

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

IT-5002-CBGS

B.E. V Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Principles of Programming Languages

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) Each question carry equal marks.

1. a) Compare and contrast the four programming paradigms: imperative, object-oriented, functional and logic.
b) Explain macro and inline function in C++. Which one is more efficient in execution?
2. a) Describe sequence control in various statements with suitable example.
b) What are various fields of an Activation Record? Explain how activation record will look like for every recursive call in case of factorial (5). Also draw activation tree for the same.
3. a) Explain design issue of sub program and parameter passing methods.
b) Draw flow diagrams for the following program fragment:
Loop
 S1;
if E then exit end;
 S2;
End

IT-5002-CBGS

PTO

[2]

4. a) What do you mean by Subprograms? Explain with proper syntax and diagram.
b) Differentiate between static and dynamic scope of a variable.
5. a) What do you mean by activation records? When it is created and deleted from call stack?
b) How the references of the parameters are passed during the calling of a function? What is the need to pass reference instead of value itself?
6. a) What is monitors? What are its advantages and disadvantages over semaphores.
b) Discuss C# threads.
7. a) What is exceptional handling? Why it is required?
b) Explain the PROLOG programming language. What deficiencies PROLOG have?
8. a) What are exceptions? How are they handled in Java?
b) Write short notes:
 - i) TGL
 - ii) Basic elements of prolog.

IT-5002-CBGS