SA – 918

VI Semester B.C.A. Degree Examination, April/May 2015
(Y2K8 Scheme)
COMPUTER SCIENCE
BCA – 602 : System Programming
(100 mark – 2013-14 and Onwards/90 mark – Prior to 2013-14)

Time : 3 Hours Max. Marks : 90/100

Instructions : *1) Answer **all** questions.*

*2) Section – **D** is applicable for **100** marks student only (F+R – 100 : 2013 -14 and onwards R – 90 : Prior to 2013-14)*

SECTION – A

I. Answer **any ten** questions. **(10×2 = 20)**

1) Define processor. List its types.
2) Differentiate between procedure and processor.
3) Explain program status word.
4) List different types of operands in an instruction format.
5) Mention the steps in designing of an Assembler.
6) What are the functions of an assembler ?
7) Expand MDI and MDLC.
8) Differentiate between macro and subroutine.
9) List four types of cards used in direct linking loader.
10) What is Binder ? What are the classes of Binders ?
11) Define Machine Dependent Optimization.
12) List the data bases of Lexical phase.

SECTION – B

II. Answer **any five** questions. **(5×5 = 25)**

13) Explain general machine structure with a neat diagram.
14) What is Pseudo-Op ? Explain its types.

P.T.O.

15) Explain databases used in Pass 1 and Pass 2 of Assembler.

16) Illustrate Binary Search with an example.

17) Explain macro facility with macro instruction argument with an example.

18) Explain Absolute Loader.

19) What are the functions of analysis and synthesis phases of compiler ?

20) Write a note on assembly phase of compiler.

SECTION – C

III. Answer **any three** questions. **(3×15=45)**

21) a) Explain different types of instruction formats with example. **7**

b) Explain address modification using instruction as data. **8**

22) a) Draw the detailed Pass 2 flow chart of an Assembler. **7**

b) List different types of sorting. Explain Interchange sort. **8**

23) a) Write an algorithm for pass 1 processing macro definitions. **7**

b) Explain implementation of macro processor within assembler. **8**

24) a) Write a note on direct linking loader. **7**

b) Draw a flow chart for pass 2 of loader. **8**

25) a) Explain Intermediate form of compiler. **7**

b) Explain code generation phase of compiler. **8**

SECTION – D

IV. Answer **any one**. **(1×10=10)**

26) a) Write a note on evolution of system software. **5**

b) What is an assembler ? Explain any four assembler directives. **5**

27) Explain the structure of a compiler with a neat diagram. **10**