

AQ - 989

**Third Semester M. Sc. - II (CBCS)
Examination**

ZOOLOGY

Paper - XI

(Elective - Paper - I)

Molecular Biology - I

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) All questions are compulsory.
(2) Illustrate your answers with suitable diagrams wherever necessary.
(3) All questions carry equal marks.

1. Give an account of the followings :—

- (a) Prokaryotic RNA Polymerase.
- (b) Post transcriptional gene silencing.
- (c) Termination of prokaryotic DNA replication.
- (d) Regulatory elements.

OR

- (e) Initiation of prokaryotic DNA replication.
- (f) Structural organization of lac operon.

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- (g) General transcriptional factors.
- (h) RNA Polymerase – II.

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2. Explain the followings :—

- (i) Genetic code.
- (j) 5' cap formation in m-RNA.
- (k) Polyribosome formation.
- (l) Nuclear export of m-RNA.

OR

- (m) 3' – end processing and polyadenylation.
- (n) Initiation of eukaryotic translation.
- (o) Editing of m-RNA.
- (p) Termination of prokaryotic translation.

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3. Give an account of the followings :—

- (q) Inhibition of splicing.
- (r) Application of antisense technology.
- (s) Yellow Fluorescent proteins.
- (t) Hammer head ribozyme.

OR

- (u) Red fluorescent proteins.
- (v) Applications of ribozyme technology.
- (w) Hairpin ribozyme.
- (x) Inhibition of Polyadenylation.

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4. Give an account on protein engineering.

OR

Describe the protein biochips contents and its application.

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5. Give an account on target validation – in drug designing.

OR

Give an account on clinical trials.

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