SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

MODEL QUESTION BANK

Subject with Code : SYSTEM SOFTWARE (19MC9108)   **Course&Branch**: MCA
Year & Sem: I-MCA & II-Sem   **Regulation:** R19

UNIT – I

INTRODUCTION, ASSEMBLER

1. Explain SIC Machine Architecture in detail.   [12 M]

2. Discuss about SIC\XE Machine Architecture with characteristics.   [12 M]

3. Explain various features in VAX Architecture.   [12 M]

4. Discuss about various characteristics in Pentium pro Architecture.   [12 M]

5. Explain about CrayT3E Architecture.   [12 M]

6. Differentiate ultraSPARC and PowerPC Architecture with their features.   [12 M]

7. a) What are the basic functions of an Assembler?   [06 M]

    b) Explain the Algorithms and Data Structures used in Assembler.   [06 M]

8. Explain various features of Machine – Dependent Assembler.   [12 M]

9. Explain the following briefly

    a) Literals   [04 M]

    b) Symbol – defining statement   [04 M]

    c) Program Blocks   [04 M]

10. Explain

    a) One – pass Assembler   [06 M]

    b) Multi – pass Assembler   [06 M]

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UNIT – II

LOADING AND LINKERS, MACRO PROCESSORS

1. Explain basic functions of a Loader.   [12 M]

2. Explain following Loader Features

   a) Relocation   [06 M]

   b) Program Linking   [06 M]

3. What are the algorithms and data structures for a linking?   [12 M]

4. Discuss various features in Machine Independent Loader.   [12 M]

5. Explain

   a) Linkage Editors   [06 M]

   b) Dynamic Linking.   [06 M]

6. Explain with example about Macro Definition and Expansion.   [12 M]

7. Explain in detail about Macro Processor design options.   [12 M]

8. Explain the following

   a) Concatenation of Macro Processor.   [04 M]

   b) Generation of Unique Labels   [04 M]

   c) Keyword Macro Parameters.   [04 M]

9. Explain Macro Processor algorithm and data structures.   [12 M]

10. Discuss various features of Macro Processor in Machine Independent.   [12 M]

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UNIT – III

COMPILERS, OTHER SYSTEM SOFTWARE

1. Explain the following with examples

   a) Grammar   [06 M]

   b) Lexical Analysis   [06 M]

2. Explain the following with examples

   a) Syntactic Analysis   [06 M]

   b) Code Generation   [06 M]

3. List out and discuss various features of Machine Independent Compiler.   [12 M]

4. What are the features of Machine Dependent Compiler?   [12 M]

5. Explain

   a) P-code compiler   [06 M]

   b) compiler – compilers.   [06 M]

6. Draw the syntax tree for the following statement   [12 M]

7. What is a Text Editor? Explain editor structure.   [12 M]

8. Explain in detail about interactive debugging system.   [12 M]

9. Discuss briefly about functions in Compiler.   [12 M]

10. Explain

    a) Structured variables   [06 M]

    b) Storage allocation.   [06 M]

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UNIT – IV

DEVICE DRIVERS AND BLOCK DRIVERS

1. What is a Device Driver? Explain various types of devices.   [12 M]

2. What are the design issues and driver in a test data generator?   [12 M]

3. What are the drivers in an A/D Converter?   [12 M]

4. Explain in detail about character driver I.   [12 M]

5. Discuss in detail about character driver II.   [12 M]

6. Explain design and gross anatomy of a device driver.   [12 M]

7. List out and discuss various design issues and driver of a Block Test Data Generator.[12 M]

8. List out and discuss various design issues and driver of a RAM Disk driver.   [12 M]

9. Explain Block Drivers I in details.   [12 M]

10. Explain about Block Driver III   [12 M]

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UNIT – V

LINUX AND SHELL SCRIPTS

1. Explain in detail about LINUX.   [12 M]

2. Explain LINUX Architecture. With a neat diagram.   [12 M]

3. List and explain Linux Administration tools.   [12 M]

4. Explain various Linux commands. With examples.   [12 M]

5. a) Explain about shell scripting in detail.   [06 M]

   b) List out advantages and disadvantages of shell scripting.   [06 M]

6. Explain the execution of a Linux shell script. With an example program.   [12 M]

7. Explain various shell programming. With examples.   [12 M]

8. Explain the following concepts in shell programming with examples

   a) Arrays   [06 M]

   b) Operators   [06 M]

9. Explain the following concepts in shell programming with examples

   a) Decision Making   [06 M]

   b) Shell Loops   [06 M]

10. Explain the following concepts in shell programming with examples

   a) if … fi   [02 M]

   b) if … else … fi   [03 M]

   c) case … esac   [03 M]

   d) break   [02 M]

   e) continue   [02 M]

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