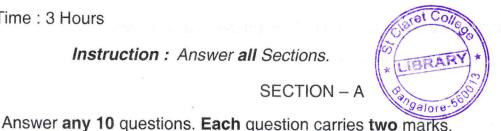
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## CB - 481

# VI Semester B.C.A. Examination, August/September 2023 (CBCS) (F + R) (2016 - 17 and Onwards) COMPUTER SCIENCE BCA – 602 : System Programming

Time: 3 Hours

Instruction : Answer all Sections.



Max. Marks: 100

 $(10 \times 2 = 20)$ 

1. What is the difference between compiler and interpreter ?

- 2. What are the functions of a loader?
- List any two advantages of assembly language.
- 4. What is PSW ?
- 5. Mention the different types of sorting techniques.
- What is a macro ? Write down its syntax.
- 7. What is a symbol table ? Give its format.
- 8. Define AIF and AGO.
- 9. Explain EXTRN pseudo-op.
- 10. Define relocation factor.
- 11. Mention any 4 components of SP.
- 12. Mention different phases of compiler.

#### SECTION - B

Answer any five questions. Each question carries five marks.

 $(5 \times 5 = 25)$ 

- 13. Explain the general machine structure with a neat diagram.
- 14. Explain bucket sort with an example.
- 15. Explain pass 2 of assembler with a neat flowchart.

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16. Explain macro definition with arguments with an example.

17. Explain general loader with a neat diagram.

18. Explain absolute loader with a neat diagram.

- 19. Explain the databases used in lexical analysis phase of a compiler.
- 20. Explain intermediate phase with an example.

4.2

#### SECTION - C

Answer any three questions. Each question carries fifteen marks.	(3×15=45)
<ul><li>21. a) Draw the detailed PASS-1 flowchart of an assembler.</li><li>b) Explain various types of instruction formats used in IBM 360.</li></ul>	7
22. a) Perform shell sort for the following numbers :	10
45, 23, 53, 43, 18, 24, 8, 95, 101	
b) Mention the databases of pass 1 and pass 2 of an assembler.	5
<ul><li>23. a) Explain macro instructions defining macros with an example.</li><li>b) Explain conditional macros or consistent</li></ul>	7
b) Explain conditional macro expansion.	8
<ul><li>24. a) Explain the overlay structure for linking.</li><li>b) Explain direct linking loaders.</li></ul>	7
<ul><li>25. a) Explain the structure of a compiler with a neat diagram.</li><li>b) Explain the semantic phase of compiler.</li></ul>	8 7
* SECTION – D	
Answer any one question. Question carries ten marks.	(1×10=10)
<ul><li>26. a) Explain any five pseudo ops in assembly language program.</li><li>b) Explain long way no looping.</li></ul>	5 5
27. Write short notes on :	
a) Pass 2 of a macroprocessor.	5
b) Dynamic loading.	5