

CBCS Scheme

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15BT36

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

Basics of Computer Application

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Explain with an example:
(i) rm (ii) echo (iii) mkdir (iv) ls (08 Marks)
b. Write a shell script to find given number is prime or not? (04 Marks)
c. Define regular expressions? Explain grep command. (04 Marks)

OR

- 2 a. Explain the following:
(i) XML attribute (ii) Xmldeclaration (iii) DTD (06 Marks)
b. Summarize the general features of NCBI's data model. (04 Marks)
c. Construct a note on: (i) SBML (ii) BioXML (06 Marks)

Module-2

- 3 a. Explain all seven layers of OSI reference model. (08 Marks)
b. Illustrate internal protocol and transport layer function. (05 Marks)
c. Demonstrate biology search engines. (03 Marks)

OR

- 4 a. Differentiate between data base and flat file. (06 Marks)
b. Define SQL. Write a SQL query to creat STUDENT table and select names who has got distinction in 10BT45(>70 Marks). (06 Marks)
c. Outline E-R model of library system with diagram. (04 Marks)

Module-3

- 5 a. What are Ontologies? Describe GO and open biological ontologies. (08 Marks)
b. Demonstrate briefly the TAMBIS ontology and cell cycle ontology. (08 Marks)

OR

- 6 a. Describe the basic arithmetic and logical operators used in MATLAB. (06 Marks)
b. What is role and application of MATLAB in Biotechnology and Bioinformatics? (08 Marks)
c. Explain features of MATLAB. (02 Marks)

Module-4

- 7 a. Write a short note on:
(i) Arrays (ii) Dynamic binding (06 Marks)
b. Explain inheritance and encapsulation OOP's concept with example. (06 Marks)
c. Write the features of Bioperl models. (04 Marks)

OR

- 8 a. Explain the functions and pointers use in C programming with example. (06 Marks)
b. Outline C++ string classes. (04 Marks)
c. Explain polymorphism concept with example. (06 Marks)

Module-5

- 9 a. Write a C program to find specific growth rate of microorganisms in detail. (08 Marks)
b. Illustrate C++ program to find the optimum pH and temperature for maximum enzyme activity. (08 Marks)

OR

- 10 a. Write a C++ program to derive column height needed to achieve the specified degree of conversion in a fluidized bed reactor. (08 Marks)
b. Explain the usage of NCBI's C++ tool kit and its feature of modules. (08 Marks)
