Shivaji University, Kolhapur
Question Bank for Mar 2022 (Summer) Examination

Subject Code: 80795 Subject Name: System Programming

Course Name: B.Tech. CBCS Part 3 Semester 5

Common subject Code (if any)

QUESTION BANK

MCQ QUESTIONS

Sr.No.	Questions	MARKS
Q.1	Lexical Analyzer is also called as_____ A) Parser B) Scanner C) YACC D) Semantic Analyzer	2
Q.2	Program Generator generates_____ A) Program in Machine Language B) Program in Assembly Language C) Program in High level Language D) None of these	2
Q.3	When Executable statements are more than total number of statements, _____is better to use A) Compiler B) Assembler C) Interpreter D) Linker	2
Q.4	Which of the following grammar is not a operator grammar A) A→AcDe B) A→CaDcf C) A→CAcfED D) All the above	2

Q.5	Grammar is said to be ambiguous grammar when____ A) Grammar produces single parse tree for given input string B) Grammar produces exactly two parse tree for given input string C) Grammar produces more than one parse tree for given input string D) None of these	2
Q.6	MOVEM moves the values from ____ to ____ A) Memory to Register B) Register to Memory C) Register to Register D) Memory to Memory	2
Q.7	In Variant-II of the intermediate code____ are not processed A) Register B) Mnemonics C) Symbols D) Literals	2
Q.8	Pass-I of Two pass assembler uses following Data structures. A) OPTAB and SYMTAB B) OPTAB, SYMTAB, LITTAB and TII C) OPTAB, SYMTAB, LITTAB and POOLTAB D) OPTAB, SYMTAB, LITTAB, POOLTAB and TII	2
Q.9	Replaced statement are preceded by + sign during_____ A) Execution of the Assembly program B) Execution of the pre-processor statement C) Macro expansion D) None of these	2
Q.10	In Keyword Parameter specification syntax of Actual parameter can be written as____ A) <Ordinary String> B) &<Parameter Name>= C) <Parameter Name>=<Parameter Kind> D) <Formal Parameter Name>=<Actual Parameter Name>	2
Q.11	In Syntax of Assembly Language statement, <Operand Specification > can be written as	2

	A) <Symbolic Name> B) <Operand Name> C) <Symbolic Name> [+<Displacement>] D) <Symbolic Name> [+<Displacement>][Index Register]	
Q.12	A Side effect of a function call is a change in the value of variable which is____ A) Local to the called function B) Not local to the called function C) Both local and not local to the called function D) None of the above	2
Q.13	KPDTAB contains ____ A) Formal Parameter name and its value B) Default values along with entries of APT table C) Only Default values D) Name of the Macro	**2**
Q.14	TOS=ARB-1 ARB=ARB* Above Actions are used _____ A) To Access Non local variables B) During Block entry into the Stack C) During Block exit from the stack D) All of the above	2
Q.15	Display is used to___ A) De-allocate activation record B) Access local variables C) To improve the efficiency of local access D) To improve the efficiency of non-local access	2
Q.16	_____ is used to optimize the compiler A) Triple B) Postfix Notation C) Indirect Triples D) Quadruples	2
Q.17	_____ Parameter Passing Mechanism do not experience side effect A) Call by value	2

	B) Call by value-Result C) Call by Reference D) Call by Name	
Q.18	If Link origin=Load origin then Loader_____ A) Performs relocation and loads the program into main memory B) Performs relocation but do not loads the program into main memory C) Do not performs relocation but loads the program into main memory D) None of these	2
Q.19	Example for Non-Re-Locatable programs is/are_____ A) All the object modules B) All the high level language programs C) Hand-Coded Machine instructions D) All of the above	2
Q.20	RELOCTAB contains_____ A) Information about Literals B) Information about Public definition and External References C) Information about Address sensitive instruction D) Inofrmation about Translated origin, link origin and size of the program	2
Q.21	MS-OFFICE is example for ____ editor A) Word Processor B) Line editor C) Stream editor D) None of the above	2
Q.22	Typewriter is example for____ editor A) Word Processor B) Line editor C) Stream editor D) Copy editor	2
Q.23	_____ is the point at which human users interact with a computer website or application A) Debug Monitor B) User Interface C) Compilation D) Interpretation	**2**

Q.24	Compiler produces_____ to _____ language program A) High level to Intermediate B) Assembly to Machine C) Machine to High level D) High level to Machine	2
Q.25	Condition code specification of EQ is____ A) 01 B) 06 C) 05 D) 04	2
Q.26	Example for System Software/System Programming E) Calculator program F) Microsoft Word G) Compiler H) Gaming Program	2
Q.27	Execution Gap is gap between____ and ____ E) Application Domain and Execution Domain F) Application Domain and PL Domain G) PL Domain and Execution Domain H) PL Domain and CL Domain	2
Q.28	In Application Domain E) Client express his requirements F) Client requirements are converted into software G) Programmer express his requirements H) None of these	2
Q.29	Tokens Contains ___ and ___ fields E) Class code and number in class F) IC and Class code G) Table of Information and IC H) Symbols and address	2
Q.30	Type 3 Grammar is also called as E) Regular Grammar F) Context Sensitive Grammar G) Context Free Grammar H) Phrase structure grammar	2
Q.31	DS in Assembly language stands for E) Duplicate Symbol	2

	F) Direct Storage G) Declare Storage H) Declare Constant	
Q.32	MOVEM is a____ statement E) Declaration F) Imperative G) Assembler Directives H) Advanced Assembler Directives	2
Q.33	Opcode of STOP is____ E) 02 F) 00 G) 04 H) 01	2
Q.34	MACRO is Enclosed between E) START and END statement F) MACRO HEADER and MACRO END Statement G) MOVER and MOVEM H) None of these	2
Q.35	Register Descriptor contains____ and ____ fields E) Status and Operand Descriptor# F) Register value and Addressability G) Attributes and Addressability H) Register name and Register value	2

UNIT: I

Q.1 Explain phases of Language Processor.

Q.2 Differentiate system software and application software. (7 Marks)

Q.3 Define following: (7 Marks)

a) Semantic gap b) Specification and execution gap

c) Language processor d) Language translator

Q.4. Define following:

a) Language migrator b) Program generation activities

c) Program execution activities d) Program generator domain

Q.5. Define following:

a) Program translation model b) Language Processing

c) Forward Reference

Q.6 Explain Fundamentals of language Processing

Q.7 Explain Fundamentals of Language Specification

Q.8 Discuss Classification of Grammar

Q.9 Explain Binding and Binding Times in detail.

Q.10 For the below example

```
int: a;
float: b,i;
i=a+b;
```

i) Generate Intermediate code ii) Construct symbol table

Q.11 Explain two models of program execution. (Translation and interpretation)

Unit: II

Q.12 Explain Assembly language statement format and Machine instruction format.

Q.12 Explain Advanced assembler directives

Q.13 Explain elements of assembly language

Q.14 What are assembler directives? List out and explain any two assembler directives

Q.15 Explain Pass structure of assembler

Q16. Explain One-Pass assembler.

Q.17 What is IC unit? Discuss two variants of intermediate code for any imperative statement

Q.18 Compare: Variant - I and Variant – II of intermediate code.

Q.19 Write Variant I for following assembly Code:

```
START   500
MOVER AREG, ='10'
ADD BREG,   AA
AA      DC  10
```

Q.20 What is TII and explain its uses with example

UNIT: III

Q.21 Define a macro. Explain macro definition and macro call with an example

Q.22 What is Macro Expansion. Discuss two different ways of Macro Expansion.

Q.23 Explain with example Positional Parameters, Keyword Parameters and Default Specification Of Parameters.

Q.24 Explain Nested macro calls with example

Q.25 Which are the advanced macro facilities for alteration of flow of control during expansion.

Q.26 Discuss Expansion time variables and attributes of formal parameter.

Q.27 Explain Advanced Macro Facilities with example

Q.28 Explain semantic expansion with example

Q.29 Write an Algorithm for processing of Macro Definition.

Q.30 Explain Data structures of macro pre-processor.

UNIT: IV

Q.31 What is Scope rule? Explain with example.

Q.32 What is Memory Allocation? Differentiate Static and Dynamic memory allocation

Q.33 Discuss in brief Memory allocation in Block structured languages

Q.34 Explain Dynamic and Static Pointer with example

Q.35 What are Operand descriptors and Register descriptors explain with an example

Q.36 Explain Triples with an example.

Q.37 Explain Quadruples with an example.

Q.38 Explain different parameter passing mechanisms with example

Q.39 Explain pure and impure interpreters.

Q.40 What is Display? Explain with an example

UNIT: V

Q.41 Which are the steps in execution of a program written in language L

Q.42 What is program Relocation? How is relocation performed? Explain with example.

Q.43 What is Linking? Explain EXTRN and ENTRY statements with example.

Q.44 Discuss Binary program and Object module.

Q.45 Write an Algorithm of Program Relocation.

Q.46 What is linking for Overlays? Explain with example

Q.47 Explain Non-Relocating Program, Relocating Programs and Self Relocating Programs in brief.

Q.48 Write an Algorithm of First Pass of Linker.

Q.49 Write an Algorithm of Second Pass of Linker.

UNIT: VI

Q.51 Define Following

i) Debug Monitor

ii) User Interface

Q.52 What is Editor? Explain Structure of Editor with suitable Diagram

Q.53 Explain Types of editors with an example for each editor

Q.54 Explain Software Tools for Program Development

Q.55 Explain Structure user Interface