322353(22)

B. E. (Third Semester) Examination, Nov.-Dec. 2021

(New Scheme)

(CSE Branch)

COMPUTATIONAL SCIENCE

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

*Note : Attempt all questions. Part (a) of each unit is compulsory. Attempt any **two** parts from (b), (c) and (d). Question (a) carry 2 mark, and (b), (c) and (d) carries 7 marks.*

Unit-I

1. (a) What do you mean by Program Design?   2

(b) Explain modules and modulation criteria.   7

(c) Describe the concept of test plan and design guide-
lines.   7

(d) Explain the following :   7

(i) Design techniques

(ii) Structured flow chart

Unit-II

2. (a) Define binding time.   2

(b) Describe different structured data types in brief.   7

(c) What do you mean by Encapsulation? Explain it
with storage management.   7

(d) Explain software simulated system in brief.   7

Unit-III

3. (a) Define functional programming language.   2

(b) Write difference between functional and imperative
programming language.   7

(c) Explain the concept of LISP programming language.   7

(d) Describe HASKELL programming language and
their futures.   7

Unit-IV

4. (a) What is Neuron?   2

(b) Explain activation function and single layer network
in brief.   7

(c) Describe auto associative neural network with
suitable diagram.   7

(d) Draw nerve structure and explain it in brief.   7

Unit-V

5. (a) Define fuzzy set.   2

(b) Explain the flow diagram and principal of genetic
algorithm.   7

(c) Define fuzzy logic and explain the concept to convert
fuzzy to crisp.   7

(d) Explain the following :   7

[4]

(i) Mutation

(ii) Properties of fuzzy set