L TE CMPN Sem-VI (Rev)

10/12/2011

SPCC

PR-Oct. (1) 140

Con.6373-11. **MP-3565**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory.**
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume suitable data if **necessary**.

1. Solve any **four** – **20**
   (a) State the reason for the assembler to be a multi pass program.
   (b) Explain the concept of macro definition within a macro.
   (c) Explain dynamic linking loader.
   (d) Explain different phases of compiler.
   (e) Differentiate between machine dependent and machine independent code optimization.

2. (a) What is forward reference problem ? How is it handled in two-pass assembler ? Explain with the help of neat flowchart the working of a two-pass assembler. Clearly showing the organization and uses of the databases. **15**
   (b) Distinguish between DFA and NFA. **5**

3. (a) How is macro defined, called and expanded ? Explain the working of a single pass macroprocessor. **10**
   (b) What is the need of linkage editor in system programming ? Explain its working in brief. **10**

4. (a) What is code optimization ? What are various strategies for code optimization ? **10**
   (b) Define and explain the following terms with suitable example. **10**
      (i) Parse tree
      (ii) Syntax tree
      (iii) Context Free Grammar
      (iv) Regular expression
      (v) Handles.

5. (a) Differentiate between Top-down and Bottom-up parsing. Explain each of them with suitable example. **10**
   (b) Explain the Run time storage Organization in detail. **10**

6. (a) Explain three-address code, its types and also implementation of three address statements. **10**
   (b) Explain Syntax Directed Translation. Give syntax directed definition to translate infix expression to postfix expression. **10**

7. Solve any **four** :– **20**
   (a) Loading and linking scheme.
   (b) Error recovery techniques used by compiler.
   (c) Role of finite state automata in compiler theory.
   (d) Syntax trees and their usage.
   (e) Java compiler environment.

30/11/11 TE CMPN VI (REV)
OOSE

45: 2nd Half-Exam.-11 mins (a).

Con. 5992-11. **MP-3572**

(3 Hours) **[Total Marks : 100**

N. B. : (1) Question No. 1 is **compulsory**.
(2) Out of remaining **six** questions, attempt any **four** questions.
(3) Assume **suitable** data wherever **required**.

1. (a) Draw the detailed class diagram for the following scenario: 10
A product is to be installed to control elevators in a building with m floors. The problem concerns the logic required to move elevators between floors according to the following constraints.
Each elevator has a set of m buttons, one for each floor. These illuminates when pressed & cause the elevator to visit the corresponding floor. The illumination is cancelled when the elevator visits the corresponding floor.
Each floor except the first floor & top floor has two buttons, one to request the up elevator and one to request the down elevator. These buttons illuminate when pressed. The illumination is canceled when an elevator visits the floor & then moves in the desired direction.

(b) Explain COCOMO model used for software estimation. 10

2. (a) Explain the following with suitable example: 10
Aggregation, Generalization, Association, Role, Dependency.

(b) What is sequence diagram? What are the elements used in sequence diagram, explain each 10

3. (a) Explain coupling &cohesion. Explain different types of coupling and cohesion. 10
(b) Explain how to map different types of association and generalization relationship to code. 10

4. (a) Construct an Activity Diagram for processing the mortgage requests. 10

(b) Explain RAD and Spiral Model for Software development. 10

5 (a) What is requirement? Explain the different types of requirements in detail. 10
(b) Explain debugging process in detail. 10

6 (a) Explain version control and change control. 10

(b) Explain Reverse & Re-Engineering. 10

7 Write Short Notes (any two): 20

(a) Types of Maintenance

(b) Regression Testing

(c) Task Network and Timeline chart

5/12/11 TE CMPN Sem-VI
Advanced microprocessor

47 : 2nd half.11-AM(d)

Con. 6184-11. **MP-3577**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Solve any **four** out of the **remaining** questions.
(3) **Figures** to the **right** specific the marks.

1. (a) Explain how flushing of pipeline problem is minimized in Pentium Architecture. **10**
   (b) Draw protected mode address translation mechanism of 80386 DX with a neat diagram and explain the segment translation in detail. **10**

2. (a) Explain Itanium processor with respect to instruction format, core pipeline stages and its functionality in detail. **10**
   (b) Explain the various data types supported by SPARC. **10**

3. (a) Explain the cache organisation of Pentium. **10**
   (b) State features of PCI bus. Draw and explain work station based on PCI bus. **10**

4. (a) Differentiate between Pentium and Pentium Pro-processors with respect to generation, overlocking feature, core pipeline stages, address bits, main memory size. **10**
   (b) Draw and explain the state transition diagram for Pentium processor's bus cycle. **10**

5. (a) Explain the architecture of Super SPARC with the help of a neat diagram. **10**
   (b) Explain instruction pairing rules of Pentium. Also explain the "Instruction Issue" algorithm in detail. **10**

6. (a) Explain ISA bus features in detail. **10**
   (b) Explain floating point pipeline stages of Pentium processor. **10**

7. Write short notes on the following :— **20**
   (a) Intel Net Burst Microarchitecture
   (b) Structure of segment descriptor
   (c) SCSI
   (d) USB.

15/12/11 TE CMPN VI CR)
ACN

Con. 6555-11. MP–3574

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions from the remaining.
(3) Draw **neat** diagrams wherever **required**.

1. (a) Compare TCP/IP Protocol suite and ISO/OSI Protocol suite. (05)

   (b) Explain Packet Filtering and Layer 7 Filtering. (05)

   (c) Explain the naming scheme used in SNMP. (05)

   (d) Discuss the functions of SONET layers. (05)

2. (a) Explain the functions of ATM adaptation layer. Explain in detail AAL1 and AAL2 layers. (10)

   (b) What is Socket Programming? Write c++/Java code for client-server program using connection oriented protocol. (10)

3. (a) Compare unicast routing Protocols OSPF and RIP. Explain RIP in detail. (10)

   (b) What are Multicast routing protocols? Explain DVMRP in detail. (10)

4. (a) What is SNMP? Explain SNMP PDU format and messages. (10)

   (b) What is RTP? Explain RTP format in detail. (10)

5. (a) Describe different delay components in communications network. (10)

   (b)Explain different QOS parameters in case of ATM. (10)

6. (a) Explain Network Address Translation. Discuss SNAT and DNAT. (10)

   (b) Explain H.323 standard in detail. (10)

7. Write short notes on (any <u>two</u>): (20)

   (a) IP Multicasting.

   (b) Traffic descriptors used in ATM.

   (c) X.25

7. Write short notes on (any two): (20)

(a) IP Multicasting.

(b) Traffic descriptors used in ATM.

(c) X.25.

(d) Storage Area Networks(SAN).

20/12/11

TE CMPN Sem-VI

DW & M

AGJ 2nd half (g+) 37

Con. 6729-11. **MP–3568**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** out of remaining **six** questions.

1. (a) What is dimentional modeling ? Explain in detail. **10**
   (b) What is datamining ? What are techniques and applications of datamining ? Explain the architecture of typical datamining system. **10**

2 (a) Explain how Apriori algorithm is useful in identifying frequent item set ? **10**
   (b) Explain major factors related to performance of DT based datamining techniques. **10**

3. (a) Explain in detail HITS algorithm. **10**
   (b) Explain Architecture of data warehouse. **10**

4. (a) Design Star Schema for autosales analysis of the company. **10**
   (b) Explain the techniques for web structure mining. **10**

5. (a) Explain Snowflake Schema with example. **10**
   (b) Explain in detail metadata and its various types. **10**

6. (a) Explain ID3 algorithum. What are the pros and cones of it ? **10**
   (b) Explain ETL of data warehousing in detail. **10**

7. Write short notes on :–
   (a) Similarity and distance measures in datamining **10**
   (b) Advanced Association rules. **10**
