

# Model Question of HSC Examination 2020

## Biology First Paper

Subject Code : 

1	7	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 carefully and answer the associated questions. Answer any five questions.]*

1. ▶

Oreganelle-1	Found in the nerve cell of cat and owl
Oreganelle-2	Two types-70S and 80S

- a. Define gene? 1
- b. Describe suicidal bag of a cell. 2
- c. How does transport occur in organelle-1? 3
- d. Analyze the role of organelle-2 in protein synthesis. 4

2. ▶



Fig-A

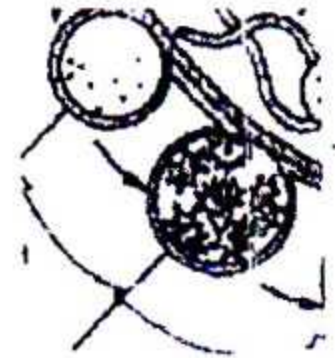


Fig-B

- a. What is botulism? 1

- b. Why Ebola is called emerging virus? 2
- c. What happen after seven to ten days in fig-A? 3
- d. Without the help of fig-B, X-part will not produce—  
analyze. 4

3. ► Fahim's father pruchased some sugarcane. He informed to Fahim that one kind of monosaccharide is abundant in the juice of sugarcane.

- a. What is coenzyme? 1
- b. Why cellobiose is a reducing sugar? 2
- c. Explain the properties with structural formula of  
monosaccharide of the stem. 3
- d. Differentiate above monosaccharide with sucrose. 4

4. ★ While doing experiment with flower of a family in biology laboratory. Afnan observed that the placentation of the flower is axile. The pollen grain of that flower was spiny.

- a. What is aestivation? 1
- b. What is meant by versatile anther? 2
- c. Draw a labeled diagram (L.S) of the flower. 3
- d. Discuss the importance of the family of above flower. 4



5. ★ Teacher was discussing about protein synthesis. For protein synthesis the first step is the production of mRNA. The next step is occur in cytoplasm.

- a. What is amino acid? 1
- b. Describe about replication fork. 2
- c. How does the product from first step finalized from preliminary stage. 3
- d. Analyze the role of RNA for the second step. 4

6. ►  $\text{CO}_2 + \text{RuBP} \rightarrow \rightarrow \rightarrow 2\text{G3P}$

$\text{C}_6\text{H}_{12}\text{O}_6 \rightarrow \rightarrow \rightarrow 2\text{G3P}$

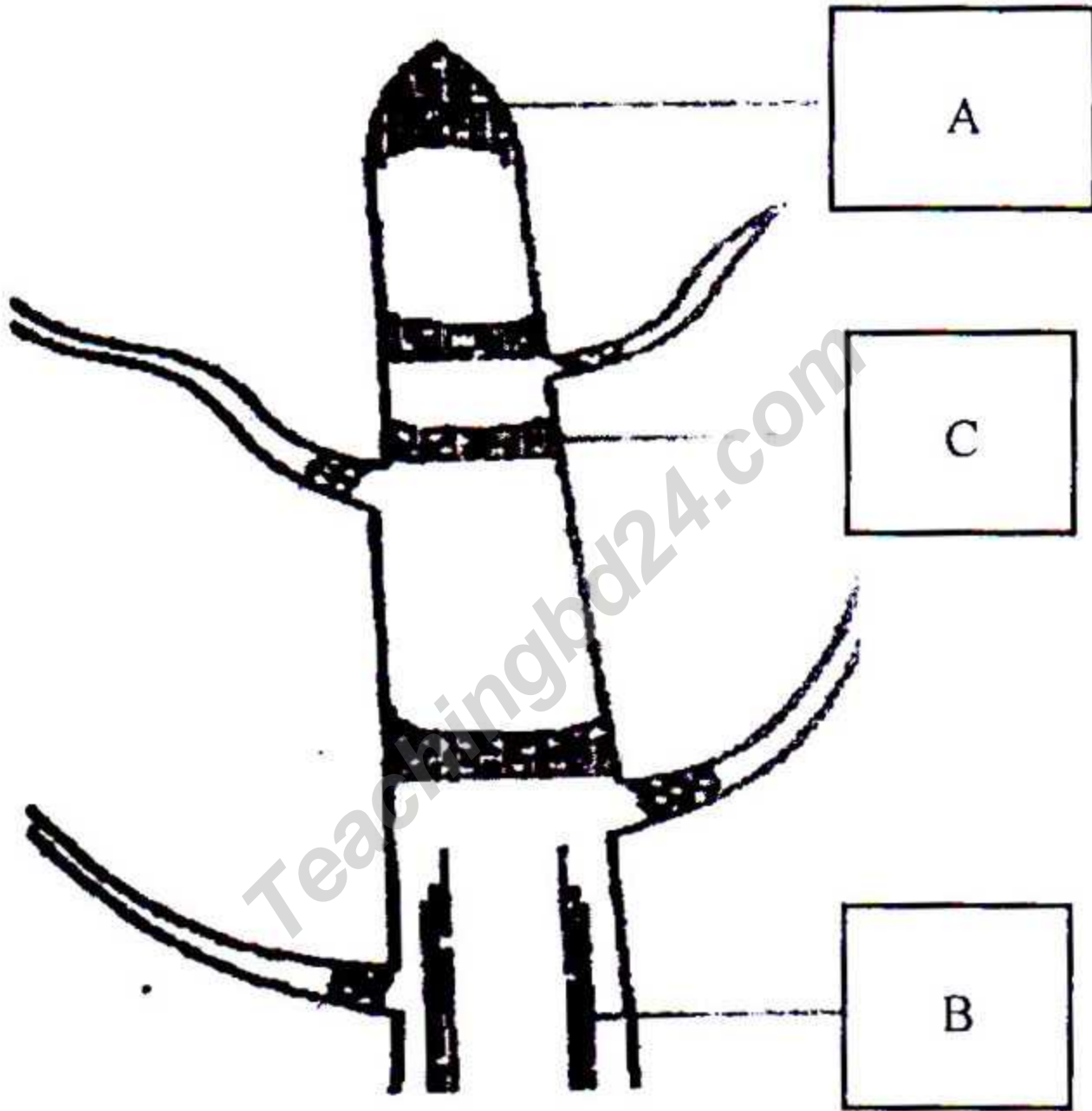
- a. What is lenticular transpiration? 1
- b. How carbon reduce in maize plant. 2
- c. Explain the first reaction given in stem. 3
- d. Energy harvest start after second reaction of stem in cytosol— analyze. 4

7. ► Zahir has a Bakery. He produces bread by using a unicellular fungus.

- a. What is anisogamy? 1
- b. Describe fruit body of Agaricus. 2
- c. Explain the sexual reproduction of organism used by Zahir. 3

d. Respiration process of above organism is completely different from Chlorella— analyze. 4

8. ★



- What is stele? 1
- Describe radial vascular bundle. 2
- Explain the C-part of stem. 3
- Compare the structure and function of A and B. 4



# Biology First Paper

## Creative Multiple Choice Questions

Marks — 25

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. Terminalization starts in—

- (a) pachytene
- (b) zygotene
- (c) diakinesis
- (d) leptotene

2. Which one carries the amino acid to ribosome?

- (a) mRNA
- (b) tRNA
- (c) rRNA
- (d) gRNA

3. Which one is the function of Endoplasmic reticulum?

- (a) lysosome production
- (b) production of cell-plate
- (c) releasing water
- (d) act as structure of protoplasm

Answer question number 4 & 5 from the given stem—

Mr. Shafiq use a biochemical substance in his fruit juice factory. That substance accelerate the biochemical reactions.

4. Substance of Mr. Shafiq—

- (a) made of protein
- (b) insoluble in water
- (c) has reducing capability
- (d) fatty acid and glycerol produce after hydrolysis

5. Uses of above substance—

- i. making cheese
- ii. wound healing
- iii. organic acid production

Which one is correct?

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

6. Which one is a disaccharide?

- (a) erythrose
- (b) ribulose
- (c) mannose
- (d) cellobiose

7. ★ Which one known as animal starch?

- (a) cellulose
- (b) raffinose

(c) amylose

(d) glycogen

8. ★ Which range is the optimum temperature for C<sub>4</sub> plants?

- (a) 10–25°C
- (b) 20–35°C
- (c) 30–40°C
- (d) 30–45°C

9. Which one is brown and kidney shaped?

- (a) sporangia
- (b) sorus
- (c) placenta
- (d) false indusium

10. The sperm of *Riccia*—

- i. monoflagellate
- ii. biflagellate
- iii. multiflagellate

Which one is correct?

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

11. Characteristics of Poaceae—

- i. stem with mucilage
- ii. versatile anther
- iii. spiny pollen

Which one is correct?

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

12. ★ Tuber produces in—

- (a) Chara
- (b) Protosiphon
- (c) Nostoc
- (d) Ulothrix

13. Spore of Pteridophyta—

- i. homosporous
- ii. heterosporous
- iii. filamentous

Which one is correct?

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



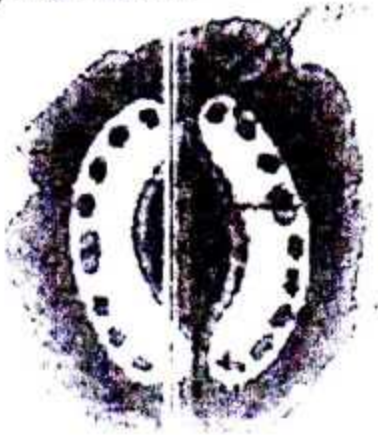
14. Which one is Bacterial disease?

- (a) Dengue
- (b) Hepatitis
- (c) Malaria
- (d) Tetanus

15. Which one has the largest sperm among the plant kingdom?

- (a) Cycas
- (b) Pinus
- (c) Agathis
- (d) Gnetum

Answer question number 16 and 17 from the given stem —



16. According to the theory of Steward opening of above stem control by —

- (a) glucose
- (b) glucose-1 phosphate
- (c) glucose-6 phosphate
- (d) starch

17. In modern concept it will be—

- i.  $K^+$
- ii.  $H^+$
- iii. malic acid

Which one is correct?

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

18. Organelles take part in

Photorespiration —

- i. chloroplast
- ii. mitochondria
- iii. peroxysome

Which one is correct?

- (a) i & ii
- (b) i & iii

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

19. ★ Feathery stigma is present in—

- (a) Pea
- (b) Hibiscus
- (c) Wheat
- (d) Poppy

20. Which meristem helps in increasing girth?

- (a) Primary
- (b) Intercalary
- (c) Lateral
- (d) Apical

21. Pteridophyta plants—

- i. gametophyte
- ii. sporophyte
- iii. have root

Which one is correct?

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

22. ★ Stages of hepatic schizogony—

- i. cryptozoite
- ii. schizont
- iii. amoeboid

Which one is correct?

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

23. ★ Which lichen is leaf like?

- (a) crustose
- (b) fruticose
- (c) laprose
- (d) foliose

24. What type of vascular bundle present in *Dracaena*?

- (a) conjoint
- (b) radial
- (c) leptocentric
- (d) hadrocentric

25. Exarch xylem found in—

- (a) stem
- (b) root
- (c) leaf
- (d) petall

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

1. \* N.B. : Correct Ans is Diplotene.