SH-III/Microbiology-303C-7(T)/19

B.Sc. Semester III (Honours) Examination, 2018-19

MICROBIOLOGY

Course ID : 32203 **Course Code : SHMCB-303C-7(T)**

Course Title: Molecular Biology

Time: 1 Hour 15 Minutes **Full Marks: 25**

The figures in the margin indicate full marks.

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

Answer all *the questions.*

1. Answer *any five* of the following: 1×5=5

(a) What is Z DNA?

(b) Define Replicon.

(c) What is attenuation?

(d) What do you mean by linking number?

(e) State the function of peptidyl transferase enzyme.

(f) What are Oka Zaki fragments?

(g) Define reverse transcription.

(h) What is Kozak sequence?

2. Answer *any two* of the following: 5×2=10

(a) What do you mean by mutation? Write a short note on mismatch repair. 1+4=5

(b) Discuss briefly about the general characteristics of genetic code. Name any one inhibitor of translation with its mode of action. 4+1=5

(c) Differentiate between prokaryotic and eukaryotic transcription. What is an ORF? 4+1=5

(d) Write a short note on mRNA splicing. Define spliceosome. 4+1=5

3. Answer *any one* from the following: 10×1=10

(a) Briefly describe the process of DNA replication in *E. Coli*. What do you mean by semiconservative mode of replication? 8+2=10

(b) Differentiate RNA polymerase of prokaryot and eukaryot. Write in detail about the initiation, elongation and termination of translation process in prokaryotes with suitable diagrams. 3+7=10

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