

ANKLE ASHIMOCK 2020

Biology 3 PS3 0/3

Damson

Tugume

MARKING GUIDE

1. (i) pharynx, choroid, post and tail

- Renta-dagi (mud)

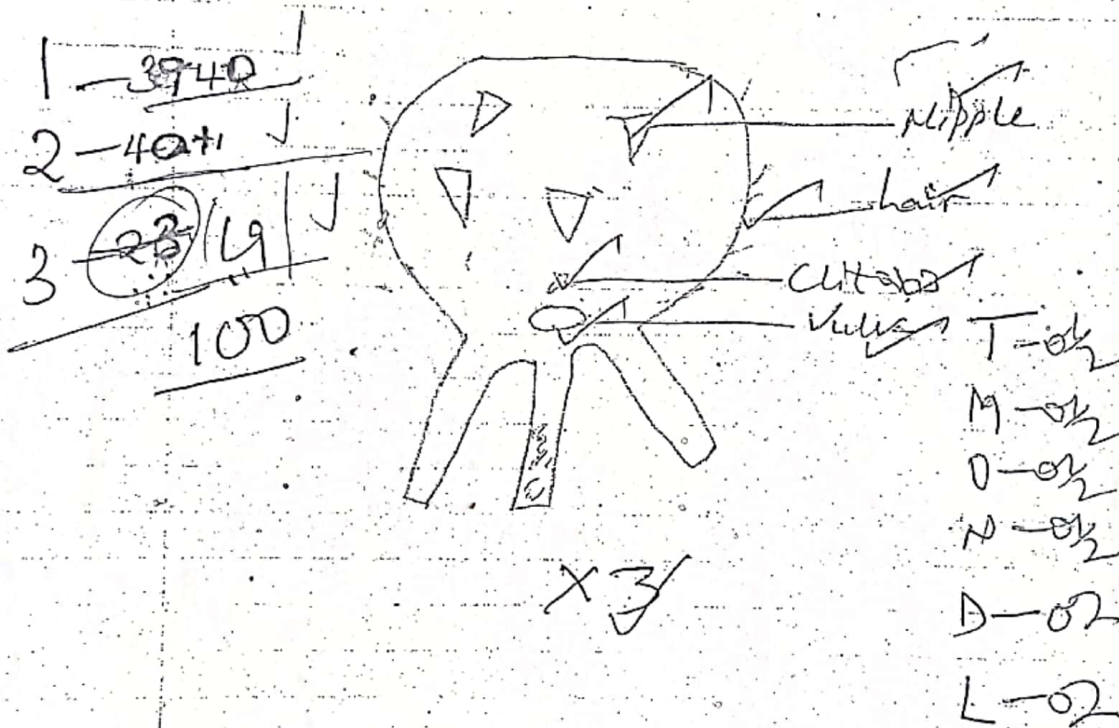
- ~~honey~~ in air. Of many

(02)

Chufu

(ii) Drawing of the ventral surface of Pecten abnormis of specimen Z showing x3 features of the class.

ridge



- Many Molar teeth to use SA for grinding of food

- Curved incisor teeth for easy scooping of food

(i) The upper plate / roof of the mouth

is rigid for firm grip of food with in the mouth - Long incisor teeth for deep cutting of food

- mouth is centrally located for

- wide distensibility to create more room for easy rolling of food

- soft palate, which is soft for easy swallowing

- upper lip - wire - soft to expose food for easy nibbling

- Pointed incisor / sharp incisor teeth for deep cutting of food

- Long tongue to increase SA for easy swallowing of food

- Broad tongue to increase SA for expose more taste buds for tasting food

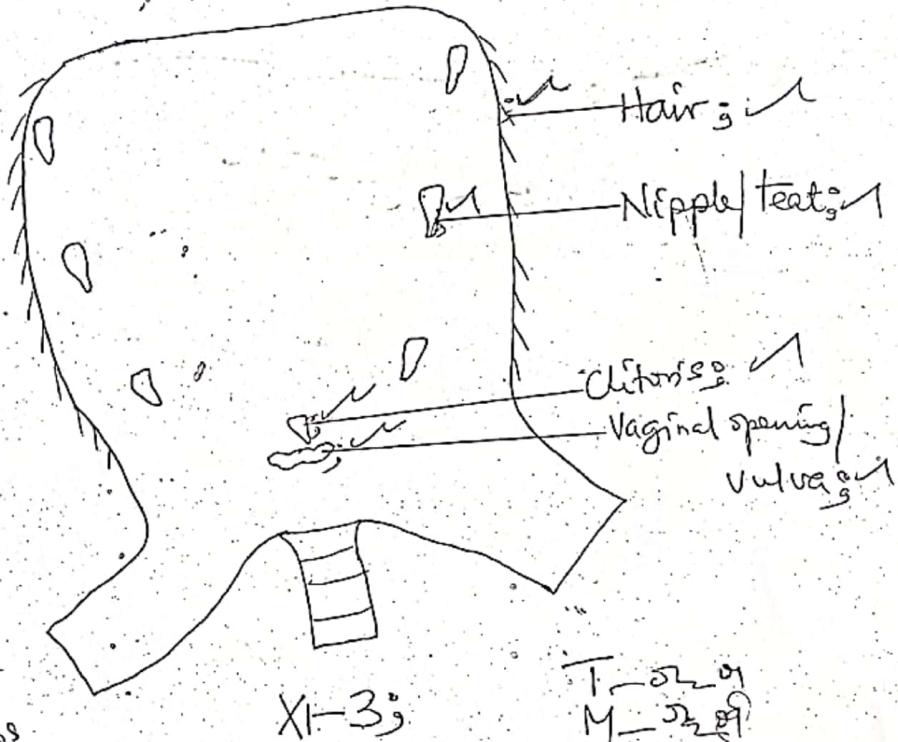
- Broad surface of molars to increase SA for grinding

- R. food surface of molars to increase SA

Accept showing showing...

(a) (ii) Drawing of the ventral surface of posterior abdomen of specimen Z showing characteristic features of the class;

Wrong/Reject
- drawing of specimen Z
- A diagram.
- No specimen Z (except Rat).



Male
- Scrotal sac
- Penis
Drawn names
- Nipples closed;
- Proper location of nipples and reproductive genitals.

NAD
- If any irrelevant feature drawn, and labelled.

T-02-01
M-02-01
D-02-01
N-02-01
D-02
L-02
% (06)
08

- muscular tongue for ~~easy~~ swallowing
- long tongue to increase surface area for ~~easy~~ rolling of food
- ~~any~~ 6x = abrasion

(i) Forefoot	Hind foot
- Ends in few digits	- Ends in five digits
- Shorter digits	- Longer digits
- Shorter feet	- Longer feet
- Less muscular	- More muscular
- First digit reduced	- First digit full size
- Prominent claw on first digit	- Prominent claw on the first digit
Proximal	Distal
80-155 mm	8:1
Ileum	7:1
(680-1080) mm	

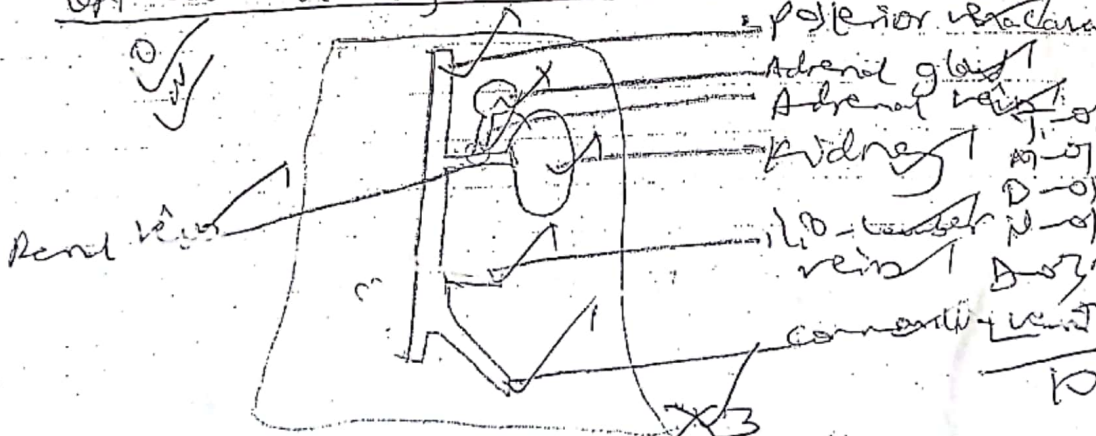
Reject short and long
over first ④

④

③

- 1) Ileum
- longer ^{much longer} provide large surface area for digestion
 - For food to spend longer time for effective digestion and absorption
- Proximal ③ Shorter for digestion of food. Since most absorption occur in ileum ③

(d) Drawing showing blood vessels that return blood from left abdominal cavity back to the heart of specimen



(d) Drawing showing blood vessels that return blood from left abdominal cavity back to the heart of specimen Z;

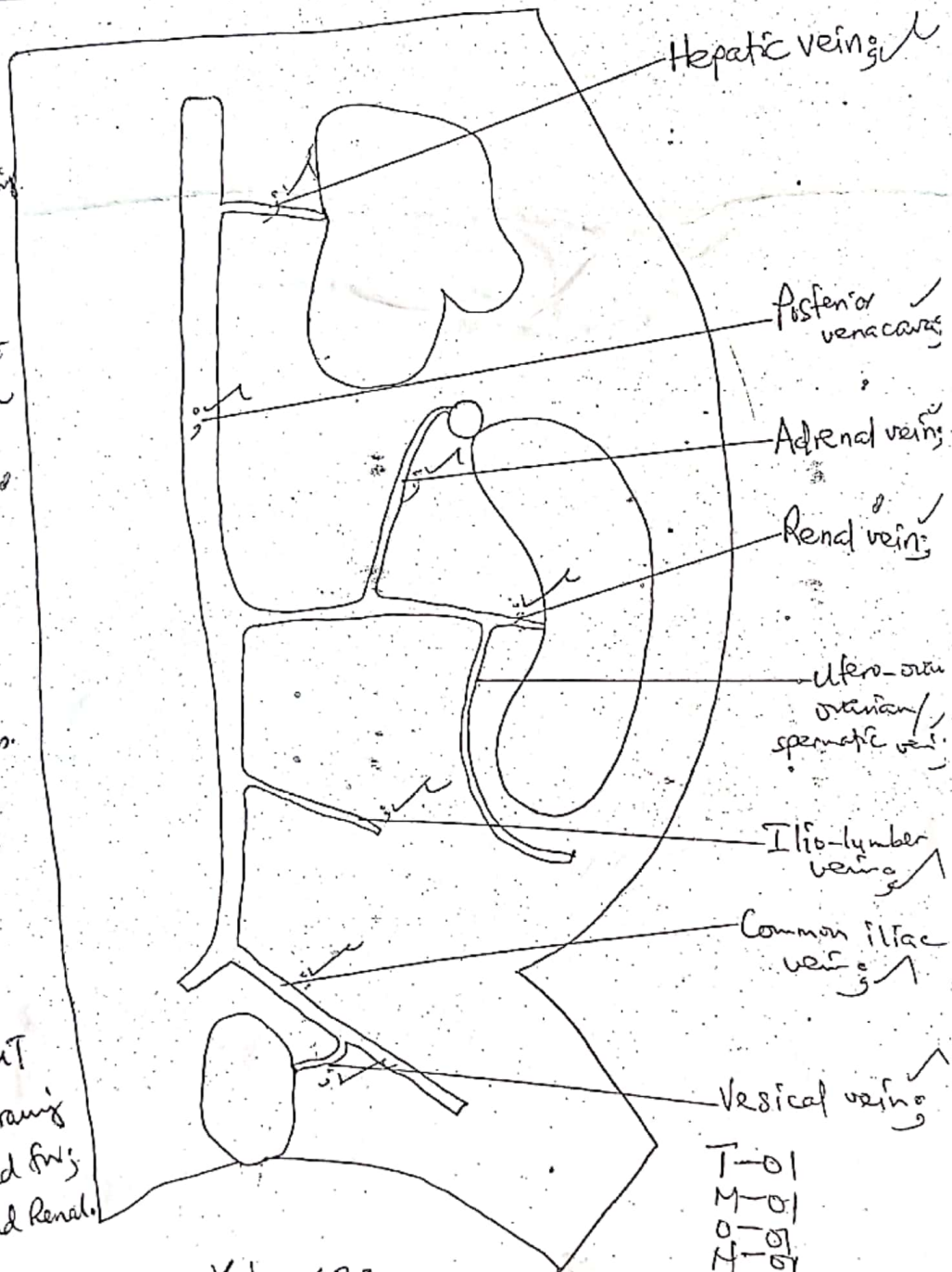
NAD
Any blood vessel draining into limb on the left.

Any blood vessel draining (ven) on the right side outside abdominal region i.e. limb.

NADL
Any artery included labelling on both sides including thoracic veins.

IR
Thoracic veins only drawn and labelled.

Ignore
organs of origin; BUT must be there for drawing name to be awarded for; Hepatic, adrenal, and Renal.



X1-X3;

T-01
M-01
O-01
H-01
D-03max
L-03max

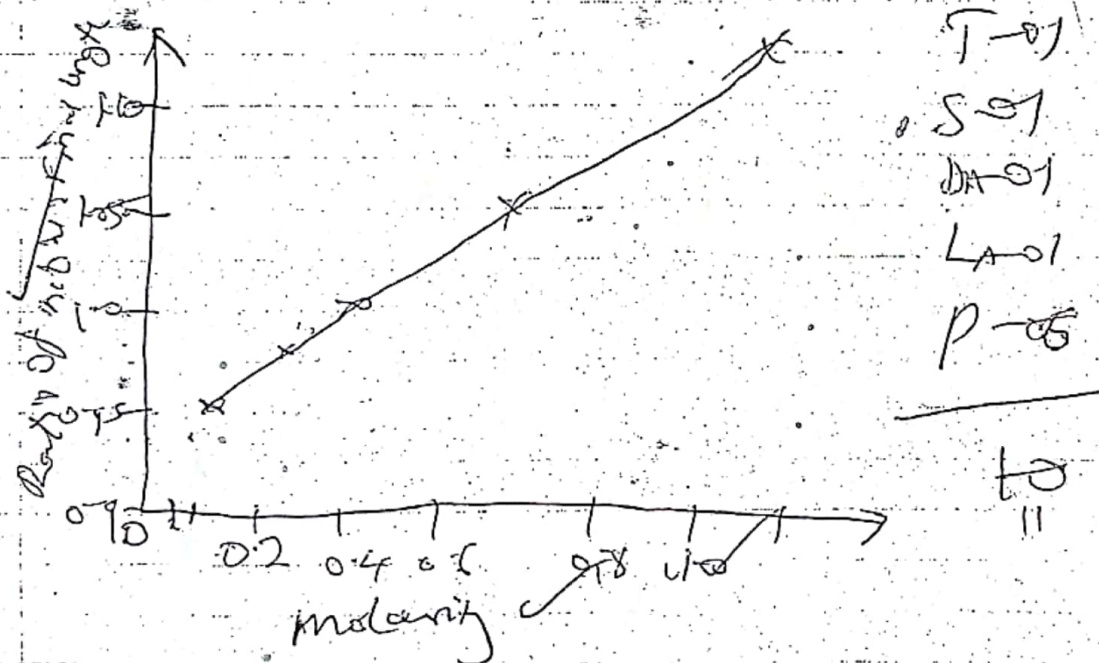
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2. Table 2

molarity of solution	initial length (cm)	Final length (cm)	initial length: Final length ratio
0.0M	3.0	3.2 ✓	0.94 ✓
0.1M	3.0	3.1 ✓	0.97 ✓
0.25M	3.0	3.0 ✓	1.0 ✓
0.5M	3.0	2.9 ✓	1.03 ✓
0.75M	3.0	2.7 ✓	1.11 ✓
1.0M	3.0	2.6 ✓	1.15 ✓

09 marks

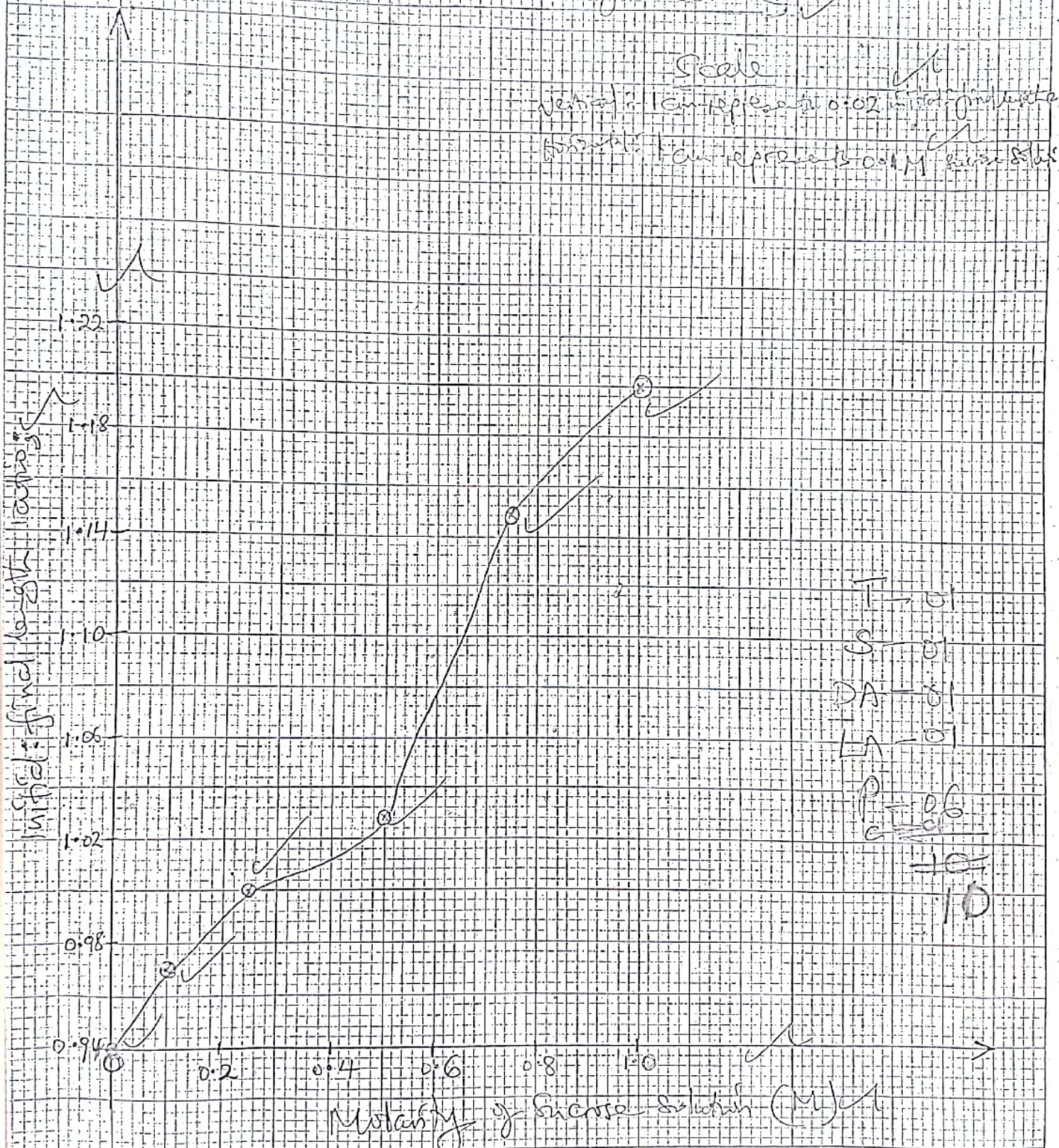
(C) i) Graph showing the variation of initial: final length ratio with concentration of sucrose ✓



ii) Osmotic pressure was highest at 0.0M and reduced with increasing molarity because highest increase in length was at 0.0M and increased with increasing sucrose because highest decrease in length was at 1.0M.

04

2(c) Graph showing the variation of initial: final length ratio with concentration of sucrose.



Test	Observation	Reduction
Biuret test No heat of extract A, add 1 cc of NaOH solution followed by 1/2-3 drops of CuSO ₄ solution (2)	Turbid solution turns to pale blue purple solution (02)	Protein present (05)
Benedict's test No heat of solution add 1 cc of Benedict's solution and heat (02)	Turbid solution turns to pale blue solution (02)	Reducing sugars absent (05)
Iodine test To 1 cc of extract A add 1-2 drops of Iodine solution (1)	Turbid solution turns to black solution (blue-black solution) (blue-black solution) (1)	Starch present (05)
		(15) (36) (41)

Reject heat and omit this and deduct 0.01

27 +

avocado
orange
cucumber
Gr pepper
papaya

3a) B - (avocado)
one large seed at the centre
attached by short funicle at the apex.
02

1) C (orange)
many ~~enlarged~~ seeds seeds radiating
outward from central placenta
02

(ii) D (cucumber)
many seeds radiating inwards attached
at 3/4 placenta.
02

(iv) E (green pepper)
many seeds clustered on central
placenta
02

(v) F (papaya)
many large seeds attached at
five peripheral placentas - 02

- 6) - Both have placenta
- Both possess many seeds
- Both have succulent mesocarp
- Both have open locule
any 3 similarities

Specimen E	Specimen F
- placenta at the centre	- Placenta at the peripheral
- divided locule	- undivided locule
- Thin mesocarp	- Thick mesocarp
	any 3 differences

03

16

3. (a)

Mango (B) (avocado)

(i) ✓ one seed at the centre, attached at the base/apex. (02)

(ii) C (orange)

- Seeds radiating outward in a circular pattern from a common central point / placenta. (02)

(iii) D (cucumber)

- Seeds radiating inwards/outward towards/from the centre, attached at 3/4 positions / placental regions, along the peripheral/outer wall / centre in a regular manner. (02)

(iv) Green pepper (E)

- Seeds clustered / crowded / concentrated, randomly attached on central placenta at the base. (02)

(v) Pawpaw (F)

- Seeds suspended / radiating / pointing inwards arranged along the peripheral/outer wall in a regular manner. (02)

(b) 6 sunburst (2) } 05
 12 diffuse (3) }

c 4

19

10

(c) Limiting yourself to internal features of the specimen construct a dichotomous key to identify them (10 marks)