



BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
PERIODIC TEST-II 2024-25
CLASS-XI
BIOLOGY (044)



Date: 02/12/2024

Max. Marks: 25

General Instructions:

- This question paper consists of 12 questions in 3 sections.
- Section A consists of 3 objective type questions carrying 1 mark each.
- Section B consists of 5 Very Short questions carrying 02 marks each.
- Section C consists of 4 Short Answer type questions carrying 03 marks each.

Section A

- Interkinesis is present between: 1
 - Meiosis-I and meiosis-II
 - Telophase-I and prophase-II
 - Prophase-I and prophase-II
 - None of these.
 - When O₂ is released as a result of photosynthesis, it is a direct by-product of: 1
 - Splitting of water molecules
 - Chemiosmosis
 - The electron transfer system of PS-I
 - The electron transfer system of PS-II
- Question No. 3 consists of Assertion (A) and Reason (R). Answer this question by selecting the appropriate option given below: 1
- 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.
3. Assertion (A) : Fermentation is the incomplete oxidation of glucose into ethyl alcohol or ethanol.
Reason (R): Fermentation occur in prokaryotes only.

Section B

- Calculate the respiratory quotient for the following reactions: 2
 - $$C_6H_{12}O_6 + 6O_2 \longrightarrow 6CO_2 + 6H_2O + \text{Energy}$$
 - $$2(C_{51}H_{98}O_6) + 145O_2 \longrightarrow 102CO_2 + 98H_2O + \text{energy}$$
- Distinguish between 2
 - Light and Dark reactions.
 - Cyclic photo-phosphorylation and non- cyclic photo-phosphorylation.
- How does cytokinesis in plant cells differ from that in animal cells? 2
- Why is mitosis called equational division? 2
- What are respiratory substrates? Name the most common respiratory substrate. 2

OR

What are the main steps in aerobic respiration? Where does it take place?

Section C

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| 9. Give the schematic representation of glycolysis? | 3 |
| 10. Explain electron transport chain. | 3 |
| 11. Explain the Hatch and Slack pathway diagrammatically. | 3 |
| 12.i) Can there be DNA replication without cell division? | 3 |
| ii) What is the significance of meiosis? | |
| iii) What is chiasmata? | |

OR

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| iii) What is the synaptonemal complex? | |
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*** Best of luck***