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BPHARM
(SEM VIII) THEORY EXAMINATION 2024-25
CELL AND MOLECULAR BIOLOGY

TIME: 3 HRS

M.MARKS: 75

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief.

10 x 2 = 20

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| a. | Define genetics. |
| b. | What are the functions of DNA? |
| c. | What do you mean by transgenic? |
| d. | Give a suitable example to illustrate how RNA works. |
| e. | Enlist the function of tRNA and rRNA. |
| f. | Distinguish between mitosis and meiosis. |
| g. | Distinguish between prokaryotes and eukaryotes. |
| h. | Give brief introduction of molecular biology. |
| i. | Differentiate between active and passive transport across cell membrane |
| j. | Write the properties of cells. |

SECTION B

2. Attempt any *two* parts of the following:

2 x 10 = 20

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| a. | Explain the cell cycle analysis in detail. Highlight the check points in cell cycle. |
| b. | Describe the characteristics of the cell membrane and cellular reproduction in details. |
| c. | Describe the cell signals and explain the receptors for cell signals |

SECTION C

3. Attempt any *five* parts of the following:

7 x 5 = 35

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| a. | Discuss the types and function of protein kinase. |
| b. | What about the translation and transcription? |
| c. | Discuss DNA and the transfer of molecular information. |
| d. | Describe the importance of protein synthesis and the positive control. |
| e. | Review the protein pathway's regularities. |
| f. | Discuss the GPCR mechanism of cell signaling. |
| g. | What different cellular activities are there? Describe each checkpoint |