

VI Semester B.C.A. Examination, May 2017 (2016-17 and Onwards) (CBCS) 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: (2×10=20)

- 1) Define compiler, assembler.
- 2) What are the functions of a Loader?
- 3) Explain PSW.
- 4) What is Instruction Interpreter?
- 5) Write the format of POT.
- 6) What is a symbol table? Give its format.
- 7) Differentiate between a macro and subroutine.
- 8) What is an argument list array?
- 9) What are overlays?
- 10) What is dynamic loading?
- 11) What are the three classes of uniform symbols?
- 12) Define local and global optimization.

SECTION - B

II. Answer any five questions, each question carries five marks. (5×5=25)

- 13) Explain open subroutine and closed subroutine with an example.
- 14) Explain different instruction formats of IBM 360/370 machine.
- 15) Explain address modification using instruction as data.
- 16) Explain shell sort with an example.

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- 17) Explain pass-2 overview of an assembler with flow-chart.
- 18) Explain macro definitions with an example.
- 19) Describe four types of cards used in direct linking loader.
- 20) Explain intermediate phase with an example.

SECTION - C

III.	Ans	we	er any three questions, each question carries fifteen marks. (3×1)	(3×15=45)	
	21)		Explain the general machine structure of IBM 360/370 with a neat diagram		
		b)	Draw the detailed PASS-1 flow-chart of an assembler.	8	
	22)	a)	Explain databases used in PASS-1 and PASS-2 of assembler.	8	
		b)	Explain different data formats used in IBM 360/370 with an example.	7	
	23)	a)	Explain simple one pass macro processor.	10	
	Å	b)	Explain conditional macro expansion.	5	
	24)	a)	Explain design of absolute loader with a neat diagram.	8	
		b)	Explain direct-linking loaders.	7	
	25)	a)	Explain the passes of compiler with neat diagram.	10	
		b)	Discuss briefly about lexical phase of compiler.	5	
			SECTION - D		
IV.	Answer any one question, each question carries ten marks. (1×10=			0=10)	
	26) With a neat diagram explain the structure of compiler.			10	
	27)	W	rite short note on:		
		a)	Relocating loaders.	5	
		b)	Draw the micro flow-chart of ADD instruction.	5	

13) Explain open subrobling and closed supredules with an example

14) Explain different instruction formals of 13M 390/370 machine