

বিদ্যাসাগর বিশ্ববিদ্যালয় VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2022

(Under CBCS Pattern)
Semester - IV

Subject: BOTANY

Paper: C8-T

Molecular Biology

Full Marks: 40
Time: 2 Hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

1. Answer any four of the following questions:

 $5 \times 4 = 20$

- (a) Differentiate B-DNA and Z-DNA.
- (b) State the significance of gene silencing.
- (c) Why RNA primer is mandatory for DNA replication?
- (d) Explain Cot curve with suitable illustration.
- (e) How does Griffith's experiment prove DNA as genetic material?
- (f) State main features of genetic code with exception.

P.T.O.

2. Answer any two of the following questions:

 $10 \times 2 = 20$

- (a) Describe the structure of nucleosome with suitable illustrations.
- (b) Describe the negative control of lactose operon.
- (c) Give an account of Watson and Crick's double stranded molecule of DNA. State the function of kinetochore. 8+2

(d) Describe the various steps of elongation and termination of translation in prokaryotes.