

BE (3rd Semester)
Examination, April - May, 2017
[New Scheme]

Computational Science

Time Allowed : 3 hours

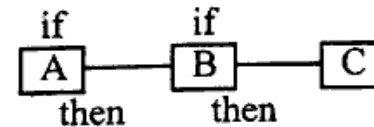
Maximum Marks : 80

Minimum Pass Marks : 28

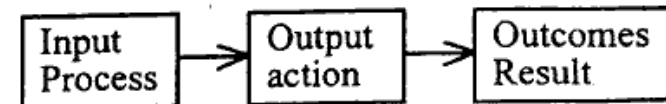
- Note :** (i) Attempt all questions. Attempt any two parts from Question nos. 1 to 5. All parts of Question 6 are compulsory. Assume any missing information.
- (ii) The figures in the right-hand margin indicate marks.

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1. (a) Explain the basic part which is expressed in diagram at the time of program design. [7]



- (b) What do you mean by each block? [7]



- (c) Explain the Compatibility, Extensibility, Fault tolerance, Portability factors in program design. [7]
2. (a) Match the following : [7]
- | | |
|---------------------------------|---------------------------|
| A. Real-valued (interval scale) | I. Tree * |
| B. Real-valued (ratio scale) | II. Array € |
| C. Count data | III. Boolean |
| D. Binary data | IV. Two-dimensional array |
| E. Categorical data | V. Integer € |
| F. Random vector | VI. Floating point € |
| G. Random Matrix | VII. Enumerated type A |
| H. Random tree | VIII. Floating point |
- (b) Write the examples of machine data types, composite types and abstract data types. [7]
- (c) What is difference between syntax and semantics of programming languages ? [7]
3. (a) Explain the advantages of functional language. [7]
- (b) What is the most functional programming language for general use? Explain with reasons. csvtuonline.com [7]
- (c) Explain the limitation of LISP. [7]

4. (a) Discuss analogy between biological and artificial neural networks. [7]
- (b) With help of a suitable diagram, discuss functioning of a simple artificial reason. [7]
- (c) Explain the features of associative memory. [7]
5. (a) What is Fuzzy adaptive system? [7]
- (b) How is concept of Fuzzy logic used in washing machine? [7]
- (c) Explain the use of Fuzzy logic in recognition for fingerprints. csvtuonline.com [7]
6. (a) Explain the objectives of the syllabus of Computational Science. [2]
- (b) Explain the Computational Science course outcomes. [2]
- (c) Mention the Textbooks mentioned in syllabus with all details. [2]
- (d) Mention the Reference books mentioned in syllabus with all details. [2]
- (e) Mention the keyword of each unit to identify i.e. name of each unit mentioned in syllabus. [2]