



GR-2253

Seat No. _____

B.Sc. (Biotechnology) (Sem. - I)

Examination

November / December - 2013

**CBT- I : Introduction to Biotechnology
& Cell Biology**

Time : 3 Hours]

[Total Marks : 70

- 1 MCQ type questions (one mark each) 10
- (1) *Bacillus thuringiensis* is used for
- (a) Petroleum recovery
 - (b) Production of Vaccines
 - (c) Recovery of metals
 - (d) Pest Control
- (2) Yeast is a
- (a) Bacteria
 - (b) Fungi
 - (c) Virus
 - (d) Algae
- (3) In dark field Microscopy, object is _____?
- (a) Dark
 - (b) Bright
 - (c) Normal
 - (d) White
- (4) Magnification of 10X ocular with 45X objective lens -
- (a) 4500
 - (b) 450
 - (c) 45
 - (d) 55
- (5) Bacterial cell wall is made up of
- (a) Chitin
 - (b) Pectin
 - (c) Peptidoglycan
 - (d) Cellulose
- (6) Which of the following organelle is enclosed by single membrane ?
- (a) Mitochondria
 - (b) Chloroplast
 - (c) Nucleus
 - (d) Lysosome

- (7) The term 'cell' was coined by
 (a) Robert Brown (b) Robert Hook
 (c) Lancmarck (d) Pasture
- (8) Mitosis occurs in which cell
 (a) Sperm cells (b) Somatic cell
 (c) Egg cell (d) None of the above
- (9) Nuclei were first discovered and named by
 (a) Bowman (b) Robert Brown
 (c) Camilo Golgi (d) Selman Walksman
- (10) How many pairs of chromosomes are in human epithelial cells ?
 (a) 23 (b) 46
 (c) 22 (d) 24

2 Answer any five questions : (two marks each) 10

- (1) Give examples of various branches of Biotechnology.
- (2) Define Biotechnology.
- (3) List out various eukaryotic cell organelles.
- (4) What is the difference between mitosis and meiosis ?
- (5) Write two functions of cell membrane.
- (6) What are the dormant stages of bacterial cell ?
- (7) Define 'Endosytosis'.

3 Answer any four questions : (eight marks each) 32

- (1) Explain in detail Biofertilizers.
- (2) Explain structure of Gram Positive Bacteria.
- (3) Describe Ultra Structure of Flagella.
- (4) Ultra structure of Mitochondria.
- (5) Explain Cell Cycle.

4 Answer any **two** questions : (**nine** marks each) 18

- (1) What is Biotechnology ? Explain Application of Biotechnology in field of medicine.
 - (2) Write about Dark field Microscope with its significance.
 - (3) Explain structure and types of chromosome.
 - (4) Explain in detail Meiosis with its significance.
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