

PG Even Semester (CBCS) Exam., May—2018

LIFE SCIENCE AND BIOINFORMATICS

( 2nd Semester )

Course No. : LSBOC-203

( Concepts in Biological Science )

*Full Marks : 70*  
*Pass Marks : 28*

Time : 3 hours

*The figures in the margin indicate full marks  
 for the questions*

Answer **five** questions, selecting **one** from each Unit

## UNIT—I

1. What are the principles of international code of nomenclature (ICN) of plants and animals? Add a note on biological nomenclature and code. 8+6=14
2. Write notes on the following : 7+7=14
  - (a) Concept of species
  - (b) Levels of organization of systems

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( Turn Over )

## UNIT—II

3. Describe modern synthetic theory of evolution highlighting its key features. 14
4. (a) Differentiate between Lamarckism and Darwinism. 10
  - (b) Write a note on elemental forces of evolution. 4

## UNIT—III

5. With suitable illustrations, describe tetrasporic embryo sac development in plants. 14
6. Write notes on the following : 7+7=14
  - (a) Spermatogenesis
  - (b) Polyspermy and its prevention

## UNIT—IV

7. What do you mean by photosynthesis? Add notes on CO<sub>2</sub> fixation and photorespiration. 6+4+4=14
8. Write notes on the following : 7+7=14
  - (a) Gas transport in blood
  - (b) Aquaporins

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( Continued )

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UNIT—V

9. What are hormone receptors? Elucidate the mechanism of hormone action. 7+7=14
10. Write notes on the following : 7+7=14
- (a) Signal transduction
  - (b) Programmed cell death

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