

SM – 634

VI Semester B.C.A. Examination, May/June 2018
(Y2K8 Scheme)
COMPUTER SCIENCE
BCA – 602 : System Programming

Time : 3 Hours

Max. Marks : 90/100

Instructions : 100 marks 2013-14 onwards. 90 marks prior to 2013-14.
Section 'D' is applicable for students 2013-14 onwards.

SECTION – A

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

1. What are the components of system software ?
2. What is PSW ?
3. Expand MDT, MNTC.
4. What is macro ?
5. Mention any two functions of Lexical phase of a compiler.
6. What are the basic units of memory ?
7. Differentiate compiler and interpreter.
8. What is sorting ?
9. Mention the format of MOT.
10. What is matrix ?
11. Define Assembler.
12. What is formal system ?

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SECTION – B

Answer **any five** questions. **Each** question carries **five** marks :

(5×5=25)

13. Discuss the functions of a loader.
14. Explain data formats of IBM 360/370.
15. Explain interchange sort with example.
16. Write short note on 'compile-go-loader'.
17. Mention the steps to design assembler.
18. Explain linear search with example.
19. Discuss the functions of macro-processor.
20. Differentiate system software and application software.

SECTION – C

Answer **any three** questions. **Each** question carries **fifteen** marks :

(15×3=45)

21. a) Explain general machine structure of IBM 360/370 with a neat diagram. 8
- b) Explain various instruction formats of IBM 360/370. 7
22. a) Explain various databases used in Pass I and Pass II macro processing. 7
- b) Explain Pass-I of two-pass macro with flowchart. 8
23. a) Explain intermediate forms of compiler. 7
- b) Discuss various machine-independent optimization techniques with example. 8



24. a) Explain Bucket sort with example. 7
b) Explain Pass-I of assembler with a flowchart. 8
25. a) Explain long-way no looping approach. 7
b) Design and explain micro flowchart for ADD instruction. 8

SECTION – D

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

26. Explain phases of a compiler.
27. Explain various features of macro with example.

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