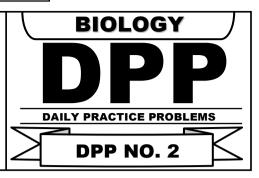


TARGET: NEET (UG) 2024

Course: SARANSH (Youtube Live CRASH COURSE)



BOTANY: MOLECULAR BASIS OF INHERITANCE

DPP No.: 2

1.	DNA- dependent RNA polymerase	catalyzes transcription on the strand of the DNA which is called the
	(1) Antistrand	(2) Template strand

(3) Coding strand (4) Alpha strand

- **2.** AGGTATCGCAT is a sequence from the coding strand of a gene. What will be the corresponding sequence of the transcribed mRNA?
 - (1) AGGUAUCGCAU (2) UCCAUAGCGUA (3) ACCUAUGCGAU (4) UGGTUTCGCAT
- 3. The experimental proof for semiconservative replication of DNA was first shown in a
 (1) Fungus (2) Virus (3) Plant (4) Bacterium
- 4. Match the following genes of the Lac operon with their respective products
 - (a) i gene (i) β-galactosidase
 - (b) z gene (ii) Permease
 - (c) a gene (iii) Repressor
 - (d) y gene (iv) Transacetylase

Select the correct option.

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



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- 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 ¢x 174	(i)	48502 base pairs
(b)	Bacteriophage Lambda	(ii)	5386 nucleotides
(c)	Escherichia coli	(iii)	3.3 × 10 ⁹ base pairs
(d)	Haploid content of Human DNA	(iv)	4.6 x 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