

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

**Subject Name :** Genetics

**Subject Code :** 4LS03MBO1/4SC03GEN1

**Branch :** B.Sc(Life Science)

**Semester :** 3

**Date :** 8/12/2015

**Time :** 2:30 To 5:30

**Marks :** 70

**Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(14)</b>
	a) Define genetics and gene.	1
	b) Define Reverse transcription.	1
	c) Define Codone.	1
	d) Define operon.	1
	e) Define translation.	1
	f) Define mycophage.	1
	g) Define traits.	1
	h) What is central dogma?	1
	i) State the law of Dominance.	1
	j) What is Product law?	1
	k) What is difference in genotypes and phenotypes?	1
	l) What are SSB proteins?	1
	m) What is role of cro gene	1
	n) Define replication	1
<b>Q-2</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	What is Law of Dominance? Explain with example	7
<b>B</b>	Explain replication fork formation in DNA replication with diagram	7
<b>Q-3</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	What is law of Independence assortment? Explain with example	7
<b>B</b>	Explain Structure of DNA in detail with diagram	7



<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Explain DNA as genetic material by Griffith's experiment and Hershey- Chase's experiment	<b>7</b>
<b>B</b>	Explain various models of DNA replication.	<b>7</b>
<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Explain all types of RNA in detail.	<b>7</b>
<b>B</b>	Explain Initiation in transcription with diagram	<b>7</b>
<b>Q-6</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	What are Bacteriophage? Explain lytic cycle with diagram	<b>7</b>
<b>B</b>	Explain Conjugation in detail	<b>7</b>
<b>Q-7</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Explain types of mutations in detail	<b>7</b>
<b>B</b>	Explain Transformation in detail	<b>7</b>
<b>Q-8</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Explain Viroids in detail.	<b>7</b>
<b>B</b>	Explain lytic and lysis cycle control in Lamda Phage with diagram	<b>7</b>

