Total Pages : 6 Roll No. .....

BCA-20

System Programmimg

Bachelor of Computer Applications (BCA-11/16/17)

Sixth Semester Examination 2019 (July)

Time : 3 Hours] **Max. Marks : 80**

Note : This paper is of Eighty (80) marks divided into 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 Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

(2×19=38)

1. Explain types of grammars. Write a regular expression for a language containing a binary string which does not contain two consecutive 0s or two consecutive 1s anywhere.

2. What is assembly language ? Explain the three basic facilities of assembly language . Explain one pass macro processor algorithm.

3. Which phases of compiler are included in front end phase of a compiler ? Which phases must be performed before semantic analysis phase of a compiler ? Explain.

4. What is finite state automation ? Explain about Regular expression, parsing and parse tree.

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer any four (04) questions only. (4×8=32)

1. What is recursion ? Also explain compilation of expression.

2. What do you understand by classification of grammar ? Explain type 1, type 2 ,type 3, type0 grammar.

3. What is language process development tool ? Explain LEX and YACC tools.

4. What are intermediate code forms ? Also Explain Design of assembler.

5. What is difference between simple procedure grammar and operator procedure grammar ?

6. What is differnce between local and global optimization ?

7. What do you understand by the term Relcoation and linking concept ?

8. What do you understand by language processing ? Explain the phases and passes of language processor.

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. (10×1=10)

1. A compiler is a software tool that translates ……. that the computer can understand :

(a) Algorithm into data

(b) Source code into data

(b) Computer language into data

(d) None of the above.

2. A program :

(a) is a sequence of instructions

(b) is the device where information is stored

(c) is a device that performs a sequence of operations specified by instrucions in memory

(d) None of these.

3. An assembler is :

(a) Programming lanuage dependent

(b) syntax dependant

(c) machine dependant

(d) data dependant.

4. Translator for low level programming language were termed as :

(a) Assembler

(b) Compiler

(c) Linker

(d) Loader.

5. In compiler design 'reducing the strength' refers to :

(a) reducing the range of values of input variables

(b) code optimization using cheaper machine instructions

(c) reducing efficiency of program

(d) none of the above.

6. In a two-pass assembler symbol table is :

(a) Generated in first pass

(b) Generated in second pass

(c) Not genrated at all

(d) Genrated and used only in second passs.

7. Which phase of compiler generates stream of atoms ?

(a) Syntax Analysis

(b) Lexical Analysis

(c) Code generation

(d) Code optimization.

8. The …… tranfers the executable image of C ++ program from hard disk to main memory"

(a) compiler

(b) linker

(c) Debugger

(d) Loader.

9. Object modules generated by assembler that contains unresolved external references are resolve for two or more object module by a/an :

(a) Operating system

(b) Loader

(c) linker

(d) compiler.

10. Which of the following is not a type of assembler ?

(a) One pass

(b) Two pass

(c) Three pass

(d) Load and go.