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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION - December 2018

B.Tech 1st Semester

COURSE CODE: 18B11BT111 MAX. MARKS: 35

COURSE NAME: Fundamental Biology

COURSE CREDITS: 03 MAX. TIME: 2.0 HRS

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated against each question in square brackets.*

Answer the following questions.

1. Explain Wobble hypothesis. How it contributes for the degeneracy of genetic code? [2] [CO-5]
2. Explain (a) Simple lipids (b) Compounds Lipids [2] [CO-2]
3. Define (a) Okazaki fragments (b) Chargaff rule [3] [CO-5]
4. Distinguish between (a) Purines & Pyrimidines (b) Nucleotides &Nucleosides [3] [CO-2]
5. Explain (a) Central Dogma (b) Anticodon (c) Phosphodiester bonds [6] [CO-2]
6. Define Homeostatis and Osmoregulation [3] [CO-4]
7. Explain the function of (a) Lysosome (b) Ribosomes (c) Mitochondria (d) Cell Wall [4] [CO-3]
8. Write down the difference between prokaryotic and Eukaryotic cells [2] [CO-1]
9. What is replication? Why is DNA replication performed in the 5' to 3' direction? Explain the mechanism of DNA replication [1+2+3] [CO-5]
10. Briefly describe (a) cell cycle (b) Mitosis [4] [CO-4]