



SM – 624

VI Semester B.C.A. Examination, May/June 2018

(CBCS) (F+R) (2016-17 and Onwards)

COMPUTER SCIENCE

BCA 602 : System Programming

Time : 3 Hours

Max. Marks : 100

Instruction : Answer **all** Sections.

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks. (10×2=20)

- 1) What is system software ?
- 2) What is location counter ? What is its purpose ?
- 3) List any two advantages of assembly language.
- 4) What is Declaration Statement ? Give example.
- 5) Mention any two disadvantages of Radix Sort.
- 6) What is Macro call ?
- 7) Define Macro definition table.
- 8) Write the four basic task that can be performed by macro-instruction processor.
- 9) What are the functions of loader ?
- 10) Define Relocation factor.
- 11) What is intermediate form ?
- 12) What is a token ? Give example.

SECTION – B

II. Answer **any five** questions. **Each** question carries **five** marks. (5×5=25)

- 13) Explain the general machine structures with neat diagram.
- 14) What is sorting ? Explain briefly about Bubble sort.
- 15) Explain databases used in Pass 1 and Pass 2 assemblers.
- 16) Explain the features of Macro facility in detail.
- 17) Explain macro instructions defining macros.
- 18) Explain compile-and-go loader with a neat diagram.
- 19) Define binder. What are the classes of binders ? Explain.
- 20) What are the functions of analysis and synthesis phases of compiler ?

P.T.O.



SECTION - C

III. Answer **any three** questions. **Each** question carries **fifteen** marks. (3×15=45)

- 21) a) Explain various instruction formats used in IBM 360. 8
- b) Explain the use of literals in assembly language programs using example. 7
- 22) a) Draw the detailed pass 2 flowchart of an assembler. 8
- b) What is an assembler directive ? Explain any five assembler directives with an example. 7
- 23) a) Give the database specifications for pass 1 and pass 2 of macro processor. 8
- b) Explain the four basic tasks of macroprocessor. 7
- 24) a) Explain design of absolute loader with a neat diagram. 8
- b) Explain the overlay structures for linking. 7
- 25) a) Explain structure of compiler with a diagram. 8
- b) Explain identifier table for the phases of compiler. 7

SECTION - D

IV. Answer **any one** question. **Each** question carries **ten** marks. (1×10=10)

- 26) a) Differentiate between Pseudo-op and machine-op with example. 5
- b) Draw the micro-flow chart for ADD instruction. 5
- 27) a) Explain Relocatable, non-relocatable and self relocatable programs. 5
- b) Explain the use of EXTERN and ENTRY statements. 5