PG – 528

V Semester B.Sc.-M.Sc. (Integrated Course) Degree Examination, Dec. 2017/Jan. 2018
(CBCS)
BIOLOGICAL SCIENCES
IBS – 501 : Molecular Biology

Time : 3 Hours Max. Marks : 70

***Instruction** : Illustrate **wherever** necessary.*

SECTION – A

I. Explain/define **any ten** of the following in **three** to **five** sentences : **(10×2=20)**

1) a) Central Dogma of Molecular Biology
   b) Centromere
   c) B-DNA
   d) rRNA
   e) DNA Helicase
   f) Photoreactivation
   g) RNA polymerase
   h) Leucine Zippers
   i) Nonsense codon
   j) Signal Recognition Particle
   k) Promoter
   l) Lysogenic repression.

SECTION – B

II. Write critical notes on **any four** of the following : **(4×5=20)**

2) DNA as the genetic material.
3) *C.elegans* as a model organism.
4) Modes of DNA replication.

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5) Transcription factors.
6) Wobble hypothesis
7) Tryptophan Operon
8) DNA polymerase.

SECTION – C

III. Answer **any two** of the following : **(2×15=30)**

9) Explain the different DNA repair mechanisms.
10) Describe the post-transcriptional modifications of pre-mRNA.
11) Give a detailed account of protein sorting and targeting.
12) Explain the structural organization of eukaryotic chromosome.