



CBCS SCHEME

15BT36

Third Semester B.E. Degree Examination, Dec.2019/Jan.2020 Basics of Computer Applications

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Identify the salient features of Linux operating system. Explain the relationship between Kernel and Shell. (06 Marks)
- b. What are regular expressions? Explain their usage in grep command, with examples. (05 Marks)
- c. What is XML? Write a note on structured data with example. (05 Marks)

OR

- 2 a. Explain the modes of functioning of Vi editor with a neat diagram. (08 Marks)
- b. Explain the modes of changing file permissions in Linux with examples. (04 Marks)
- c. Write short notes on:
(i) CML (ii) SDML (04 Marks)

Module-2

- 3 a. What is internet address? Briefly explain the IP address clauses. (08 Marks)
- b. Define SQL. Explain create, insert and update statements with an example. (08 Marks)

OR

- 4 a. Explain the function of all the seven layers in OS7 Reference model with a neat diagram. (08 Marks)
- b. Write a note on Proxy servers. (02 Marks)
- c. Define Entity and Relationship. Draw an ER diagram for the company database. (06 Marks)

Module-3

- 5 a. Bring out the overview of ontologies. List and explain the components of ontologies. Discuss the structure of ontologies. (08 Marks)
- b. Explain the different types of data formats. (08 Marks)

OR

- 6 a. Describe briefly TAMBIS ontology and cell cycle ontology. (06 Marks)
- b. Discuss the different ontology development tools. (06 Marks)
- c. Write a note on use of MATLAB in Bioinformatics application. (04 Marks)

Module-4

- 7 a. Write the structure of C-program and explain in brief. (05 Marks)
- b. Define a function. Demonstrate the parameter passing methods to a function. (05 Marks)
- c. Explain the basic concepts of an object oriented programming language. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. What is a variable? List the rules for framing variable names, with suitable examples. (05 Marks)
- b. List the advantages of functions. Illustrate recursion with an example program. (06 Marks)
- c. Explain the concept of inheritance in C++. (05 Marks)

Module-5

- 9 a. What is object oriented programming? Differentiate between Procedure oriented and Object oriented programming. (06 Marks)
- b. Write a C program to estimate the doubling time and specific growth rate. (06 Marks)
- c. Develop a C++ program to find the optimum dilution rate for maximum cell productivity. (04 Marks)

OR

- 10 a. Write a C program to find the thermal death kinetics of microorganisms, holding time for sterilization and substrate to cell-yield-coefficient. (06 Marks)
- b. Describe basic features of NCBZ C++ tool kit. (06 Marks)
- c. Develop a C++ program to derive the column height needed to achieve the specified degree of conversion in a fluidized bed reactor. (04 Marks)

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