

Total Time: 3:00 HoursBiology (9th)Total Marks: 53

(Full Course)

"Section - B"Marks: 32

Q-2. Write short answers to any eight (8) of the following parts. All parts carry equal marks:-

- (i) Why biologist career as agriculturalist is important? Give FOUR reasons
- (ii) With the help of diagram shows structure of virus.
- (iii) Write contribution of Jean Baptist de-Lamark in cell biology.
- (iv) Describe the structure of cells of epidermal tissues in plants.
- (v) Define cell cycle and write names of its TWO main stages.
- (vi) What are TWO differences and TWO similarities between mitosis and meiosis?
- (vii) Briefly explain the mechanism of enzyme action. Also write names of two models of enzyme action.
- (viii) Differentiate between TWO steps of alcoholic fermentation.
- (ix) Column A contains some properties of fats. Write their answer in column B.

| Column A | Column B |
|------------------|----------|
| Elements of fats | |
| Main sources | |
| Energy value | |
| Metabolic value | |

- (x) Define stomata. How transpiration take place in stomata?
- (xi) How oxygenated blood is transported from lung to heart?

"Section - C"Marks: 21

Note: Answer any three (3) questions. All questions carry equal marks:-

- Q-3. (a) How does do scientists collect and organize their data?
(b) Enlist some serious threat faced by Indus river dolphin.
- Q-4. (a) Write down any FOUR characteristics features of prokaryotic cell.
(b) With the help of late prophase diagram indicate position of spindle fiber.
- Q-5. (a) How some enzymes work in complex metabolic reactions?
(b) Explain Krebs cycle with reference to its discovery, occurrence and series of reactions.
- Q-6. (a) Write down any THREE advantages of inorganic fertilizers.
(b) Write any FOUR differences between vein and capillary with reference to their structure.