

Roll No.

CODE : S1BY1

KENDRIYA VIDYALAYA SANGATHAN, PATNA REGION

SESSION ENDING EXAMINATION, 2017-18

CLASS - XI

311

BIOLOGY

Sl. No.

TIME - 3 HOURS]

[MAX. MARKS - 70

General Instructions :

- (i) There are a total of 26 questions and five sections in the question paper. All questions are compulsory.
- (ii) Section A contains questions number 1 to 5, very short answer type questions of 1 mark each.
- (iii) Section B contains questions number 6 to 10, short answer type questions, and 2 marks each.
- (iv) Section C contains questions number 11 to 22, short answer type questions of 3 marks each.
- (v) Section D contains questions number 23, value based question of 4 marks.
- (vi) Section E contains questions number 24 to 26, long answer type questions of 5 marks each.
- (vii) There is no overall choice in the question paper; however, an internal choice has been provided in one question of 2 marks, one question of 3 marks and three questions of 5 marks.

SECTION - A

1. Give the number of segment from which anal style is attached in male Cockroach. 1
2. What is aestivation in Pea flower ? 1
3. What is peptide bond ? Show it by bond formation ? 1
4. The name of stage of cell cycle in which recombination takes place. 1
5. What is major limiting factor for Photosynthesis ? 1

[Turn Over

SECTION - B

6. Show haplontic and diplontic life cycle with an example. 2
7. Why are bryophytes called as amphibians of the plant kingdom ? 2
8. Write the floral formula of an actinomorphic, bisexual, hypogynous flower with five united Sepals, five free petals, five free stamen and two united carpals with superior ovary and axile placentation. 2

OR

Draw the structure of a maize grain and show Radical and Plumule.

9. What is the difference between root hairs and trichomes ? Mention one function of each. 2
10. What is cell cycle and show all events in pie chart of cell cycle ? 2

SECTION - C

11. Which is the second largest Phylum of animal kingdom ? Write its five most distinguish features. 3
12. What are the major three changes take place during secondary growth in dicot stem ? (Briefly elaborate). 3
13. Define Placentation. Draw the various types of placentation found in angiospermic plants ? 3
14. What are Nucleic acids ? Differentiate between Nucleotide and Nucleoside. Name Nitrogenous bases associated to purine and pyrimidine. 3

OR

What is Enzyme ? What is competitive inhibitor ? Define Apo-enzyme and Coenzyme.

15. Who proposed fluid mosaic model of plasma membrane ? Draw its structure and elaborate in brief. Write its two functions. 3
16. How many molecules of carbon dioxide, ATP and NADPH are required to make one molecule of glucose ? 3
17. Name the plant hormone synthesized at shoot tip. Write their three most important functions. 3

18. Why a plant cell membrane displaced from their original position in hypertonic solution ? Name the event, define and elaborate through labeled diagram. 3
19. What is the first stable product of C_4 cycle ? Write biochemical steps of C_4 cycle. 3
20. (i) Name the gland of human which acts as exocrine as well as endocrine gland.
(ii) Name the hormones secreted by alpha cells and beta cells of this gland.
(iii) What are the functions of these hormones ? 3
21. Explain ultrafiltration, reabsorption and secretion with respect to nephron. 3
22. What is Pacemaker ? How does cardiac impulse act throughout tissues of heart ? 3

SECTION - D

23. A milkman is very upset one day morning as his cow has not given a single drop of milk. At the mean time milkman's wife gets the calf from the shed. On fondling by the calf, the milkman got sufficient milk. Describe the role of endocrine gland and hormone associated with this response with suitable diagram. 4

SECTION - E

24. Give the biochemical steps of Tri-Carboxylic -Acid cycle occurring in Mitochondria with connecting to formation of Acetyl.Co.A. 5

OR

Explain steps of EMP pathway occurring in Cytoplasm.

25. Elaborate the cytological events of all stages of Mitosis. 5

OR

Which cell division occurs in Meioocyte ? Illustrate all phases of Prophase-I of that cell division.

26. How is nerve impulse transmitted across a Non-myelinated nerve fibre ? Explain through diagram. 5

OR

What is Synapse ? Name neuro-transmitter compound. Explain the process of the formation of chemical Synapse.

