INDIAN SCHOOL MUSCAT

FIRST TERM EXAMINATION

SEPTEMBER 2018

CLASS XI

Marking Scheme – BIOLOGY [THEORY]

SET C

Q.NO.	Answers	Marks (with split up)
1.	caecum	1
2.	Actin and Myosin ½ + ½	1
3.	Cartilaginous joint	1
4.	Contains several groups of neurosecretory cells called nuclei /which produce hormones./	1
5.	Due to presence of pneumatophores/ get oxygen for respiration ½ + ½	1
6.	Cause; cigarette smoking. Alveolar wall damaged, respiratory surfaces will decrease. 1+ ½ + ½	2
7.	Are cell fragments produced from megakaryocytes of bone marrow. Clotting disorders will arise. 1+1	2
8.	Ammonotelic - bony fishes, aquatic amphibians and aquatic insects (any one) Urecotelic - Reptiles, birds, land snails and insects (any one) 1 m	2
9.	In removing dust particles in respiratory system/ passage of ova in oviduct OR Myoglobin/ white fibres and red fibres 1+ ½ + ½	2
10.	Myelinated and unmyelinated nerve fibres/ schwans cells present around myelinated fibre and secrete myelin sheath./ Myelinated fibres found in cranial and spinal nerves/ un myelinated fibres found in somatic and autonomous neural system. / any four points (two points for each fibre)	2
11.	The thymus gland secretes the peptide hormones called thymosins./plays a major role in the development of the immune system./ Thymus is degenerated in old individuals resulting in a decreased production of thymosins./ As a result, the immune responses of old persons become weak.	2
12.	i) presence of buds ii) presence of nodes and internodes.	2
13.	a) breakdown of starch/ carbohydrates b) breakdown of fats/lipids/ c) breakdown of nucleic acid 1 m each.	3
14.	Oxygen dissociation curve/ to study the factors affecting oxyhemoglobin formation/ four molecules of oxygen 1+1+1	3
15.	Presence of nodal tissue/feature- auto excitable / SA node/ AV node/ bundle of HIS/ Purkinjee fibres/ 6 X ½	3
16.	Glomerular filteration /– malphigian body;/ tubular secretion/ and tubular absorption/- tubular cells/ in renal tubule; ½ m each	3
17.	True ribs – first 7 pairs/ false ribs – 8,9,10th ribs (reason)/ floating ribs 11th and 12th ribs. 1 m each.	3
18.	located on the basilar membrane/ contains hair cells that act as auditory receptors. /The	3

hair cells located on the internal side of the organ in rows/The basal

end of the hair cell is in close contact with the afferent nerve fibres./ A large

number of processes called stereo cilia are projected from the apical part

of each hair cell. /Above the rows of the hair cells is a thin elastic membrane

called tectorial membrane./ 6 X ½

OR

Photoreceptor cells – rods and cones / consists of photo pigments /rods- scotopic vision cones- photopic vision/ consists of pigments/
Ganglion cells
Bipolar cells 6X ½

19. (i) peptide, polypeptide, protein hormones (e.g., insulin, glucagon, pituitary hormones, hypothalamic hormones, etc.) 3
(ii) steroids (e.g., cortisol, testosterone, estradiol and progesterone)
(iii) iodothyronines (thyroid hormones)
(iv) amino-acid derivatives (e.g., epinephrine). 4 X ½
Membrane bound receptors and intra cellular receptors ½ + ½

20. (a) Glucagon, Insulin 3
(b) Parathormone (PTH)
(c) Follicle stimulating hormone (FSH) and Luteinizing hormone (LH)
(d) Progesterone
(e) Atrial natriuretic factor
(f) Testosterone and Estradiol. 6 x ½

21. the pattern of arrangement of leaves on the stem or branch/ opposite/ alternate/whorled. 3
2 m.
presence of bud at the axil of a leaf. 1m

22. Diagram – 1 m ; any four parts – ½ m each. 3

23. Drupe/ and it develops from monocarpellary/ superior ovaries/ and are one seeded./ 3
In mango the pericarp is well differentiated into an outer thin epicarp,/ a
middle fleshy edible mesocarp and an inner stony hard endocarp./ 6 x ½

24. Arrangement of flowers on the floral axis/ racemose and cymose /any one difference. 1 m each 3

25. Mucosa form rugae consisting of gastric glands necessary for digestion in stomach/ small intestine forms villi/ consists of brush border epithelial cells/ increases surface area/ supplied with blood capillaries and lacteal/ crypts in between villi (crypts of Liberkuhn)/ consists of goblet cells/ secretes mucus necessary for lubrication./ 5X1 5
OR
a) helps in osmotic balance
b) secretes serotonin, histamine etc., and involved in inflammatory reactions.
c) supply of Oxygen, other nutrients and removal of wastes from tissues.
d) to prevent backflow of blood from ventricles to atrium.
e) to supply blood to lungs for oxygen.

26. Accumulation of urea in blood/ leads to kidney failure/ hemodialysis/procedure 5

1+1+1+2

OR

Resting potential- 1m; action potential at site A-1-1 m/ conduction of nerve impulse from site A to B- 1m / reverse of potential at site A- 1m/ chemical synapse role -1

27. a) stores food and acts as organ of perennation b) tendrils- for support c) thorn- for protection d) for photosynthesis e) vegetative propagation. 5
OR

a) sterile stamens
b) free carpels
c) arrangement of ovules inside a ovary
e) arrangement of petals and sepals in a flower
f) arrangement of veins and veinlets in a leaf