



**TARGET : NEET (UG) 2024**

**Course : SARANSH (Youtube Live CRASH COURSE)**

**BIOLOGY**

**DPP**

**DAILY PRACTICE PROBLEMS**

**DPP NO. 2**

**BOTANY : MOLECULAR BASIS OF INHERITANCE**

**DPP No. : 2**

- DNA- dependent RNA polymerase catalyzes transcription on the strand of the DNA which is called the
  - Antistrand
  - Template strand
  - Coding strand
  - Alpha strand
- AGGTATCGCAT is a sequence from the coding strand of a gene. What will be the corresponding sequence of the transcribed mRNA ?
  - AGGUAUCGCAU
  - UCCAUAGCGUA
  - ACCUAUGC GAU
  - UGGTUTCGCAT
- The experimental proof for semiconservative replication of DNA was first shown in a
  - Fungus
  - Virus
  - Plant
  - Bacterium
- Match the following genes of the Lac operon with their respective products
 

(a) i gene	(i) $\beta$ -galactosidase
(b) z gene	(ii) Permease
(c) a gene	(iii) Repressor
(d) y gene	(iv) Transacetylase

Select the correct option.

	(a)	(b)	(c)	(d)
(1)	(iii)	(iv)	(i)	(ii)
(2)	(i)	(iii)	(ii)	(iv)
(3)	(iii)	(i)	(ii)	(iv)
(4)	(iii)	(i)	(iv)	(ii)
- From the following, identify the correct combination of salient features of Genetic Code
  - Universal, Non-ambiguous, Overlapping
  - Degenerate, Overlapping, Commaless
  - Universal, Ambiguous, Degenerate
  - Degenerate, Non-overlapping, Non ambiguous

6. In the process of transcription in Eukaryotes, the RNA polymerase I transcribes –
- (1) mRNA with additional processing, capping and tailing
  - (2) tRNA, 5 S rRNA and snRNAs
  - (3) rRNAs - 28 S, 18 S and 5.8 S
  - (4) Precursor of mRNA, hnRNA
7. Which is the basis of genetic mapping of human genome as well as DNA finger printing
- (1) Polymorphism in DNA sequence
  - (2) Single nucleotide polymorphism
  - (3) Polymorphism in hnRNA sequence
  - (4) Polymorphism in RNA sequence
8. What is the role of RNA polymerase III in the process of transcription in eukaryotes ?
- (1) Transcribes tRNA, 5s rRNA and snRNA
  - (2) Transcribes precursor of mRNA
  - (3) Transcribes only snRNAs
  - (4) Transcribes rRNAs (28S, 18S and 5.8S)

9. Match List-I with List-II :

List-I		List-II	
(a)	Bacteriophage $\phi \times 174$	(i)	48502 base pairs
(b)	Bacteriophage Lambda	(ii)	5386 nucleotides
(c)	Escherichia coli	(iii)	$3.3 \times 10^9$ base pairs
(d)	Haploid content of Human DNA	(iv)	$4.6 \times 10^6$ base pairs

Choose the correct answer from the option given below:

- (1) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)
  - (2) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)
  - (3) (a) - (ii), (b) - (i), (c) - (iv), (d) - (iii)
  - (4) (a) - (i), (b) - (ii), (c) - (iv), (d) - (iii)
10. Which is the "Only enzyme" that has "Capability" to catalyse initiation, Elongation and Termination in the process of transcription in prokaryotes
- (1) DNA dependent RNA polymerase
  - (2) DNA ligase
  - (3) DNase
  - (4) DNA dependent DNA polymerase