CBCS Scheme

USN | | | | | | | | | | |

15NT36

Third Semester B.E. Degree Examination, Dec.2017/Jan. 2018
Fundamentals of Bioscience

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. With a neat diagram give structure of nucleus. **(08 Marks)**

b. With a appropriate diagram explain mitosis type of cell division. **(08 Marks)**

OR

2 a. Write a note on cytoplasm. **(05 Marks)**

b. Explain cell metabolism. **(06 Marks)**

c. Describe structure and function of microtubules. **(05 Marks)**

Module-2

3 a. Explain the mechanism of sodium and potassium transport. **(10 Marks)**

b. With diagram illustrate the mechanism of a mino acid transport. **(06 Marks)**

OR

4 a. Write a note on micelle formation. Define reverse micelle. **(05 Marks)**

b. Describe membrane permeability and fluidity. **(05 Marks)**

c. Give an account on blood brain barrier. **(06 Marks**

Module-3

5 a. Explain the events involved in transcription. **(10 Marks)**

b. Write a note on protease enzyme. **(06 Marks)**

OR

6 a. Narrate the process of translation. **(10 Marks)**

b. What are the different tools used in the process of genetic engineering? Explain. **(06 Marks)**

Module-4

7 a. Give an account of T – cell receptor and subclasses. **(08 Marks)**

b. Narrate, how antibody diversity is generated within the body. **(08 Marks)**

OR

8 a. How T-cell repertoire selection is carried out within thymus? **(06 Marks)**

b. Write a note on cellular basis of immune system. **(06 Marks)**

c. Explain adaptive immunity. **(04 Marks)**

Module-5

9 a. Describe structure of ATP syntheses. **(06 Marks)**

b. Explain heart as pump. **(10 Marks)**

OR

10 a. Write a note coupling and co-ordinations of motors. **(06 Marks)**

b. Give an account on stomach as digester. **(06 Marks)**

c. Elucidate pure power stroke. **(04 Marks)**

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