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VI Semester B.C.A. Degree Examination, May/June 2014 (Y2K8 Scheme)

BCA - 602 : SYSTEMS PROGRAMMING

Time: 3 Hours

Max. Marks: 90/100

Instructions: 1) Answer all questions.

2) Section – D is applicable for the 2011-12 Batch and Onwards.

F - 100: 2013-14 and Onwards.

R - 90 : Prior to 13-14.

SECTION - A

I. Answerany ten questions:

 $(10 \times 2 = 20)$

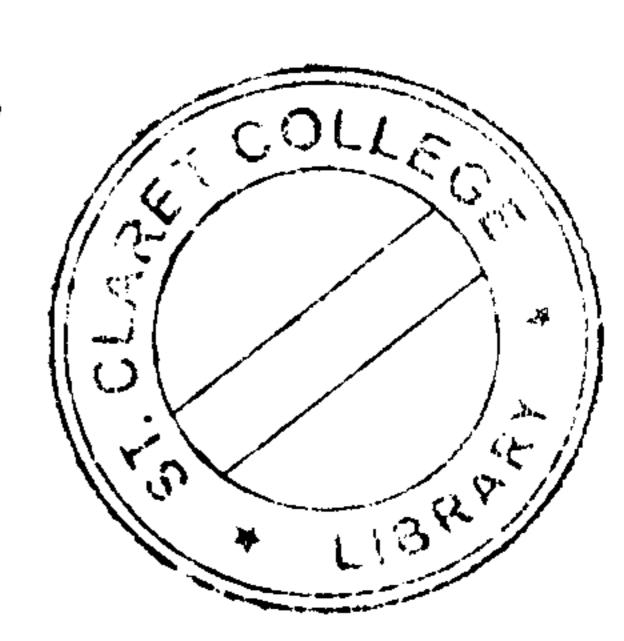
- 1) What are the components of a programming system?
- 2) Define compile time and load time.
- 3) What is the difference between CR and CLR instructions?
- 4) Define pseudo-OP. Give one example.
- 5) What is the structure of Base table?
- 6) Define fixed table. Give an example.
- 7) What is meant by macro call?
- 8) Name the four features of a macro facility.
- 9) Define loader.
- 10) Expand the terms GEST and RLD concerned to loaders.
- 11) What is meant by lexical analysis?
- 12) Name the tables created by the compiler during lexical phase.

SECTION - B

II. Answerany five questions:

- 13) What are the basic instruction formats supported by IBM 360/370 architecture?
- 14) What is sorting? Explain briefly about interchange (bubble) sort?
- 15) What are the databases used by pass 1 of two pass assembler?

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- 16) Explain macro facility with macro instruction argument with an example.
- 17) Draw the block diagram of general loading scheme and explain.
- 18) Define: (a) Binder (b) Dynamic loading.
- 19) What are the rules for converting an arithmetic statement into a parse tree? Explain with an example.
- 20) Discuss briefly about syntax phase of a compiler.

SECTION-C

III. A	nsw	ver any three questions.	3×15=4	5)
21)	a)	Draw the micro-flow chart for ADD instruction.		8
	b)	What are the data formats supported by IBM 360/370 architecture ?	?	7
22)	a)	Draw the detailed pass I flow chart of an assembler.	-	8
	b)	What are the steps followed in general design procedure of an assemb	oler?	7
23)	a)	Draw the flow chart of pass I of macro processor to show how it prothe macro definitions.	cess	8
	b)	What are the data bases used in Pass 1 of the macro processor?		7
24)	a)	Discuss about direct linking loader.		8
	b)	Draw the flow chart of an absolute loader and explain.		7
25)	a)	Draw the block diagram of the structure of a compiler.		8
	b)	Discuss briefly about lexical phase of compiler.		7
		SECTION - D		
V. Ar	ISW	er any one .	1×10=10))
26)	a)	Differentiate between pseudo-op and machine op1 with example.		5
	b)	Define macro. State its advantages.	,	5
27)	a)	What are the four different types of cards produced by the direct link loader? Discuss.	_	5
	b)	What are the four optimisation techniques used in the compiler?		5