

Jashore Board-2017

Biology Second Paper

Subject Code :

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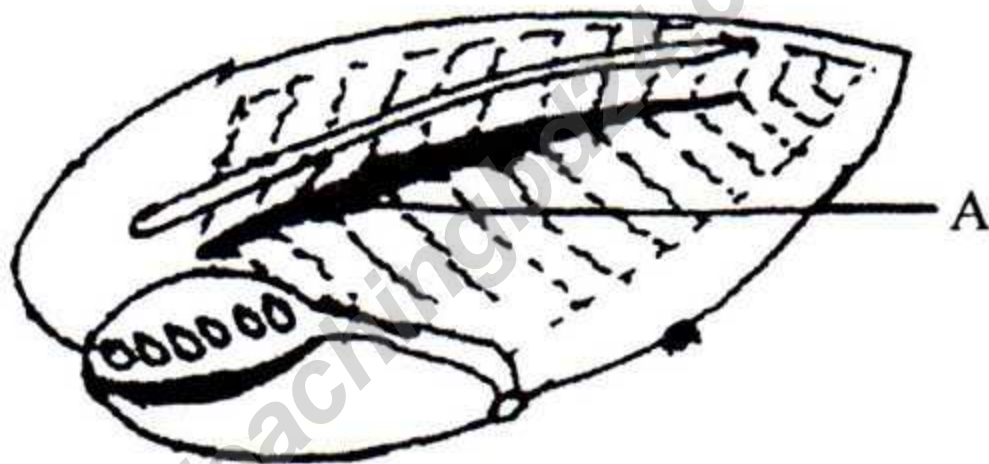
Time — 2 hours 35 minutes

Creative Essay Type

Full Marks — 50

[N.B. -The figures in the right margin indicate full marks. Read the stems carefully and answer the associated questions. Answer any five questions.]

1. ► ★ Observe the figure and answer the following questions:

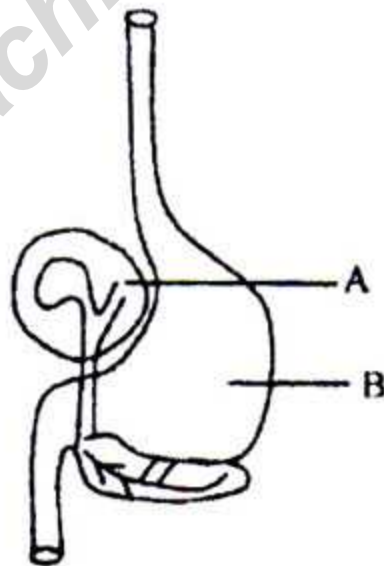


- What do you mean by coelom? 1
- What do you mean by ICZN? 2
- Write down the characteristics of the phylum related to the passage. 3
- Describe the different subphylums obtained by dividing the mentioned phylum on the basis of the part "A". 4

2. ► ★ The animal kingdom consists of such an animal which contains attacking cells on its body. Again this animal moves by releasing its basal disc in rapid manner and by attachment of basal disc, it travels longer distance.

- a. What is hypostome? 1
- b. What do you mean by symbiotism? 2
- c. Describe the structure of the attacking cell mentioned above. 3
- d. Discuss the movements of the organism mentioned in the passage. 4

3. ► Observe the figure and answer the following questions:



- a. What is saliva? 1
- b. What do you mean by *BMI*? 2

- c. Discuss the role of the part “A” in digestion. 3
- d. Discuss the process of mechanical digestion in the part “B” respectively. 4

4. ► ★ In the skull around the facial region, on each side of the nasal cavities, there are some pairs of special cavities which when filled with liquid instead of air, give rise to inflammation by transmission of germs.

- a. What is alveolus? 1
- b. Write down the functions of the epiglottis. 2
- c. Write down the name, position and the inflammation of the cavities mentioned above. 3
- d. How can one be prevented from the inflammation mentioned above? Discuss it. 4

5. ► A pair of organs of the human body shaped like beans continuously produces an acidic liquid waste product and eliminates it to free the body from toxicity.

- a. What is ADH? 1
- b. What do you mean by osmoregulation? 2
- c. Draw the figure of the structural unit of the organ mentioned above. 3
- d. Discuss the mechanism of production of the liquid product in the passage. 4

6. ► The teacher mentioned about biological substances of living cells acting as a chemical messenger which are essential for human life. She further said that if these

components are used in an increased amount, they may cause harmful problems.

- a. What is a cranial nerve? 1
- b. What do you mean by accommodation? 2
- c. Discuss the importance of the biological component of the passage. 3
- d. Evaluate the importance of the last line of the passage. 4

7. ► Black colour × White colour ♀



$F_1 \rightarrow$ All animals are white spotted

- a. What is epistasis? 1
- b. What do you mean by erythroblastosis fetalis? 2
- c. Describe the result of F_1 generation. 3
- d. Give the genetic explanation of result of a crossing between the two animals in F_1 generation. 4

8. ► On discussion over the protection of the body from different organisms, the teacher mentioned that there are some organs outside the body which play a primary role in this regard.

- a. What is antigen? 1
- b. What do you mean by immunity? 2
- c. Classify the information mentioned in the passage. 3
- d. Give your opinion on the role of the special organs mentioned in the passage. 4

Time — 25 minutes

[N.B.— Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Questions Examination. use a ball point pen. Each question carries 1 mark.]

1. Which cranial nerve helps in the movement of the tongue?

- (a) Abducens (b) Facial
(c) Vagus (d) Hypoglossal

2. During accommodation in the eye —

- i. Decrease and increase of pupil
ii. Contraction and relaxation of the ciliary muscles
iii. Change in the shape of the lens

Which one is correct?

- (a) i & ii (b) i & iii
c. ii & iii (d) i, ii & iii

3. For which disease macrophage and T_4 lymphocyte of human whiteblood cells are destroyed?

- (a) AIDS (b) Gonorrhoea
(c) Syphilis (d) Trisomy

Read the following passage and answer the questions 4 and 5:

Modern Bina always feeds her child with artificial baby food. A few days later her child developed different diseases.

4. The reason behind the diseases of Bina's child —

- (a) Carelessness of mother
(b) Baby food
(c) Low disease resistance power of body
(d) Apathy towards food

5. Bina provides artificial baby food to her child instead of breast-milk because —

- i. Breast-milk is a painful process
ii. Thinking about the physical growth of the child
iii. For prevention of egoism created due to modernity

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

6. ★ The phenotypic ratio of duplicate recessive epistasis —

- (a) 9:7 (b) 13:3

- (c) 9:3:3:1 (d) 1:2:1

7. ★ What kind of behaviour is child rearing?

- (a) Inborn (b) Social
(c) Reflex (d) Learning

8. How many times does a grasshopper shed its slough while transforming from nymph to adult?

- (a) 1-time (b) 3 times
(c) 5 times (d) 7 times

9. ★ The fins behind the gills of Rui fish are called —

- (a) Pelvic fins
(b) Dorsal fins
(c) Pectoral fins
(d) Anal fins

10. Which one is appropriate for the blood circulation of Rui fish?

- i. One way blood flow
ii. CO_2 enriched blood enters the gills from the rear
iii. Cold blooded

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

11. Which one is the length of a?

- (a) 5.8mm (b) 7.8mm
(c) 12.8mm (d) 23.8mm

12. Which one is protein-digesting enzyme?

- (a) Ptyaline (b) Amylase
(c) Trypsin (d) Maltase

13. Under normal circumstances, blood does not clot inside blood vessels because —

- i. Blood flows in a rapid and continuous state
ii. Blood contains substance called heparin
iii. The inner surface of the blood vessel is rough

Which one is correct?

- (a) i & ii (b) i & iii
c. ii & iii (d) i, ii & iii

14. ★ Tissue arrangement phylum level

- (a) Porifera (b) Cnidaria
(c) Nematoda (d) Chordata

15. The characteristics of Aves —

- i. Warm-blooded
ii. Body covered in hair
iii. Bones filled with air

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

Observe the following figure and answer the questions 16 and 17 :

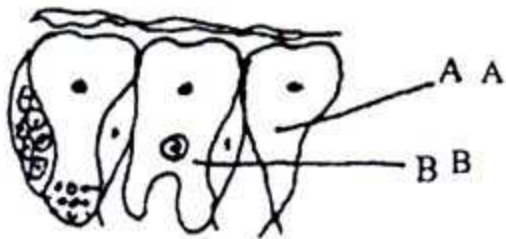


Figure: K

16. The part "A" in the figure —

- a. Sensory cell
b. Flagellated nutrition cell
c. Pseudopod nutrition cell
d. Gland cell

17. The function of parts "A" and "B" —

- i. Contraction-relaxation of body
ii. Ingestion and digestion of food particles
iii. Takes part in respiration and excretion

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

18. ★ The dorsal, thick and hard part made of chitin in the body segment of grasshopper is called —

- (a) Pleurite (b) Sclerite
(c) Sternite (d) Turgite

19. Which one is the part of the female reproductive system of grasshopper?

- (a) Ejaculatory duct
(b) Vas deferens
(c) Spermatheca
(d) Testis

20. The maximum containing ability of

lungs —

- (a) Vital capacity (b) Tidal air
(c) Tidal volume (d) Residual volume

Read the passage and answer the questions 21 and 22:

Due to the closure of tricuspid and bicuspid valves, blood enters pulmonary artery and aorta from the ventricles.

21. The above-mentioned statement is true for which of these?

- (a) Atrial diastole
(b) Atrial systole
(c) Ventricular systole
(d) Ventricular diastole

22. The above-mentioned valves remain closed in the step —

- i. Atrial systole
ii. Atrial diastole
iii. Ventricular systole

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

23. Alveolus —

- i. Structural and functional unit of lungs
ii. Contains collagen fibres in the membrane
iii. Destroys germs

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

24. The function of kidney —

- i. Removal of nitrogenous waste products
ii. Maintenance of water balance of body
iii. Maintenance of hemoglobin concentration in blood

Which one is correct?

- (a) i & ii (b) i & iii
(c) ii & iii (d) i, ii & iii

25. What kind of cartilage is present in trachea and nose?

- (a) Hyaline
(b) Yellow fibrous
(c) White fibrous
(d) Calcified

Ans.	1	2	3	4	5	6	7	8	9	10	11	12	13
	(d)	(d)	(a)	(c)	(d)	(a)	(a)	(c)	(c)	(a)	(a)	(c)	(a)
	14	15	16	17	18	19	20	21	22	23	24	25	
	(b)	(d)	(b)	(d)	(b)	(c)	(a)	(c)	(c)	(d)	(d)	(b)	