

Roll No.

BCA–20

System Programming

Bachelor of Computer Applications (BCA–11/16)

Sixth Semester, Examination, 2017

Time : 3 Hours

Max. Marks : 60

Note : This paper is of **sixty (60)** marks containing **three (03)** sections A, B and C. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section ‘A’ contains four (04) long answer type questions of fifteen (15) marks each. Learners are required to answer *two* (02) questions only.

1. Explain the various types of language processors.
2. Explain the procedure to design the assembler and explain the data structure of assembler.
3. What is memory allocation ? Discuss static and dynamic memory allocation during compilation of a program.
4. Give an overview of syntax analysis with respect to the compilation process.

Section-B**(Short Answer Type Questions)**

Note : Section 'B' contains eight (08) short answer type questions of five (05) marks each. Learners are required to answer *four* (04) questions only.

1. What is System Software ? Classify System Software.
2. Differentiate between LEX and YACC.
3. Write the difference between one pass and two pass assembler.
4. What is lexical analysis ?
5. What do you understand by booting of a machine ?
6. Compare Machine Language and Assembly Language
7. What is dynamic debugging ? Explain in detail.
8. What do you mean by symbol table ?

Section-C**(Objective Type Questions)**

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.

1. Which of the following is not a feature of compiler ?
 - (a) Scans the entire program first and then translate it into machine code
 - (b) When all the syntax error are removed execution takes place
 - (c) Slow for debugging
 - (d) Execution time is more

2. Parsing is also known as :
 - (a) Lexical analysis
 - (b) Syntax analysis
 - (c) Semantic analysis
 - (d) Code generation
3. The linker :
 - (a) Is same as the loader
 - (b) Is required to create a load module
 - (c) Is always used before programs are executed
 - (d) None of the above
4. Which of the following is not a type of assembler ?
 - (a) One pass
 - (b) Two pass
 - (c) Three pass
 - (d) None of the above
5. The output of the linker (LINK command) is stored in a file with the extension :
 - (a) .lis
 - (b) .obj
 - (c) .exe
 - (d) .lnk
6. Resolution of externally defined symbols is performed by :
 - (a) Compiler
 - (b) Assembler
 - (c) Linker
 - (d) Loader

7. Relocatable programs :
- (a) Can be loaded at a specific location in memory
 - (b) Can be loaded almost anywhere in memory
 - (c) Cannot be used with virtual memory management scheme
 - (d) None of the above
8. A program that set up an executable program in main memory for execution is :
- (a) Compiler
 - (b) Assembler
 - (c) Linker
 - (d) None of the above
9. Assembler is :
- (a) A program that places programs into memory and prepares them for execution
 - (b) A program that automate the translation of assembly language into machine language
 - (c) A program that accepts a program written in high level language and produces an object program
 - (d) None of the above
10. A compiler has phases.
- (a) 7
 - (b) 6
 - (c) 8
 - (d) None of the above