

C069

Total Pages : 3

Roll No.

MBOT-601

Cell Biology and Genetics

M.Sc. BOTANY (MSCBOT)

3rd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 40

Note : This paper is of Forty (40) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Ten (10) marks each. Learners are required to answer any Two (02) questions only.

(2×10=20)

1. Write an essay on Plasma membrane.
2. Discuss the morphology of chromosome and its chemical composition.

3. Explain Watson-Crick model of DNA. Write a note on DNA replication.
4. Write an essay on genetic code.
5. Mention various types of numerical aberration in chromosomes.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Five (05) marks each. Learners are required to answer any Four (04) questions only. (4×5=20)

1. Discuss briefly the structure of mitochondria with the help of labelled diagram.
2. In context to Chromosomal aberrations, describe Deletion and Duplication briefly.
3. Write short notes on (any *five*) :
 - (a) Somatic and Germinal mutation.
 - (b) Spontaneous and induced mutation.
 - (c) Nonsense mutation.
 - (d) DNA.
 - (e) Fluorescent microscopy.

- (f) Chemical mutagens.
 - (g) Mismatch repair.
4. Discuss ABO blood types in Humans.
 5. Differentiate between Incomplete Dominance and Codominance.
 6. Describe briefly the process of transcription and translation.
 7. Describe briefly the process of conjugation.
 8. Write a short note on Lampbrush chromosome.
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