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SARDAR PATEL UNIVERSITY
T.Y.B.Sc. EXAMINATION – 2011
COMPUTER SCIENCE

CS-301 (Business Application Through DBMS)

TIME : 3.00pm to 06.00pm

Thursday, 31 March, 2011

Max. Mark : 80

- Q-1
- [A] Describe choice of organization. 4 [05]
 - [B] What is accounting? State different branches of accounting. Explain financial accounting and its objective. 4 [04]
 - [C] Define the following terms: 4 [12] [04]
 - (i) Capital (ii) Expences (iii) Debtor (iv) Assets
- OR

- Q-1
- [A] Define business. Explain types of organization in brief. [04]
 - [B] State the advantages and limitation of the accounting. [05]
 - [C] Define the following terms. [04]
 - (i) Drawing (ii) Creditors (iii) Book of account (iv) Equity

- Q-2
- [A] What is trial balance? Explain how it is prepared? Explain objects of preparing trial balance. 4 [04]
 - [B] Write a note on cash book(single column & double column). Explain its balancing with example. 5 [06]
 - [C] What is a subsidiary book? Also write down advantages of it. 4 [13] [04]
- OR

- Q-2
- [A] Explain debit and credit with example. Write the rules to debit and credit the accounts. [04]
 - [B] Prepare a Journal and ledger for the following transactions. [07]

1	Ramesh started business with Rs. 50000 on 1/3/80.
2	Purchased furniture from Mohan on credit of Rs. 10000 on 3/3/80
3	Purchased goods on cash Rs. 20000 on 5/3/80
4	Paid to Mohan Rs. 1000 on 7/3/80
5	Sold goods of Rs. 8000 in 16000 on 10/3/80.

- [C] Write any three differences between trial balance and balance sheet. [03]

- Q-3
- [A] Explain the list commands with all the options. 5 [05]
 - [B] Explain the following commands with example. 3 [03]
 - (i) Create (ii) Append (iii) Display
 - [C] Explain the following functions with example. 3 [03]
 - (i) month() (ii) upper() (iii) min()
 - [D] Write the difference between Accept and Input. 2 [02]
- OR

- Q-3
- [A] Explain the following with example. [03]
 - (i) set date (ii) set deleted (iii) set status
 - [B] Explain the following functions with syntax and example. [03]
 - (i) cdown() (ii) date() (iii) sqrt()
 - [C] Explain the following command with syntax and example. [03]
 - (i) modify structure (ii) rename (iii) replace
 - [D] Differentiate the followings. [04]
 - (i) ?, ??, ??? (ii) delete and recall

- Q.4 (a) Differentiate the following pair : 6
 1. Find & Seek 2. Compound index and Structural index
 (b) Explain Conditional control commands with example. 5
 (c) How corrupted index file is reorganized? Explain. 3

OR

- Q.4 (a) What is Sorting? Explain the SORT command in brief. 6
 (c) Explain the following command: 6
 1. @ ... SAY ... GET 2. SCAN ... ENDSCAN
 (b) Differentiate : SET INDEX and SET ORDER 2
- Q.5 (a) Explain Update command in brief. 5
 (b) Explain advantages of Label facility available in foxpro. 4
 (c) What is macro substitution? Give some use of it. 4

OR

- Q.5 (a) What is Report writer? Give the feature of Report writer facility available in Foxpro. Explain the commands which are used to create and print the report. 7
 (b) Explain in detail JOIN command with appropriate example 5 5
- Q.6 (a) What is Window? And also explain different command using with it. 5 5
 (b) Explain the commands which are used to
 i. back-up the memory variable in file ii. give back from the file 4 4
 (d) Explain the command(s) to transfer multiple records from a database BOOK to an array MBOOK. Database has 20 4 records and each record has 5 fields. 4

OR

- Q.6 (a) What are macros? Explain how they are created, edited, recorded and saved using FoxPro. 6
 (b) List out steps to create Pop up menu and various command using with it. 4
 (c) Differentiate : scatter and gather 3

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No. of printed pages : 2

75+0
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SARDAR PATEL UNIVERSITY
T. Y. B. Sc. (Computer Science) Examination
Saturday, 2nd April 2011

CS-302 [Data Structure and Programming using C++]

Time : 3:00 PM to 6:00 PM

TOTAL MARKS : 80

- Q.1 [A] Explain basic terminology related to Object Oriented Programming. [6]
[B] Explain how to declare and initialize variable in C++. Explain Dynamic initialization of variable and reference variable with suitable example. [5]
[C] What are Manipulators? Explain the use of Manipulators with example. [3]

OR

- Q.1.2 [A] Write notes on Characteristics & Application of Object Oriented Programming [6] 6
14 [B] Explain the concept of Conventional, Structure and Object Oriented Programming. [5] 4 1/2
13 [C] Explain cin and cout statement with example. Which header file must be included when we use these statements in C++ program? [3] 3

- Q.2 [A] Explain switch statement, if-else statement and for loop with example. [5] 5
17 [B] What is Structure? Discuss the concept of Arrays of Structure and Structure within Structure. [5] 4
16 [C] What are Constructors? List type of Constructors and explain any one of them with suitable example. [3] 2 1/2

OR

- Q.2 [A] What is Sorting and Searching? Write Quick sort algorithm. [5]
[B] Define Class and Object? Explain declaration of class and accessing of class members and functions with example. [5]
[C] Explain New and Delete operator with example. [3]

- Q.3 [A] What is function? What are the advantages of using function? Which type of user defined functions used in C++? Explain any one by giving example. [5] 5
10 [B] Define Pointer. What are the advantages of Pointer? Explain how pointer can be declared and initialize? Explain concept of pointer to pointer. [5] 5
9 [C] Explain function overloading with example. [3] 3

OR

- Q.3 [A] What do you mean by user defined function? How you can pass parameter to user defined function? Discuss pass by value and pass by address with example. [5]
[B] Explain following. [5]
[1] Pointer and Structure [2] Pointer and Array
[C] Explain inline function? Write advantage of inline function. [3]

- Q:4 (a) List application on stack and explain recursion algorithm to calculate N factorial and functioning of this procedure with the help of Dry Run. (06)
- (b) Explain: Storage Representation of Integer and characters. (06)
- (c) Define following: (02)
- 1) Data and Data Structure
 - 2) Stack

OR

- Q:4 6 (a) Write an algorithm for transforming infix to postfix expression and convert given infix expression to postfix expression: (06) 6
- $((a/b) * c - d + e^{(f * g)})$ ✓ $abc * d - efg * ^ +$
- 7 (b) Write algorithm for PEEP and CHANGE into Stack. (06) 6
- 8 (c) What is Array? Write operations on Array. (02) 2

- Q:5 4 (a) Write algorithm for Insert an element at given location in Single Linked List. (06) 6
- 5 (b) What is difference between Queue and circular Queue? Write an algorithm for insert and delete an element in circular queue. (07) 7

OR

- Q:5 (a) Define Header Linked List and write an algorithm of Traversing a Circular Header Linked List. (07)
- (b) Define Single Linked List and explain storage representation of Single Linked List. (06)

- Q:6 (a) Explain Methods of Representing Tree. (05)
- (b) Write algorithm of Linear search tree. (04)
- (c) Define following terms with figure: (04)
1. Lexically ordered tree
 2. Loop

OR

- 1 Q:6 (a) Explain Binary tree and also explain insertion and deletion operation on a binary tree. (05) 4 1/2
- 2 (b) Explain Threaded Storage Representation of Binary Tree. (04) 3 1/2
- 3 (c) Define following terms with figure: (04) 4
1. Directed graph
 2. Multi Graph

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SARDAR PATEL UNIVERSITY
T. Y. B. Sc. Examination – 2011
Computer Science
CS – 303: Business Data Processing
Tuesday, 5th April, 2011

1168-7211

Time: 3.00pm to 6.00pm

Total Marks: 80

SECTION - I

- Q-1 [a] Write the full form of Cobol. Also explain the structure as well as coding format of a Cobol program. 5 [5]
- [b] What is Level Structure? Explain in brief how it is employed in Cobol. Also state the valid level numbers. 4 [5] 13
- [c] Explain the following divisions with use of each. [4]
- (i) Identification division 4
- (ii) Environment division

OR

- Q-1 [a] List and explain the different types of constant available in Cobol. Also differentiate between literal and figurative constant [5]
- [b] What is the importance of editing characters? Explain the Zero Suppression 'Z' and Asterisk '*' with examples. [5]
- [c] Explain the following clauses: [4]
- (i) Value Clause (ii) Justified Clause
- Q-2 [a] Discuss the following arithmetic verbs: [6]
- (i) ADD (ii) MULTIPLY 5
- [b] Differentiate between READ and WRITE verbs. 4 [4] 12
- [c] List and explain the categories of COBOL statements. 3 [3]

OR

- Q-2 [a] Explain in brief the COMPUTE verb. [5]
- [b] Write short note on ACCEPT and DISPLAY. [4]
- [c] What is importance of ADD CORRESPONDING? Explain. [4]
- Q-3 [a] What is Condition Name? Why it is used? Explain it with example 4 1/2 [5] 11 1/2
- [b] What is purpose of the PERFORM verb? Explain in detail how a PERFORM..... UNTIL statement works. 3 1/2 [4]
- [c] Write short note on REDEFINES clause. 3 1/2 [4]

OR

- Q-3 [a] What is Table Handling in COBOL? Explain the OCCURS clause and subscripting with its rules. [5]
- [b] Write short note on RENAME clause. [4]
- [c] Discuss the GO TO with depending phrase with example. Also make comparison with simple IF. [4]

- Q.4 A. Explain MERGE verb with OUTPUT PROCEDURE with example. [7]
- B. Explain PROCEDURE DIVISION, LINKAGE SECTION, EXIT PROGRAM and GOBACK of COBOL Subroutine with example. [7]

OR

- Q.4 A. Explain SORT verb with example. 6 [7] 12 1/2
- B. Explain EXAMINE verb with example. 6 1/2 [7]

- Q.5 A. What do you mean by Index File? Explain FILE-CONTROL paragraph for Indexed Files with example. 6 [7] 12
- B. Explain General Format of Report. 6 [6]

OR

- Q.5 A. Explain "REPORT-DESCRIPTION ENTRY" with example. [7]
- B. Explain START and DELETE of Procedure Division Statements for Index File. [6]

- Q.6 A. Describe "TYPES OF FILE". 6 [7] 11 1/2
- B. Explain Direct Addressing, Index look-up and Randomizing. 5 1/2 [6]

OR

- Q.6 A. Why Hashing techniques are used? Explain Digit analysis and Mid-square hashing algorithms with an example. [7]
- B. Describe the criteria for selecting file organization and access mode. [6]

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SARDAR PATEL UNIVERSITY
T.Y.B.Sc. (Computer Science) Examination
Date: 7th April, Thursday, 2011

Answered
70 + 073

CS-304 System Analysis, Design and Software Engineering

Time: 3.00 p.m. to 6.00 p.m.

Total Marks : 80

Note:

1. All the questions are compulsory.
2. Give diagrams or example where required.

Q.1

- [A] Who is system analyst? Explain system analyst relation to the company. [06]
Write brief note on role of system analyst.
- [B] Define Information System. Draw general model of the system. List the different types of information system. [05]
- [C] Define :: (1) Black box (2) Boundary & Environment [02]
- OR

Q.1

- [A] Describe feasibility study. Why feasibility study is needed? Explain different types of feasibility study. 6 [06]
- [B] Write a short note on:
(1) System Evaluation (2) Problem Identification 4 [05]
- [C] Differentiate between: Deterministic & Probabilistic system 2 [02]

Q.2

- [A] Discuss the statement – “Principal of starting with output “. Explain the design of principals of output. Explain Objective of Output. [07]
- [B] Define Data Capture. Explain Data Capturing Process in Brief. [07]
- OR

Q.2

- [A] List Fact gathering Techniques which r commonly used. Explain Interview. Write the general rules for conducting an interview. Explain advantages of interviewing. 6 [07]
- [B] What is SSADM? List the stages of SSADM. Write down the advantages of SSADM. Explain the components of System Implementation. 6 1/2 [07]

Q.3

- [A] “DFD is a better tool as compared to flowchart” – comment. Explain. [05]
- [B] Draw the DFD for Hostel Management System. [08]
- OR

Q.3

- [A] Distinguish between Physical DFD and Logical DFD. 5 [05]
- [B] Draw PDFD & LDFD for any order processing system you know. 6 1/2 [08]

Q.4

[A] What r case tools? Give two examples of case tools. What benefits & weakness do case tools provide & what r their limitations? [13]

OR

Q.4

[A] Explain the following Terms: [13]

- ✓ (1) Centralized Information Repository ✓ (2) Code Generator ✓ #2
- ✓ (3) Interface Generator ✓ (4) Encryption
- ✓ (5) Management Tools

Q.5

[A] Explain Waterfall Model with Diagram. 5 [05]

[B] Explain the phases of software development. 7 [08]

OR

Q.5

[A] Explain Spiral Model with Diagram. [05]

[B] Define: Software and Software Engineering. What r the general characteristics? Explain the Role of Management in Software Development. [08]

Q.6

[A] Define SRS. Explain need & structure of SRS. 7 1/2 [08]

[B] Write a short note on: 5 1/2 [06]

- ✓ 1) Structure English ✓ 2) Regular Expression ✓ 3) Decision Table

OR

Q.6

[A] Explain Analysis Phase of SRS in brief. [08]

[B] Explain: Validations for SRS. [06]

***** ALL THE BEST *****

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SARDAR PATEL UNIVERSITY
T.Y.B.Sc. EXAMINATION
COMPUTER SCIENCE : CS305
DATA COMMUNICATION AND NETWORKS

DATE:09/04/2011
TIME:3.00pm TO 6.00pm

TOTAL MARKS: 80

SECTION - I

- Q-1
- ✓ [A] Define Computer Network. Explain need and disadvantages of computer network. 7 [07]
 - ✓ [B] Explain politics of telephone network. 5 13 [06]
 - ✓ [C] Define term : Trunks 1 [01]
- OR
- Q-1
- [A] Give the types of Network and explain MAN and WAN in detail. [07]
 - [B] Write note on structure of telephone network [06]
 - [C] Define term: Local loop [01]
- Q-2
- ✓ [A] Write the difference between circuit switching and packet switching. 6 [06]
 - ✓ [B] Discuss in detail fiber optics transmission media and its advantages. 5 12 [06]
 - ✓ [C] Define term: Modulation rate 1 [01]
- OR
- Q-2
- [A] Write conditions for synchronous TDM. Discuss synchronous TDM in detail by giving example. [07]
 - [B] Differentiate between guided and unguided media. [04]
 - [C] Define terms : (1) Bandwidth (2) Baud rate [02]
- Q-3
- ✓ [A] Write notes on: 6 1/2 [07]
 - (1) Modem
 - (2) Router
 - ✓ [B] Discuss the concept of bridge and explain simple bridge and multiport bridge. 5 1/2 12 [06]
- OR
- Q-3
- [A] Explain the concept of Hub in networking. [05]
 - [B] Discuss time division switching along with its types in detail. [08]

- Q-4 (a) What are the protocols? Explain the functions of protocol 8 1/2 [09]
(b) What is HDLC? Explain the frame format of HDLC in detail. 5 13 1/2 [05]

OR

- Q-4 (a) What is SNMP? Explain SNMP model and its protocol. [10]
(b) Differentiate between parallel data transfer and serial data transfer [04]

- Q-5 (a) What is topology? Explain Bus, Star, Tree, Intersecting, Regular 9 12 [10]
(b) Differentiate between Multi-user and LAN. 3 [03]

OR

- Q-5 (a) E-mail is Better and Faster way of communication. Justify the sentence [06]
(b) Explain following terms [07]
i) Work station ii) Throughput iii) Modulation Rate iv) Bottlenecks
v) Media vi) Server vii) WWW.

- Q-6 (a) Describe the following terms [09]
i) DNS ii) Internal hyperlink iii) Hypermedia
(b) Explain the <AHREF> and
 tags with Example [04]

OR

- Q-6 (a) Explain forms with syntax and different types of inputs in HTML with example 7 [07]
(b) Explain the Features of various Markup Languages SSSF 5 12 [06]

X=X=X

2