

C 63021

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Name

Reg. No.

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2019

(CUCSS)

Botany

BO 02 CT 05—CELL BIOLOGY, MOLECULAR BIOLOGY, AND BIOPHYSICS

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

1. Answer the questions very briefly (14 x 1 = 14 weightage, Grades : A, B, C, D, E) :
 - 1 What are Chaperons ?
 - 2 Comment on C value paradox.
 - 3 What are hnRNA ?
 - 4 Write notes on Nucleosomes.
 - 5 Comment on Satellite DNA.
 - 6 What is meant by Lyophilisation?
 - 7 Define pH.
 - 8 What are Oncogenes ?
 - 9 State the significance of Metastasis.
 - 10 Define Beer Lambert's Law.
 - 11 What is RIA ?
 - 12 Write notes on Silencers.
 - 13 Define an operon.
 - 14 Write a note on Autoradiography.
11. Answer the *seen -questions* in not more than 100 words each (7 x 2 = 14 weightage, Grades A, B, C, D, E)
 - 15 Differentiate euchromatin and heterochromatin.
 - 16 Explain primosome and replisome.
 - 17 Explain molecular mechanism of cellular differentiation.
 - 18 What is the principle of chromatography ?
 - 19 Write a brief account on the applications of molecular phylogenetics.

Turn over

20 Describe the structure of IgG.

21 Explain agarose gel electrophoresis.

22 What are the functions of buffers in biological system ?

23 What are the different stages of interphase ?

24 What is crossing over ? During which phase of meiosis does this event occur ?

HI. Answer any *two* questions in not more than 300 words each (2 x 4 = 8 weightage, Grades : A, B, C, D, E) :

25 Write an account on the gene regulation. Illustrate your answer with lac operon.

26 What are mutations ? Classify the different types of mutations.

27 Define Centrifugation. What are the different types of centrifuges ? Mention its applications.

28 Explain cell cycle. Mention its significance.