Reg. No.										

INTERNATIONAL CENTRE FOR APPLIED SCIENCES

(Manipal University)

II SEMESTER B.S. DEGREE EXAMINATION – NOV. / DEC. 2016

SUBJECT: BIOLOGY (BE 121)

(BRANCH: CHEMICAL & BIO MEDICAL)

Friday, 16 December 2016

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

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

1A. What are the characteristics of prokaryotic cell?
1B. Distinguish between Down syndrome and Cri du chat syndrome.
1C. Explain the process of biological protein synthesis. **(3+5+12)**

2A. Write any three functions of endoplasmic reticulum.
2B. Explain the mechanism of DNA replication.
2C. How the codon is expressed? Write the characteristics of triplet codon. **(3+5+12)**

3A. Give an account of chromosomal mutations.
3B. Explain back cross and test cross with reference to pea plants.
3C. With appropriate example explain Mendel'second law. **(3+5+12)**

4A. What are the types of plastids? Describe any one.
4B. Explain the different types of RNA.
4C. Explain sex linked inheritance in man. **(3+5+12)**

5A. Explain the structure of tRNA.
5B. What are the steps involved in mitosis.
5C. Give details of reactions of Embedden Meyerhof pathway. **(3+5+12)**

6A. Describe the structure of polytene chromosomes.
6B. What is codominance? Explain with suitable example.
6C. What is R DNA technology? Explain the steps involved in it. **(3+5+12)**

7A. Explain the Miller's experiment.
7B. Write the characteristics of codons.
7C. What are mutations? Explain with suitable examples. **(3+5+12)**

8A. Explain the chemical composition of cell wall.
8B. Describe the structure of lamp brush chromosomes.
8C. Explain the applications of DNA fingerprinting. **(3+5+12)**