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BG—19—2016

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(Revised Course)

BIOTECHNOLOGY

Paper (BTT-3.3)

(Molecular Biology)

(Wednesday, 23-11-2016)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—80

N.B. :— (i) All questions are compulsory.

(ii) Draw diagrams wherever necessary.

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|----|-----|---|----|
| 1. | (a) | Explain in detail regulation of transcription in prokaryotes. | 10 |
| | (b) | Describe Eukaryotic DNA replication. | 10 |
| 2. | (a) | Write in detail prokaryotic transcription. | 8 |
| | (b) | Write a note on structure of RNA polymerase. | 7 |
| | | <i>Or</i> | |
| | (a) | Explain the mechanism of initiation of Eukaryotic translation. | 8 |
| | (b) | Discuss the properties of Genetic Code. | 7 |
| 3. | (a) | Write a note on photoreactivation. | 8 |
| | (b) | Discuss RNA-5' capping. | 7 |
| | | <i>Or</i> | |
| | (a) | Write a note on role of <i>mRNA</i> , <i>rRNA</i> and <i>tRNA</i> . | 8 |
| | (b) | Write a note on polyadenylation. | 7 |
| 4. | (a) | Write a note on tryptophan operon. | 8 |
| | (b) | Discuss arabinose operon. | 7 |

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Or

- (a) Discuss Co & Post translation modifications in proteins. 8
- (b) Write a note on properties of DNA. 7
5. Write short notes on (any *three*) : 3×5=15
- (a) Structure of DNA
- (b) SOS
- (c) DNA Polymerase
- (d) mRNA
- (e) Promoters.

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