Reg. No.										

प्रज्ञानं ब्रह्म

Manipal

INSPIRED BY LIFE

INTERNATIONAL CENTRE FOR APPLIED SCIENCES

(Manipal University)

II SEMESTER B.S. DEGREE EXAMINATION – JUNE 2016

SUBJECT: BIOLOGY (BE 121)

(BRANCH: BIO-MED / BIO-TECH/ CHEM)

WEDNESDAY, 15TH JUNE, 2016

Time: 3 Hours **Max. Marks: 100**

- ✓ **Answer ANY FIVE FULL Questions.**
- ✓ **Draw diagrams wherever necessary.**

1A. What is glycolysis? Give its significance.
1B. Explain the sex linked inheritance.
1C. Explain the structure and functions of centrioles, mitochondria, lysosomes. (3+5+12)

2A. Explain the different types histones.
2B. Elucidate the mechanism of DNA replication.
2C. Describe the technique of genetic engineering and its application. (3+5+12)

3A. Write a note on multiple alleles.
3B. Explain the structure and function of ER.
3C. Describe the components of ETS and explain oxidative phosphorylation. (3+5+12)

4A. Explain the structure of tRNA.
4B. Write the cause of sickle cell anemia and albinism.
4C. Elucidate the process involved in protein synthesis. (3+5+12)

5A. Describe the structure of lamp brush chromosome.
5B. Explain the process of meiosis.
5C. How the diameter of DNA is maintained constant in a cell? Explain the structure and functions of DNA. (3+5+12)

6A. Explain any three functions of Golgi complex
6B. Write a note on first law of inheritance.
6C. Explain the process and applications of DNA fingerprinting. (3+5+12)

7A. Write the classification of chromosomes
7B. What are plastids? Explain different types of plastids.
7C. Give an account of different theories of evolution. (3+5+12)

8A. What are desmotubules? Explain their functions.
8B. Explain aneuploidy with proper examples.
8C. How giant chromosomes are formed? Explain the structure of metaphase chromosome. (3+5+12)