13-11-13-DTP6-MU-20 T.E. COMP Sem-II Dec-2013

Con. 8267-13.

LJ-11519

(3 Hours) [Total Marks : 100

Advanc. Microprocessor

N.B. : (1) Question No. 1 is **Compulsory**.
(2) Solve any **four** questions from the remaining questions.

1. (a) Draw and explain various instruction formats of SPARC processor. 10
(b) Explain the protection mechanism of x86 Intel family microprocessor. 10

2. (a) Explain segment translation mechanism with flowchart. Also explain segment descriptor. 10
(b) Explain data cache organisation of pentium and give emphasis on triple ported access of data cache. 10

3. (a) Explain dynamic branch prediction logic of Pentium processor. 10
(b) Explain different stages of integer pipeline and floating point pipeline of Pentium processor. 10

4. Write short notes on:– 20
(a) USB
(b) Data types supported by SPARC
(c) VESA
(d) CALL gate Mechanism

5. (a) Draw the block diagram of 80386 DX processor and explain each block in brief. 10
(b) State the features of PCI bus. Draw workstation based on PCI bus and explain. 10

6. (a) Compare super SPARC and ultra SPARC processors. Draw the architecture of super SPARC and explain. 10
(b) Explain how flushing of pipeline is minimized in pentium processor. Also explain the instruction pairing rules for pentium. 10

7. (a) Explain Intel's Net Burst microarchitecture with diagram. 10
(b) Explain Itanium processor with respect to instruction format, core pipeline stages and functionality. 10

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one correction in (Q 1) 7th line ...

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T.E. Sem VI Computer NOV 13 1/2

Sub: ACN

Con. 8835-13. **LJ-11608**

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

Date 09/12/13

N.B. : (1) Questions No. **1** is **compulsory**.
(2) Attempt any **four** questions from the rest.
(3) Assume **suitable** data if **necessary**.

1. Vidya Niketan is an Education Trust having 3 buildings in its campus, for management, Technology course and for hostel. It caters to approximately 500 students for each of the courses. Hostel facility is only outstation students of approximately 200 no. Vidya Niketan would like to design their network such that their buildings are connected through high-speed line. All the 3 buildings and their respective departments have access to common data center. The account, administration and examination departments are common. And also library and conference facilities are should. (shared) The Web server. Email-server etc. are available to all.

   (a) Assume suitable application running in the labs and departments and identify the need / requirements in terms of hardware, software connectivity. **10**

   (b) Design the compus network wrt above requirment and draw neat diagram. The security concerns require to be handled. **10**

2. (a) Compare and conrast RIP and OSPF protocols. **10**

   (b) Why traditional routing algorithms for unicasting can not be need for Multicasting. Expain anyone Multicast protocol (MOSPF / DVMRP) in detail. **10**

3. (a) Explain the need of studying queuing model while understanding Network traffic Engineering. Explain M / M / 1 queuing model with the help of an example. **10**

   (b) Explain the working of MPLS network. What advantage does it offer over IP. **10**

4. (a) Explain SONET SDH Structure in detail. **10**

   (b) What are the various Time Delay consideration taken into account while doing engineering for a traffic Network, **10**

5. (a) Eplain AAL layer and its various classes for ATM. **10**

   (b) What are various network management tool available. Explain SNMP protocol. **10**

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T.E. Sem VI Computer NOV. 13

SWS: ACN.

7/2

Con. 8835-LJ-11608-13.

6. (a) Explain X·25 and X·75 in detail. **10**

   (b) Write a socket program for connection loss client server communication. **10**

7. Write short notes on (any **four**) **20**
   (a) QOS in IP
   (b) Network Address Translation.
   (c) Enterprise Network Security.
   (d) NMAP
   (e) Class base and Class less addressing scheme in IPV4.
   (f) SMDS.

15-11-13-DTP-P-14-AK-3

T.E. SEM VI COMP 3/12/2013

SYSTEMS PROGRAMMING & COMPILER CONSTRUCTION

Con. 8552-13. **LJ-11568**

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

N.B. : (1) Question No. **one** is **compulsory**.
(2) Attempt any **four** from the remaining.
(3) Assume suitable data wherever necessary.

1. (a) Differentiate between a system program and an application program with examples. **5**
   (b) Explain the different ways of parameter passing in macros. **5**
   (c) What are the different error handling techniques used in a compiler. **5**
   (d) Explain the various function of a loader. **5**

2. (a) Explain the working of single pass assembles. Show the structure of its databases used. **10**
   (b) Differentiate Top-down and Bottom-up passing techniques. Explain shift-reduce passes in detail. **10**

3. (a) Explain the working of Direct Linking Loader with neat flow charts. **10**
   (b) Explain the different code optimization techniques in compiter design. **10**

4. (a) What do you inean by ambiguity in grammar ? How will you remove ambiguity from a grammar ? use suitable examples. **10**
   (b) Show whether the following grammar is LL (l). Construct the passing table. **10**
   S → AB / y Da
   A → ab / c
   B → dC
   C → yC / y
   D → xD/y

5. (a) What is binding ? Explain static and dynamic binding. **10**
   (b) Explain the features of Java Compiter Environment. **10**

6. (a) Explain syntax directed translation. Give the syntax directed translation equations for infix to prefix conversion. **10**
   (b) With examples explain the different forms of intermediate code generated. **10**

7. Write short notes on (any **two**) :- **20**
   (a) Compiter - compiter
   (b) Finite automata
   (c) SPARC assembler
   (d) Garbage collection and compaction.

12-11-13-DTP-P-14-AK-8

Con. 7348-13. TE(comp) Sem - VI - Oct 2013 22/11/13

LJ-11473

OOSE

(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) For Construction company software is to be developed with following specifications :- Company undertakes many projects each project is at particular location. Each project is supervised by project manager, assigned by COE of the company. Record related to start of the project, completion of it is maintained. Under each PM there is a team of people of different category like designer, plumber, electrician, Architect, labour etc. Each project is marketed by team of Marketing Executives. **10**
   (i) Draw class diagram for it.
   (ii) Draw use - case diagram.
   (b) Explain agile process with its advantages. Explain any one agile process. **10**

2. (a) How to map following associations to code ? **10**
   (i) Realization of unidirectional one-to-one associations.
   (ii) Bidirectional one-to-one associations.
   (iii) Bidirectinal on-to-many associations.
   (iv) Generalisation.
   (b) Explain coupling and choesion types in detail. **10**

3. (a) Why FTR is necessary ? How FTR is conducted ? **10**
   (b) Explain version control and change control with the help of suitable example. **10**

4. (a) What is Sequence diagram ? What are the elements used in Sequence diagram, explain each . **10**
   (b) Explain Integration and Regression Testing. **10**

5. (a) Explain Singleton Pattern in detail. **10**
   (b) Explain the following with suitable examples :- **10**
   Composition, Association, Generalization, Aggregation.

6. (a) Explain Function Point based Metrices. **10**
   (b) Draw the activity diagram of ATM activities. **10**

7. Write short notes (any **two**) :- **20**
   (a) CMM levels.
   (b) Task Network and Timeline Chart
   (c) Change Control.

ONE CORRECTION
Q5(A)

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Con. 9243–13.

LJ–11650 1/2

T.E. Sem VI Computer Engg Nov. 13

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

Dat 13/12/13

SUB:- DWM.

N.B.: (1) Question No. **1** is **compulsory**.
(2) Answer any **four** questions out of the remaining **six** questions.
(3) Assume data if **required**, and state **clearly**.

Q1. (A) What is a Data ware house? Explain the three tier architecture of a Data Ware house with a block diagram. 10

Q1. (B) Explain Data mining as a step in KDD. Explain the architecture of a typical DM system. 10

Q2. (A) What is meant by market- basket analysis? Explain with an example. State and explain with formula the meaning of following terms 10

(I) Support

(ii) Confidence

(iii) Iceberg Queries

Hence explain how to mine multilevel Association rules from transaction databases, with examples.

Q2. (B) What is meant by Web Mining? Explain any one Web mining Algorithm. 10

Q3. (A) All Electronic company have sales department sales, consider three dimensions namely 10

(i) Time (ii) Product (iii) Store

The schema contains central fact table sales with two measures

(I) Dollars-cost and (ii) Units-Sold

Using the above example, describe the following OLAP operations

(I) Dice (ii) Slice (iii) Roll-Up (IV) Drill-Down

Q3. (B) Explain ETL (Extract Transform Load) cycle in a Data Warehouse in detail 10

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Con. 9243–LJ–11650–13.

T.E. Sem VI Comput Engg Nov-13 2/2

Sub. D.B.M. Date 13/12/13

Q4. (A) Compare between OLAP and OLTP 10

Q4. (B) Explain in detail the HITS Algorithm 10

Q5. (A) What is meant by Information Package Diagram, For recording the information requirements for "Hotel Occupancy" having dimensions like time, hotel etc., give the information package diagram for the same, also draw the star schema and snowflake schema 10

Q5. (B) Consider the following transactions: - 10

TID	Items
01	1,3,4,6
02	2,3,5,7
03	1,2,3,5,8
04	2,5,9,10
05	1,4

Apply the Apriori Algorithm with minimum support of 30 % and minimum confidence of 75 and find the large item set L

Q6. (A) Give five examples of application that can use clustering. Describe any one clustering algorithm with an example. 10

Q6. (B) What is meant by meta data? Explain with example. Explain the different types of meta data stored in a data ware house. Illustrate with examples. 10

Q7. Write short Notes on (Any Two) 20

(a) Web Personalization
(b) Decision Tree based classification Approach
(c) Trends in Data Ware Housing
(d) Attribute Oriented Induction