



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL



TERM-I EXAMINATION 2025-26

BIOLOGY (044)

SET-II

Class: XI

Date: 09/09/2026

Admission no:

General Instructions:

Duration: 3 Hours

Max. Marks:70

Roll no:

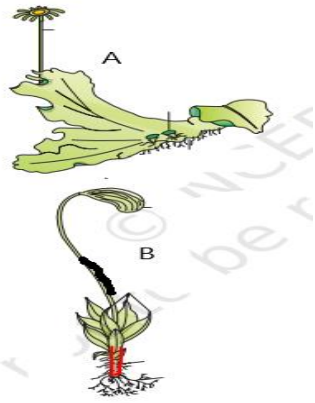
- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions.
- (iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section– C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
- (iv) There is no overall choice. Answer all 33 questions. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labeled diagrams should be drawn.

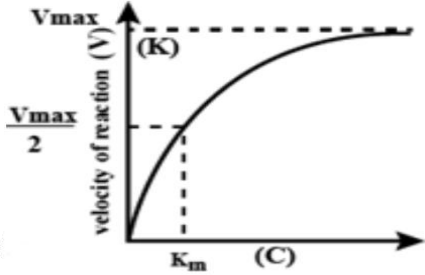
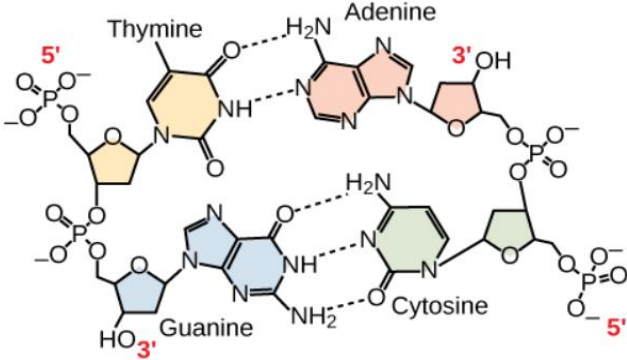
SECTION-A

Q. No. 1 to 12 are multiple choice questions. Only one of the choices is correct. Select and write the correct choice as well as the answer to these questions.

Q.no	Question	Marks
1.	Asthma is characterised by: (a) Wheezing due to inflammation of bronchi and bronchioles. (b) Inhibition of respiratory centre (c) Accumulation of fluid in lungs (d) Spasm of muscles of trachea	1
2.	How do frogs respire on land? a) Cutaneous respiration b) Pulmonary respiration only c) Buccal cavity d) cutaneous respiration, Pulmonary respiration and Buccal cavity	1
3.	<i>Plasmodium</i> causes (a) sleeping sickness (b) cholera (c) malaria (d) food poisoning	1
4.	<i>Albugo</i> belongs to which of the following group of Fungi ? (a) Deuteromycetes (b) Phycomycetes (c) Ascomycetes (d) Basidiomycetes	1
5.	The organic compounds that are associated with the apoenzyme transiently are known as: A. Co – factors B. Holoenzyme C. Prosthetic group D. Co-enzyme	1
6.	Example of the smallest angiosperm is _____. A. <i>Porphyra</i> B. <i>Fucus</i> C. <i>Rafflesia</i> D. <i>Wolffia</i>	1
7.	In <i>Mangifera indica</i> , first and second words stand for, respectively (a) genus, generic name (b) specific epithet, species (c) generic name and specific name (d) specific name and generic name	1
8.	During anaphase-II of meiosis-II	1

	a. Homologous chromosomes separate b. Non-homologous autosomes separate c. Sister chromatids separate d. Non-sister chromatids separate	
9.	Select the correct statement about S phase a. Cell is metabolically inactive b. DNA in the cell replicates c. It is not a phase of synthesis of macromolecules d. Cell stops growing	1
10.	Choose the wrongly matched pair: a) Chloroplast- semiautonomous organelle b) Mitochondrion- site of oxidative phosphorylation c) Centriole- (9+2) array of microtubules d) Axoneme-core of eukaryotic flagella	1
11.	Oxygen combines with haemoglobin to form (a) Carboxy haemoglobin (b) Carbamino haemoglobin (c) Oxyhaemoglobin (d) Amino haemoglobin	1
12.	The term 'species' was coined by (a) Theophrastus (b) Linnaeus (c) Aristotle (d) John Ray	1
	Question No. 13 to 16 consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below: A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, and R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.	
13.	Assertion (A): Tadpole undergoes metamorphosis. Reason(R): They are poikilotherms.	1
14.	Assertion (A): Meiosis produces four cells which are genetically different Reason (R): Crossing over and disjunction of homologous chromosomes occurs in Prophase-I.	1
15.	Assertion (A): TMV is a virus which causes mosaic disease. Reason: TMV has RNA as genetic material.	1
16.	Assertion: Few protists are prokaryotic. Reason: Protists possess true nucleus and membrane bound cell organelles.	1
	<u>SECTION-B</u>	
17.	Attempt either option A or B. A.(i) List out the major difference between dicots and monocots. (ii) What is alternation of generation? Explain. OR B.(i) Name the four main classes of Pteridophyta.	2
18.	Why is interphase so called "Resting stage" a misnomer?	2
19.	Explain the structure of lecithin.	2
20.	Compare fore-limbs and hind limbs of frog. State the significance of a special feature present in male frog .	2
21.	(i) Write down the consequence if cytokinesis do not occur during mitosis. Give an example.	2

	(ii) Describe the difference between plant and animal cell mitosis.	
	<u>SECTION-C</u>	
22.	A. What does ICZN stands for? B. Reproduction is not the defining characteristic of living organisms. Justify.	3
23.	Write the steps of sexual cycle in kingdom fungi.	3
24.	i) What are kelps? ii) In which plant mycorrhiza and coralloid roots are present? Also, explain what these terms mean.	3
25.	a) Distinguish between IRV and ERV. b) What is the role of the enzyme in the transport of CO ₂ during respiration?	3
26.	A. What is interkinesis? What is the average cell cycle span for a mammalian cell? B. Differentiate between acrocentric and telocentric chromosomes. C. What is the significance of nucleolus?	3
27.	Attempt either option A or B. A. (a) The following events occur during the various phases of the cell cycle. Name the phase against each of the events. (i) Chromosomes are moved to spindle equator. (ii) Centrosome splits and chromatids separate. (iii) Pairing between homologous chromosomes takes place. (iv) Formation of nuclear membrane (b) How does movement of chromosome occur during mitotic phase? OR B. (i) Differentiate between the events of mitosis and meiosis. (ii) An organism has four pair of chromosomes (i.e., chromosome number = 8). Diagrammatically represent the chromosomal arrangement during different phases of meiosis II.	3
28.	A. What are secondary metabolites? Give any two examples. B. Explain the quaternary structure of protein with the help of an example. C. What is the role of ligases?	3
	<u>SECTION-D</u>	
29.	a) Draw male reproductive system of frog. b) What is the role of bidder's canal and cloaca? c) How is fertilization takes place in frogs ?	4
30.	 A. Distinguish between A and B. B. Give the economic importance of sphagnum and algin.	4

	<u>Attempt either subpart C or D.</u> C. Explain the two phases of life cycle of B shown in the above figure. OR D. Give two examples of heterosporous pteridophytes.	
	<u>SECTION-E</u>	
31.	Attempt either option A or B. A. Study the graph given and answer the questions that follow:  (i) a) Explain the lock and key method of enzyme action with the help of diagram. b) Mention two factors affecting enzyme activity. c) What are co-factors? OR B.i) What is the function of enzyme ligase? ii) Why does the reaction, after reaching V_{max} does not further increase after increasing substrate concentration? iii) Give one example of competitive inhibition.	5
32.	Attempt either option A or B. A. Study the diagram given below and answer the questions that follow:  (i) Name the three bonds involved in the above diagram. (ii) What is the polarity/direction of the two stands of the DNA. (iii) Name pyrimidines bases from diagram. (iv) What is the difference between the structure of RNA and DNA ? OR B. Explain the phases of Prophase I of meiosis I.	5
33.	Describe, how the respiratory gases are exchanged between the blood and the alveolar air? OR With the help of a diagram, explain the human respiratory system.	5

*****ALL THE BEST*****