

# Model Question of SSC Examination 2021 for All Board

## 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. ★ The teacher said in the Biology class that in your book, there is an organelle in the diagrams of animal and plant cells which produces all the necessary energy of the cell and controls it?

- a. What is karyokinesis? 1
- b. Why the meiosis is called reductional cell division? Explain. 2
- c. Describe the structure of the cell organelle which mentioned in the stem with diagram? 3
- d. 'The organelle indicated in the stem plays important role in the life of the organism' – analyze. 4

2. ► In one type of cell division the chromosome number remain equal and in another type of cell division the chromosome number is reduced to half in the newly produced cells. There are some similarities and dissimilarities between both of them.

- a. What is meiosis cell division? 1
- b. Write down the difference between amitosis and mitosis cell division. 2
- c. Draw the labeled diagram of the last three stage of 1<sup>st</sup> type of cell division mentioned in the stem. 3
- d. "The two type of cell divisions mentioned in the stem are essential for the plant life"— Analyze it. 4

3. ► While Kushum was watering the plants during day her younger sister saw it and asked her whether the plants intake water like them. Kushum replied that the plants absorb water and other substance from the soil first and then giving up of water from the aerial parts as water vapour.

- What is osmosis process? 1
- Write down the difference between diffusion and transpiration. 2
- Draw labeled diagram of the organ through which water goes out as vapour. 3
- The later process affects the plants life in what ways? Analyze it. 4

4. ★ Plants needs to take  $\text{CO}_2$  from the air for the process of preparing of food. So a harmful gas of the animals is utilized. Beside plant released  $\text{O}_2$  in the air.

- What is respiration? 1
- Why the diffusion is important for plants life? 2
- Describe the process of plant where above gas is used. 3
- “If the plants can’t take gas which mentioned above stem, the whole living being face a big problem” — analyze. 4

5. ►

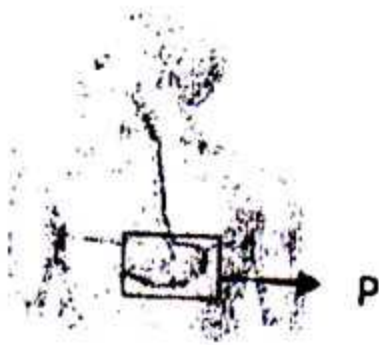


Figure-M

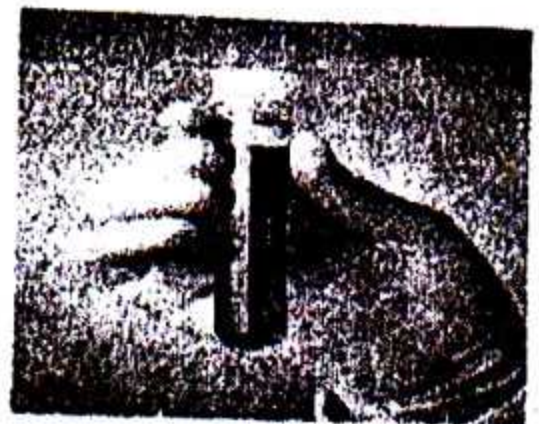


Figure-N (Red coloured)

- a. What is feromen? 1
- b. Why fungi are dependent on other for food? Explain. 2
- c. P-marked organ of Figure-M formed of which muscle? Explain. 3
- d. Figure-N is essential substance for human body — analyze it. 4

6. ★

Name of disease	Symptoms
A	Dopamine producing cells are destroy
B	Excessive thirst & huger, feeling triedness, delayed healing of wound

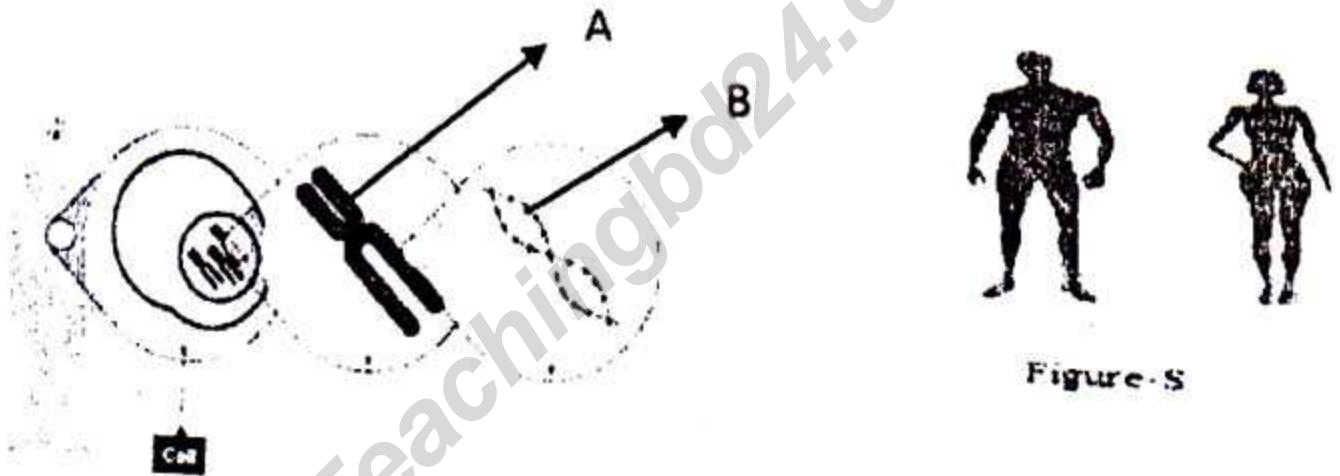
- a. What is implantation? 1
- b. Why Sudden cold breeze cannot do any harm if entered to lungs? Explain. 2
- c. Explain the 'A' mentioned disease in the steam. 3
- d. 'B' mentioned disease usually occured due to hereditary reasons — analyze it. 4

7. ►



- What is essential amino acid? 1
- Why do we cook rice before eating? Explain. 2
- Which of the above ingredients plays a vital role in the growth of our body? Explain. 3
- Between A and B which one is best for the production of energy? Analyze with logic. 4

8. ►



- What is peritendium? 1
- Why is E. coli used as plasmid? Explain. 2
- Explain the structure of B-marked part of mentioned figure. 3
- Analyze the relationship between A-marked part and Figure-S. 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. When Margulis modified the Whittaker's classification?

- (a) 1958
- (b) 1969
- (c) 1974
- (d) 1981

2. Eye piece and objective lenses are attached by which part of the microscope?

- (a) Base
- (b) Arm
- (c) Body tube
- (d) Stage

3. ★ Which colour is called universal colour blind colour?

- (a) Red-Blue
- (b) Red-Green
- (c) Red-Yellow
- (d) Blue-Yellow

4. Kidney become sudden failure because of —

- i. complex nephritis
- ii. hypertension
- iii. diarrhoea

Which one is correct?

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

Read the stem and answer the following questions no 5 and 6.



5. Which secretes from P-marked organ?

- (a) Thyroxine
- (b) Prolactine
- (c) Glucagon
- (d) Estrogen

6. The secretion of P-marked part —

- i. helps in carbohydrate metabolism
- ii. regulate the glucose level in blood
- iii. controls the metabolism of calcium

Which one is correct?

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

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

7. Where is found in neurohumor?

- (a) Neuron
- (b) Nephron
- (c) Synapse
- (d) Spinal cord

8. ★ Cholesterol helps in —

- i. production of adrenaline hormone
- ii. constructing cell membrane
- iii. production of bile

Which one is correct?

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

Read the stem and answer the following questions no 9 and 10.

Mr. X is suffering from headache, vertigo and shoulder pain. He also feels weakness and palpitation. Sometimes bleeding from nose, insomnia, easily tiredness after little exertion.

9. Mr. X attacked by which disease?

- (a) Hert attack
- (b) Hypertension
- (c) Diabetes
- (d) Eclamsia

10. Causes of the above disease is —

- i. mental tension
- ii. family history
- iii. increase of HDL

Which one is correct?

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

11. Which one is the source of calcium?

- (a) banana
- (b) Potatoes
- (c) Apples
- (d) Arum leaves

12. ★ Hepato-pancreatic duct opens into duodenum and carries —

- i. bile
- ii. saliva
- iii. Pancreatic juice

Which one is correct?

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

13. How milligrams calcium should be taken elderly people regularly?

- (a) 1100
- (b) 1200
- (c) 1300
- (d) 1400

14. Which one of the following structures is not found in cytoplasm?

- (a) Golgibody
- (b) Rhibosome
- (c) endoplasmic reticulum
- (d) Chromatin fibre

15. For which one of the following, sunlight is essential?

- (a) Bacteria
- (b) Virus
- (c) Algae
- (d) Fungi

16. Which is the active component of an ecosystem?

- (a) Minerals
- (b) Temperature
- (c) Sunlight
- (d) Living world

17. What is called the irregular fold inside the Mitochondria?

- (a) Lamellae
- (b) Stroma
- (c) Cristae
- (d) Auxisome

18. Which one is found in all types of cell?

- (a) Lysosome
- (b) Rhibosome
- (c) Mitochondria
- (d) Chloroplast

19. In photosynthesis process necessary Hydrogen ions come from where?

- (a) Mineral nutrient
- (b) Carbon dioxide
- (c) Oxygen
- (d) Water

20. Which cell organelle bears genetic material?

- (a) Dictyosome
- (b) Rhibosome
- (c) Chromosome
- (d) Lysosome

21. Characteristics of chloroplast —

- i. covered by three layered membrane
- ii. chlorophyll remain present in the granum disc
- iii. photosynthesis takes place in this organelle

Which one is correct?

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

Read the stem and answer the following questions no 22 and 23.

Urmi planted the plant in tub in her room. Though taking adequate care the plant dies at a time. She brought another same plant and planted in her home yeard, within a few days, flower bloomed.

22. What was the lacking in the first plant?

- (a) Chlorophyll
- (b) Carbon-dioxide
- (c) Light
- (d) Water

23. The correct informaiton about the two plants —

- i. second plant got enought oxygen but the first plant did not
- ii. the rate of photosynthesis is more in comparison of second one with first one
- iii. second plant absorbs more carbon-dioxide than the first one

Which one is correct?

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

24. In photosynthesis process where is the main place?

- (a) In xylem tissue
- (b) In phloem tissue
- (c) In messophyll tissue
- (d) Young branches of stem

25. During photosynthes which of the following is converted to ATP by receiving solar energy?

- (a) ADP
- (b) NADP
- (c) GTP
- (d) AMP

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