

BIOLOGY PP3
MARKING SCHEME

Specimen	steps followed	Identity	
1(a) D2	: 1b, 2b, 4b	commelinaceae	
D3	: 1a	Pinaceae	
D4	: 1b, 2a 3a	Mimooaceae	
D5	: 1b, 2b, 4a, 5b	Gerannaceae	
D6	: 1b, 2b, 4a, 5a	Graminae	
D7	: 1b, 2a, 3b	Compositae	(12mks)
Semi -arid/Dry/Desert/Arid			(1mk)
Provide protection against injury by herbivores			(1mk)

2.

Food being tested for	Procedure	Observation	Conclusion
Starch	To 1cm ³ of Z add 2 drops of iodine solution	Blue-black colour	Starch present
Reducing sugar	To 1cm ³ of Z add 1cm ³ of Benedict's solution, Boil/heat/warm	No colour change/blue colour	Reducing sugar absent
Protein	To 1cm ³ of Z add drop of Biuret reagen	Purple /violet colour	Protein present
Ascorbic acid /vit.c	To 1cm ³ of DCPIP add substance Z dropwise	No colour change/DCPIP not decolourized /blue colour	Vit c/ascorbic acid absent

3. Specimen

- (a)(i) M - Lumbar vertebra (1mk)
- Reasons - Presence of metapophysis (1st two)
 - Large/broad centrum
 - Long transverse processes (2mks)
- (ii) Specimen N: - Cervical vertebra (1mk)
- Reasons - Short neural spine (1st two)
 - Presence of vertebrarterial canal
 - Winged/branched/divided transverse process
 - Presence of cervical ribs (2mks)
- (b)
- Neural canal for passage of spinal cord
 - Transverse process for attachment of muscles
 - Facets for articulation with other vertebrae
 - Vertebrarterial canal for passage of blood vessels and nerves. (1st four)
 - Neural spine for attachment of muscles
 - Neural arch and centrum for protection of spinal cord (4mks)
- (c)
- | | |
|--|---|
| <p>M</p> <p>Vertebrarterial canals absent</p> <p>Long tranverse processes</p> <p>Neural spine broad/wide/large/long</p> <p>Metapophysis present</p> <p>Neural canal is narrow</p> | <p>N</p> <p>Verbrearterial canal present</p> <p>Short transverse processes</p> <p>Neural spine narrow/short/small</p> <p>Metapophysis absent</p> <p>Neural canal is wide. (1st four) 4mks</p> |
|--|---|