3 (231/3)

1a)	E – scapula/shoulder blade; - Has a socket/glenoid cavity/depression to articulate with the ball/head of the humerus; - Flat/triangular-shaped flat blade/triangular shaped/flat blade/flattened;; - Has a spine/ridge/coracoids process/acromion for attachment of muscles;	(3 marks)
	F – Humerus; - Has a ball/head/rounded head that articulates with the glenoid cavity/ socket on the scapula; - -Has condyles that articulate with radius and ulna;	(2 marks)
	G – Radius attached to ulna; - Ulna has a sigmoid notch for articulation with the shoulder joint/ lower end of the humerus; - Has trochlea/olecranon fossa; - Has greater/larger tuberosity - Has bicipital groove;	(2 marks)
b)	• Ball and socket (joint);	(1 mark)
	• Hinge joint;	(1 mark)
c)	Rotation/up and down/side-ways (of the arm);	(1 mark)
d)	(i) Bone marrow;	(1 mark)
	(ii) Manufacture of (red) blood cells;	(1 mark)
e)	(i) Biceps;	(1 mark)
	(ii) Contract/relax to move the lower arm (upwards);	(1 mark)
2 (a)	i) J – Erythrocyte(s)/red blood cell; K – Leucocyte/white blood cell; L – Thrombocytes/Platelets	(3 marks)
	ii) J – Transportation of oxygen/carbon (IV) oxide; K – Engulf/attack pathogens/ foreign materials in the blood; L – Blood clotting;	(3 marks)
b)	i) Amoebic dysentery;	(1 mark)
	ii) <i>Entamoeba histolytica</i> ;	(1 mark)
	iii) -Boiling drinking water (before drinking);/ -Chlorinating/treating drinking water; -Keeping the food covered (to keep away flies/prevent contamination/proper storage of food; -Proper faecal disposal in pit latrines/toilets/keeping the same clean/not to dispose faecal materials in the open/washing hands before handling food/ washing fruits/food before eating/after visiting toilet/latrine; -Proper cooking of food; -Washing hands before handling of food/washing fruits before eating;	(2 marks)

	iv) -Pain (especially during feeding);/ -Bloody stool;/ -Impaired absorption (of digested food materials);	(2 marks)
3 (a)	i) Fruit(s); ii) Has two scars; point of attachment to remains of style; and point of attachment to the receptacle/fruit stalk iii) Presence of seeds; iv) Presence of pericarp/fruit wall v) Has epicarp, mesocarp and endocarp fused;	(1 mark) (2 marks)
b)	i) <div> </div> <p>-Correct, complete diagram with continuous outline-2 marks -Any three correctly labelled parts-3 marks.</p>	(5 marks)
	ii) Linear magnification = $\frac{\text{Length of drawing}}{\text{Actual length of object (specimen)}}$; OWTTE	(2 marks)
	iii) Explosive mechanism/self-dispersal mechanism/self explosive;	(1 mark)
	iv) Dry pods; due to loss of water from the pod and pressure from within the pod; the pod opens (violently) along the sutures /lines of weakness; seeds are thrown away from the parent plant/dispersed;	(3 marks)