

# Vijaya College

R.V Road, Basavanagudi

## VI SEM BCA Model Question Paper 1

### BCA 602: System Programming

#### SECTION – A

I. Answer any ten questions. Each question carries two marks 10x2=20

1. List the components of system software.
2. Differentiate between processor and I/O channel.
3. Explain PSW.
4. Differentiate between a macro and subroutine.
5. What is an argument list array?
6. What are overlays?
7. What is ALA? Explain its format.
8. What is dynamic loading?
9. What are the three classes of uniform symbols?
10. Define local and global optimization.
11. Define AIF and AGO.
12. List the functions of a loader.

#### SECTION – B

II. Answer any five questions. Each question carries five marks 5x5=25

13. Explain open subroutine and closed subroutine with an example.
14. Explain different instruction formats of IBM 360/370 machine.
15. Explain addresses modification using instruction as data.
16. Explain shell sort with an example.
17. Explain pass-2 overview of an assembler with flowchart.
18. Explain macro definition with an example.
19. Describe four types of cards used in direct linking loader.
20. Explain intermediate phase with an example.

#### SECTION – C

III. Answer any three questions. Each question carries fifteen marks 3x15=45

21. a) Draw the general machine structure of IBM 360 and explain.  
b) Explain various instruction formats used in IBM 360.
22. a) Draw the detailed Pass 2 flowchart of an assembler.  
b) Explain databases used by Pass I and Pass II of an assembler.

- 23. a) Explain the terms macro definition, macro call and macro expansion with an example.  
b) Explain with a flowchart Pass 2 of a macroprocessor.
- 24. a) Explain the design of an absolute loader.  
b) Explain the databases used by Pass I and Pass II of a direct linking loader.
- 25. a) Explain structure of a compiler with a diagram.  
b) Explain syntax phase of a compiler.

#### SECTION – D

IV. Answer any one question. Each question carries 10 marks

1x10=10

- 26. a) Sort the following numbers using bubble sort technique:  
55, 53, 45, 48, 39.  
b) Explain any 5 pseudo ops. used in an assembly language program.
- 27. a) Explain dynamic loading.  
b) List the databases used by Pass I and Pass II of the macroprocessor.