Roll No._____.

The H. N. S. B. Ltd. Science College, Himatnagar

Internal Examination September/October - 2016

B.Sc. Sem-5 **Subject: MICROBIOLOGY** **Date: 26/9/2016**

Marks: 40 **Time: 1½ hr**

Paper : CC- MI -501 MOLECULAR BASIS OF MICROBIAL GENETICS

Part –A answer any **five** of following. [05]

Q.1 The gene has been variously considered as a unit of function is called

(a) Recon (b) Muton

(c) Cistron (d) None of the above

Q.2 Find out mismatch one

(a) UAA (b) UAG

(c) GUG (d) UGA

Q.3 Which promoter sequence is known as "Pribnow box"

(a) -10 *sequence* (b) -35 *sequence*

(c) -25 *sequence* (d) -75 *sequence*

(Match the appropriate pair: Q.4 to Q.6)

Q.4 DNA Polymerase - [i] DNA unwinding protein

Q.5 DNA helicase - [ii] formation of negative supercoils of DNA

Q.6 SSBPs - [iii] covalent addition of nucleotides

- [iv] stabilize the extended single stranded template

- [v] recognition and binding in transcription

PART-B Answer any **five** of following. [05]

Q.7 Give contribution of Watson and Crick.

Q.8 Give Contribution of Meselson and Stahl.

Q.9 Explain term "Central Dogma".

Q.10 What is nucleotide?

Q.11 Define: Mutation

Q.12 Define: locus

Q.13 Give examples of pyrimidines

PART-C Answer any **three** of the following. [06]

Q.14 Explain Chargaff's rule

Q.15 Explain Palindromic DNA.

Q.16 What is overlapping genes?

Q.17 Explain initiation codons.

Q.18 Draw structure of purines.

PART-D Answer any **four** of the following. [12]

Q.19 Give components of transcription.

Q.10 *Rho dependent* termination of transcription.

Q.21 Types of DNA

Q.22 Explain Wobble nature of genetic code.

Q.23 Photoreactivation: a repair mechanism.

Q.24 Describe RNA polymerase and its function.

PART-E Answer any **two** of the following. [12]

Q.25 Discuss the Rolling circle model of DNA replication.

Q.26 Explain initiation and elongation in transcription.

Q.27 Describe in detail steps of protein synthesis.

Q.28 What is operon? Discuss about *lac operon*.

-: Best of Luck :-