

ZOOLOGY

1. Arrange the external openings and their segmental numbers of Pheretima

Set -I

A. Male genital apertures

B. Dorsal pores

C. Spermathecal

D. Nephridiopores

a) A-2, B-1, C-3, D-4

c) A-3, B-4, C-2, D-1

Set-II

1) Between 12/13 to last segment

2) From 3rd to last segment

3) 18th segment apertures

4) From 5/6 to 8/9 segments

b) A-3, B-1, C-4, D-2

d) A-2, B-3, C-1, D-4

2. The largest class in the kingdom Animalia is

a) Crustacea

b) Nematoda

c) Arachnida

d) Insecta

3. The hormone used for suppressing allergies, rheumatoid arthritis and tissue inflammation is :

(a) Mineralo corticoid

(b) Glucocorticoid

(c) Thyroxin

(d) Adrenalin

4. Silicosis is caused by

(a) Acid rains

(b) Depletion of Ozone

(c) Inhalation of aerosols

(d) Inhalation of sulphur dioxide

5. Assertion (A): Urinary bladder can considerably be distended to accommodate urine Reason (R): It is lined by stretchable pseudostratified epithelium.

a) Both (A) and (R) are true and (R) is correct explanation of (A)

b) Both (A) and (R) are true and (R) is not correct explanation of (A)

c) (A) is true but (R) is false

d) Both (A) and (R) are false

6. Match the following

List-I ~'

A) *Cervus e/aphus hanglu*

B) *Ailurus ochraceus*

C) ZSI

D) Earth Summit

a) A-I, B-II, C-III, D-IV

c) A-II, B-III, C-I, D-IV

List- II

I) Kolkata

II) Kashmiri stag

III) Red Panda

IV) Rio de Janeiro

b) A-II, B-1, C-IV, D-III

d) A-II, B-III, C-IV, D-I

7. Which of the following is not a category included in the taxonomic hierarchy established by Linnaeus

a) Kingdom

b) Order

c) Family

d) Class

8. Rabbits dental formula is

- a) $2/1; 0/0; 3/2; 3/3$ b) $1/2; 0/2; 0/2; 3/3$
c) $1/2; 0/2; 3/0; 3/3$ d) $2/2; 1/1; 2; 2; 2/2; 3/3$

9. The scientific name of peacock is

- a) *Corvus* . b) *Pavo cristatus* c) *Gallus gallus* d) *Columba livia*

10. In mammals teeth are formed twice in the lifespan, hence the denition is called

- a) Monophyodont b) Polyphyodont c) Diphyodont d) Triphyodont

KEY:

11.B	12.C	13.B	14.C	15.C	16.C	17.C	18.A	19.B	20.C
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BOTANY

1. **Cell above the egg cell in the archegonial venter in funaria is**
 - a. operculum
 - b. neck canal cell
 - c. venter canal cell
 - d. lid cell

2. **Chemical attractant in chemotaxis of antherozoids in funaria is**
 - a. Mucilage b) sugar c) malic acid d) water

3. **Inverted omega –like arrangement of vascular bundles is present in the anatomy of the following structure of Cycas**
 - a. coralloid roots
 - b. roots
 - c. leaflet
 - d. rachis

4. **A substitute tissue for lateral veins found in Cycas leaflets is**
 - a. transfusion tissue
 - b. additional palisade layers
 - c. centripetal xylem
 - d. centrifugal xylem
 - e.

5. **Identify the correct ascending order of the important event in the history of virology with reference to their discovery year**
 - a. nucleoprotein nature of viruses
 - b. causal agents of tobacco mosaic disease are filterable
 - c. TMV crystallization
 - d. Bacteriophages

6. **Study the following table**

SI NO:	DISEASE	PATHOGEN	SYMPTOM
I	Blast of paddy	Pyriculariaoryzae	Leaf sheath turns blackish
II	Red rot of sugarcane	Cercosporapersonata	Discolouration of leaves is the first symptom
III	Grain smut of sorghum	Sphacelothecasorghii	The grains are converted in to blackcoloured spore sacs
IV	Citrus canker	Xantho monas citri	Plant show early defoliation

Which two disease show the correct combination?

- a. i & ii
- b. ii & iii
- c. iii & iv

d. i & iii

7. Bio –pesticide is

- i. baculo virus ii. Agrobacterium iii. Bacillus thuringiensis iv. escherichia coil
- a. i & ii are correct
b. ii & iii are correct
c. i & iii are correct
d. iii & iv are correct
e.

8. One of the following is not a criteria for determining the essentiality of an element

- a. The element is directly required in vegetative and reproductive stages of the plant
b. the element is distributed in all parts of the plant equally
c. the deficiency symptoms of an element expressed by the plant can be removed by adding only the same
d. the element –role in the plant nutrition is direct

9. Study the following

	Macro element	Chemical symbol	Available form
I.	Nitrogen	Ni	NO_2^- , NH_3^+
II.	Oxygen	O^3	CO , CO_3^-
III.	Magnesium	Mg	Mg^{+2}
IV.	Sulphur	S	SO_4^{-2}

Which two diseases show the correct combination?

- a. i & ii
b. ii & iii
c. iii & iv
d. ii & iv

10. In chlorophyll-b methyl group is present on

- a. pyrrole ring –I b) pyrrole ring-II c) pyrrole ring-III d) pyrrole ring-IV

KEY:

1.B 2.C 3.D 4.A 5.B 6.B 7.C 8.D 9.B 10.B