**PG Even Semester (CBCS) Exam., May—2019**

# LIFE SCIENCE AND BIOINFORMATICS

**( 2nd Semester )**

Course No. : LSBCC–203

( Open Choice Paper )

**( Concepts in Biological Science )**

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

*Time* : 3 hours

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

## UNIT—I

**1.** Write down the principles of the International Code of Nomenclature for algae, fungi and plants (ICN). Add a note on type concept with proper examples. 7+7=14

**OR**

**2.** Write short notes on the following : 3½×4=14

*(a)* Taxonomic hierarchy

*(b)* Principles of priority

*(c)* Basic classification of plants

*(d)* Allopatric speciation





## UNIT—II

**3.** Write an assay on Darwin's theory of evolution. 14

**OR**

**4.** Write notes on the following : 7+7=14

*(a)* Lamarckism

*(b)* Types of gene mutation

## UNIT—III

**5.** What is an egg? Describe briefly the different types of eggs in animals. How do egg types influence cleavage patterns? Use diagrams wherever necessary. 2+6+6=14

**OR**

**6.** Write notes on the following : 7+7=14

*(a)* Oogenesis

*(b)* Structure of sperm

## UNIT—IV

**7.** What do you mean by gaseous exchange? How are oxygen and carbon dioxide transported in blood? Use diagrams wherever necessary. 7+7=14

**OR**

**8.** Differentiate between : 7+7=14

*(a)* Photophosphorylation and photo-respiration

*(b)* Hemopoiesis and hemoglobin

UNIT—V

**9.** What do you understand by hormone receptors? Give an account of the mechanism of hormone action. 6+8=14

**OR**

**10.** Write notes on the following : 7+7=14

*(a)* Signal transduction

*(b)* ROS signaling in plants

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