

Barishal Board 2017

Biology

Subject Code

1	3	8
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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 attentively and answer any five of the following questions.]

1. ★

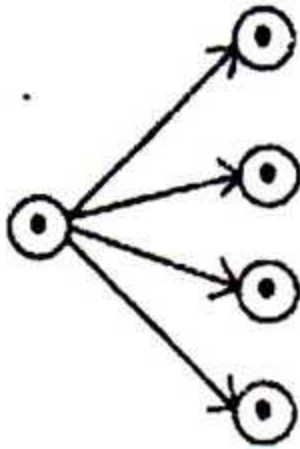


Fig : X

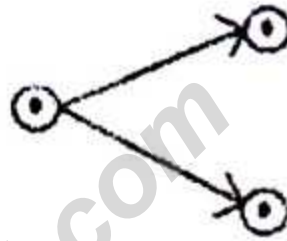


Fig : Y

- What is cell division? 1
- What do you understand by prokaryotic cells? 2
- Mention the features of the fourth stage of the process mentioned in figure : Y. 3
- Explain the significance of the process mentioned in the figure : X in maintaining the individuality of species. 4

2. ► Nilu was watching different advanced plants and animals including tigers on a TV Channel. He is a lazy and ease type of a young man, who always likes to eat Biryani and Berger. LDL level in his blood is 5.68 gm/decilitre.

- What is an artery? 1
- What do you understand by active and passive absorption? 2

- c. Describe the symptoms of the disease which may develop in Nilu's body. 3
- d. The plants and animals mentioned in the stem above are under the same super kingdom but they are under different kingdom. — Explain it. 4

3. ►



Fig : P



Fig : Q

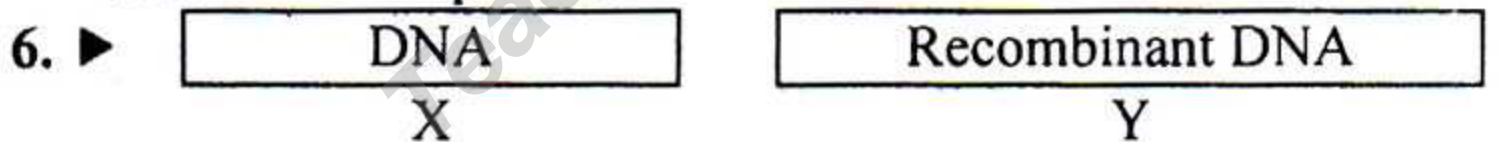
- a. What is diffusion? 1
- b. What do you understand by blood group? 2
- c. Explain the functions of the organ mentioned in the fig : Q above. 3
- d. Describe the differences in the process mentioned in the fig : P. 4

4. ► The orphan Nabil is totally careless. He does not take much care about the purity of food and water he eats and drinks. Even he does not maintain the cleanliness of the utensils he uses. He has been suffering from peptic problems. When he met his doctor, the doctor said that remedy is not the main concern in his case but the prevention is.

- a. What is tonic goiter? 1
- b. What do you understand by balanced diet? 2
- c. Describe the symptoms of the disease Nabid is suffering from. 3
- d. Explain the appropriateness of the utterance made by the doctor. 4

5. ★ (i) Green plants → Zooplankton.
 (ii) Green plants → Small fish → Rohit fish.
 (iii) Conservation of environment.

- a. What is a food chain? 1
- b. What do you mean by positive interactions? 2
- c. Which ecosystem are they included in which organisms are mentioned in (i) and (ii). 3
- d. In case of (iii), the role of human beings is the main concern. — Explain it. 4



- a. What is an explant? 1
- b. What do you understand by natural selection? 2
- c. Describe how X plays a role in ensuring justice? 3
- d. It is possible by the process mentioned in the figure Y to introduce new and qualitative features in plants and animals. — Explain it. 4

7. ►

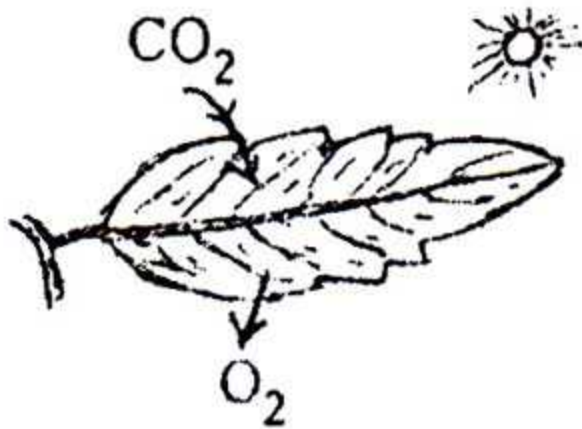


Fig : M

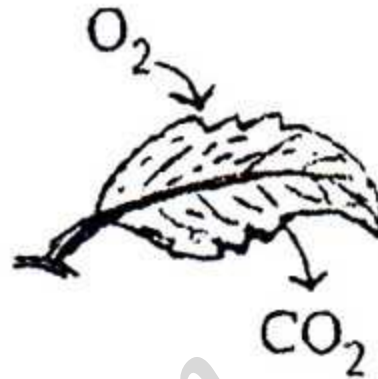


Fig : N

- What is considered the currency in a living cell? 1
- What do you understand by photophosphorilation? 2
- Explain the first stage of the process mentioned in the figure : N. 3
- For the existence of living organisms both the process M and N are essential. — Explain it. 4

8. ★

China-rose, Datura (Bisexual)

Y

(i) Cotton tree (Shimul) (Male Flower)
(ii) Polash (Female Flower)

Z

- What is reproduction? 1
- What do you understand by fly-pollinated flowers? 2
- Describe the development of gametophyte of Z (i). 3
- Which type of pollination mentioned in the stem Y and Z has more advantages? 4

Time — 25 minutes

Creative Multiple Choice Questions

Full marks — 25

[NB. 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 the Multiple Choice Questions Examination.]

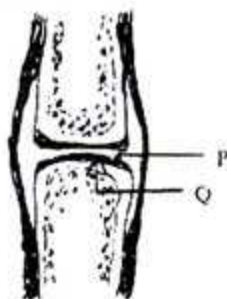
1. ★ How many ATPs are produced from two molecules of $FADH_2$?

- (a) 2 (b) 3
(c) 4 (d) 6

2. What amount of lipid in gram does an adult human require daily?

- (a) 30—40 (b) 40—50
(c) 50—60 (d) 60—70

Study the following stem and answer to the questions no. 3 and 4 :—



3. The part marked with P is —

- (a) different forms of connective tissue
(b) the most compact or hard part of the body
(c) contained with 40—50 percent water
(d) composed of the cells called osteoblast

4. Which ones of the following are applied in case of Q?

- i. Synovial fluid is present there
ii. Cartilage is attached with the bone
iii. Bone does not collide with another bone

Which one of the following is correct?

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

5. ★ Which part of the brain is the largest part of it?

- (a) Cerebrum
(b) Cerebellum
(c) Pons
(d) Medulla oblongata

6. Which of the following flowers adapts

self-pollination?

- (a) Datura
(b) Shimul
(c) Papaya
(d) Cucumber

7. Which of the following are found in DNA and RNA?

- (a) adenine and thymine
(b) cytosine and thymine
(c) guanine and uracil
(d) cytosine and guanine

8. Which one of the following is a scavenger?

- (a) Cow (b) Frog
(c) Tiger (d) Vulture

9. 'A cuckoo lays its eggs in the nest of a crow. The crow hatches the eggs.' — What type of interaction is it?

- (a) Competition
(b) Antibiosis
(c) Commensalism
(d) Absorption

10. ★ In which stage does spindle apparatus develop?

- (a) Prophase
(b) Pro-metaphase
(c) Metaphase
(d) Telophase

11. Which structure of chromosome is called sub-metacentric in the process cell division?

- (a) I (b) J
(c) L (d) V

12. In Nehar's blood there are antigen A and B. But there is no antibody in her blood. She can —

- i. receive blood from all the groups
ii. give blood only to the AB group
iii. give blood to both the groups A and B

- Which one of the following is correct?
 (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii
13. What is the concave part of a kidney called?
 (a) renal pelvis (b) hilum
 (c) medulla (d) cortex
14. Which one of the following is applied to placenta?
 (a) It develops ten (10) weeks after the fertilization occurs
 (b) Develops permanent organs in embryo and mother's uterus
 (c) It is released from the body during delivery
 (d) It absorbs wastes developed by embryo
15. ★ Which cell is used in transporting food produced by the plant to its different parts?
 (a) Tracheids
 (b) Sieve tube
 (c) Vessel
 (d) Companion cell
16. Which of the following genes is transferred for the improvement of the protein content of milk?
 (a) Protein-A (b) Protein-B
 (c) Protein-C (d) Protein-D
17. What are the main components of chlorophyll?
 (a) Ca and Fe (b) Na and Mg
 (c) Fe and N (d) Mg and N
18. ★ Which of the following subjects becomes concerned with insects?
 (a) Microbiology
 (b) Palaeontology
 (c) Entomology
 (d) Parasitology
19. When was the drug control authority established?
 (a) 1976 (b) 1983
 (c) 1989 (d) 1990
20. Which of the following substances being deficient causes die-back disease?
 (a) Ca (b) K
 (c) Fe (d) S
21. How many parts is a renal tubule divided into?
 (a) 2 (b) 3
 (c) 4 (d) 5
22. Oxygen is carried from the lungs to the cells of the body as —
 i. Oxyhemoglobin
 ii. bicarbonate
 iii. being dissolved in plasma
 Which one of the following is correct?
 (a) i and ii (b) i and iii
 (c) ii and iii (d) i, ii and iii
23. ★ How many segments are there in the right and the left lung consecutively?
 (a) two and three (b) three and two
 (c) three and four (d) four and three
24. Which of the following does possess cisternae?
 (a) centrosome
 (b) endoplasmic reticulum
 (c) golgi body
 (d) lysosome
25. Which ones of the following are applicable in case of parenchyma tissue?
 i. cells having thin walls
 ii. intercellular spaces are there
 iii. stone cells are present
 Which one of the following is correct?
 (a) i and ii (b) ii and iii
 (c) i and iii (d) i, ii and iii

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