

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc./IMSC, Winter 2019-20 Examination

Semester: 1/7
Subject Code: 11202103
Subject Name: Molecular Biology

Date: 29/11/2019
Time: 10:30am to 1:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Brief note (4x2) (Each of 04 marks) (08)**
(a) Short note on Organization of bacterial genome.
(b) Short note on Matrix binding proteins.
- Q.1. B) Answer the following questions (Any two)**
(a) Short note on Cot curve analysis. (04)
(b) Short note on role of Satellite DNA. (04)
(c) Short note on Euchromatin. (04)
- Q.2. A) Essay type.**
Explain Replication initiation, elongation and termination in prokaryotes (08)
- Q.2. B) Answer the following questions (Any two)**
(a) Short note on Replication of single stranded circular DNA. (03)
(b) Short note on SOS repair. (03)
(c) Short note on Nucleotide excision repair (03)
- Q.3. A) Essay type** Discuss lac operon and trp operon in detail. . (08)
- Q.3. B) Answer the following questions (Any two)**
(a) Discuss RNA polymerase: structure and assembly (04)
(b) Explain initiation of translation. (04)
(c) Short note on Protein turnover and degradation (04)
- Q.4. A) Answer the following questions.**
(a) Brief note (2x2) (Each of 02 marks) (04)
1. Define promoter and enhancer.
2. Define Activators and repressors
(b) Explain Degeneracy of codons. (04)
- Q.4. B) Answer the following questions (Any two)**
(a) Short note on 5'-Cap formation. (03)
(b) Short note on RNA Splicing. (03)
(c) Short note on RNA editing. (03)