



Name:

Section:

ID:

Course name: Bio103 Semester:

Date:

**Midterm**

**Marks: 15. Time: 1 hour 20 minutes**

**Answer any 3 out of 5 subjective questions (Please do not answer more than three questions, negative marking will be enable for extra question answering.)**

**Subjective Questions:**

**3 × 5 = 15**

1. Describe the structure of nucleotide. Explain how variation of an organism affects its chance of survival. (2.5+2.5)
2. What are the important functions of protein? How carbon dating helps to assume the age of an ancient organic compound? (2.5+2.5)
3. Compare Diffusion and osmosis. Describe how your body makes antibodies by decoding the code of DNA. (2+3)
4. Write the significant differences between Prokaryotic and Eukaryotic cells. Why gametes (Sperm & Ovum) contain haploid number of chromosomes? (2.5+2.5)
5. Write short notes on : (2.5+2.5)
  - a) Cell cycle (Interphase)
  - b) Ionic bond with example

**Bonus Questions:**

**1.5**

**In the light microscope below of dividing cells near the tip of an onion root, identify a cell in each of the following stages by circling: Metaphase, Anaphase, and Cytokinesis. (See the picture in the next page)**

