

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[3877]-101

M. C. M. (Semester - I) Examination - 2010

'C' PROGRAMMING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.
 - (2) Solve **any five** from the remaining.
-
-

Q.1) (A) Find and explain output of the following programs : [12]

- (a)

```
void main() {  
    int a = 5, b, c;  
    b = a++ + ++a + a++;  
    c = ++a + a++ + a--;  
    printf("\n a = %d, b = %d, c = %d", a, b, c);  
}
```
- (b)

```
void main() {  
    int a = 5, b = 15, r, s;  
    r = a < 8;  
    s = (a < 10) && (b == 12);  
    printf("r = %d, s = %d", r, s);  
}
```

```

(c) void main() {
    int x = 'i';
    switch (x) {
    case 'i' : put c('i');
    case 'j' : put c('j');
    case 'k' : put c('k'); break;
    case 'l' : put c('l');
    default : put c('a'); }
    }

```

(B) Explain the following : **(Any Two)** **[08]**

- (a) Data types in 'C'
- (b) Command Line Arguments
- (c) Bitwise Operators in 'C'

Q.2) Write a C program to print the following : **[10]**

```

*   *   *   *   *
    2   2   2   2
        *   *   *
            4   4
                *

```

Q.3) Write a program to accept 15 numbers and print them in reverse order of acceptance using recursion. (Do not use array) **[10]**

Q.4) Write a program to accept a string. The program should print : **[10]**

- (a) No. of Vowels
- (b) No. of Digits
- (c) No. of Spaces
- (d) No. of Capital Letters in the String

- Q.5)** Write a 'C' program to accept 20 integer numbers from the user and store them in an array. The program should then sort numbers in descending order and print minimum and maximum of the numbers. **[10]**
- Q.6)** Write a 'C' program to copy a file to another. Use Command Line Arguments. **[10]**
- Q.7)** Accept 24 records in an array of structures, player with fields playerno, name, no_of_innings, totalruns, average. Print name of the player with highest average. **[10]**
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-102

M. C. M. (Semester - I) Examination - 2010

FUNDAMENTALS OF INFORMATION TECHNOLOGY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.*
- (2) Attempt **any five** from the remaining.*
- (3) Figures to the right indicate full marks.*

-
-
- Q.1)** (A) Define Computer. Discuss Generations of Computer in detail with example. **[12]**
- (B) Solve : **[08]**
- (a) $(1212)_{10} = (?)_2$
 - (b) $(1B2)_{16} = (?)_{10}$
 - (c) $(712)_{10} = (?)_8$
 - (d) $(10101)_2 = (?)_{10}$
- Q.2)** Discuss Classification of Printers. Explain with the help of advantages and disadvantages. **[10]**
- Q.3)** Differentiate between Multiprogramming and Multiprocessing with diagram. **[10]**
- Q.4)** Explain OSI Model in detail. **[10]**
- Q.5)** Explain any one Internal Coding System with example. **[10]**

Q.6) Define Operating System. Write functions of an Operating System. **[10]**

Q.7) Explain Primary Memory in detail. **[10]**

Q.8) Differentiate between Client - Server Network and Peer-to-Peer Network. **[10]**

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-103

M. C. M. (Semester - I) Examination - 2010

SOFTWARE ENGINEERING AND BUSINESS PROCESS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Q. Nos. 1 and 6 are compulsory.

*(2) Solve **any three** from the remaining.*

Q.1) Fitness Mantra offers various fitness training courses. It has a team of trainers who specialise in different therapies.

Interested people enquire about different courses and join a course needed by paying monthly/quarterly/yearly membership fees.

They are divided among batches which are allocated to different trainers according to their availability.

At the end of month health progress report is prepared and given to members. The members may renew membership.

(a) File Design **[10]**

(b) ERD **[10]**

(c) Design Membership Form **[05]**

Q.2) ABC Bank offers various schemes of term deposits with attractive interest rates. Customer can make application for a T.D. A/c. by filling a form mentioning the amount and period. On verification of the form and payment of amount, account is opened and a Term Deposit Receipt (TDR) is issued to the customer.

The interest is calculated half-yearly and credited to customer's TD A/c. If required, customer can request for premature withdrawal. On completion, of TD period the maturity amount is paid to customer.

Draw Context and First Level DFD. [10]

Q.3) Draw a Use-case Diagram for an Online Shopping System. [10]

Q.4) Explain Waterfall Model and RAD Model comparatively. [10]

Q.5) In a Shopping Mall, following Scheme is introduced :

If you are a regular customer, on every shopping of Rs. 5,000 and above, you will get 1 point.

On collecting such 10 points you get a free tour package. For points below 10 you get a gift coupon. The collected points between 1 January, 2010 to 31 March, 2010 are only considered for this scheme.

Draw Decision Tree and Decision Table for the above case. [10]

Q.6) Give short notes : (**Any Three**) [15]

- (a) Prototyping
- (b) Reverse Engineering
- (c) CASE Tools
- (d) Software Implementation Strategies
- (e) Feasibility Study

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

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M. C. M. (Semester - I) Examination - 2010

PRINCIPLES AND PRACTICES OF MANAGEMENT

AND ORGANISATIONAL BEHAVIOUR

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.*
- (2) Attempt **any three** from the remaining.*
- (3) Figures to the right indicate full marks.*

-
-
- Q.1)** (A) Define the term 'Management'. Discuss different functions of Management. **[15]**
- (B) Explain Theory X and Theory Y. **[10]**
- Q.2)** What is an Organisation ? Explain different types of Organisational Structures. **[15]**
- Q.3)** Define Organisational Behaviour. Explain nature of Organisational Behaviour and behavioural challenges faced by Managers. **[15]**
- Q.4)** What is Group Dynamics ? Why it is important for understanding Group Behaviour ? **[15]**
- Q.5)** Define Conflict. Discuss different measures to avoid conflict. **[15]**
- Q.6)** Elaborate contributions made by F.W. Taylor and Henry Fayol. **[15]**

Q.7) Short notes : (Any Three)

[15]

- (a) Quality Circles
 - (b) Leadership Styles
 - (c) Transactional Analysis
 - (d) Types of Managerial Decisions
 - (e) Managerial Skills
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-105

M. C. M. (Semester - I) Examination - 2010

WEB PROGRAMMING AND E-COMMERCE

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 7 is compulsory.*
- (2) Attempt **any five** from the remaining.*
- (3) Figures to the right indicate full marks.*
- (4) Draw neat diagrams wherever required.*

-
-
- Q.1)** What is E-commerce ? Explain its types and also mention its advantages and disadvantages. **[10]**
- Q.2)** Explain importance of Network Security. Explain various threats to Network Security. **[10]**
- Q.3)** What are Internet Service Providers ? Explain their types. **[10]**
- Q.4)** Explain features required in an E-commerce Website ? Explain steps required to develop it. **[10]**
- Q.5)** What is On-line Marketing ? Explain various ways of On-line Marketing. **[10]**
- Q.6)** Explain various types of Firewall with their advantages and disadvantages. **[10]**

Q.7) Write short notes : (Any Four)

[20]

- (a) E-payment
 - (b) Deep Linking
 - (c) Software Agents
 - (d) www
 - (e) EDI
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

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M. C. M. (Semester - I) Examination - 2010

‘C’ PROGRAMMING

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.
 - (2) Solve *any five* out of the remaining.
-
-

Q.1) (A) Find and explain output of the following programs : **[12]**

- (a)

```
void main()
{
    char str[] = "Escape Sequence";
    char *a, *b;
    for (a = str, b = str; b < a + str/en (str) -4; b++)
        printf("%c', * (str +b));
}
```
- (b)

```
#define SQUARE(X) X*X
void main() {
int a = 11, b;
b = SQUARE (a + 2);
printf("b=%d", b);
}
```
- (c)

```
void main() {
int x;
x = - 13 + 14 - 17 * 18/5 % 10;
printf("X = %d", x);
}
```

(B) Explain the following : (Any Two) [08]

- (a) Recursion
- (b) Dynamic Memory Allocation
- (c) Break and Continue

Q.2) Write a program to accept a number n and then find sum of the integers from 1, 1 to 2 then 1 to 3 then 1 to 4 and so on until it displays sum of integers from 1 to n. For example input is 5, the output will be : [10]

1
3
6
10
15

Q.3) Write a C function : [10]
int rightmost (char * S, char ch) which returns position of the rightmost occurrence of ch in string S or -1 if ch does not occur in string S.

Q.4) Write a C program that accepts 10 integers numbers in an array and one constant from the user and then displays counts for numbers greater than constant, less than constant and equal to the constant from the contents of array. [10]

Q.5) Write a program that displays the following output using nested for loops only : [10]

A B C D E F
B C D E F
C D E F
D E F
E F
E

- Q.6)** Write a general purpose program that would count characters, spaces, tabs and newlines in a text file. Display result. **[10]**
- Q.7)** Define a structure account with elements acc_no, acc_type, name and balance. Write a C program that will accept data of 20 customers and print names of customers having a balance of greater than 10,000. **[10]**
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-12

M. C. M. (Semester - I) Examination - 2010

DATABASE MANAGEMENT SYSTEM

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.
- (2) Solve **any five** questions from the remaining.
- (3) Figures to the right indicate full marks.

Q.1) (A) Study the following Purchase Order details and normalize data upto 3NF :

[12]

| <u>Purchase Order</u> | | | | |
|-----------------------|--------------------------|---------------------------|------|--------|
| Supplier Name : | | P.O. No. : _____ | | |
| Supplier Add. : | | P.O. Date : _____ | | |
| | | Supplier Quotation No. : | | |
| | | Supplier Quotation Date : | | |
| Sr. No. | Item No. and Description | Qty. | Rate | Amount |
| | | | | |
| Terms and Conditions | | | | |
| Prepared by | | Approved by | | |

[3877]-12

1

P.T.O.

- (B) Explain the following : **[08]**
- (a) Select
 - (b) Specialization
- Q.2)** What is a Checkpoint ? How is it useful for the process of recovery ? Explain this with the help of suitable example. **[10]**
- Q.3)** Explain differences between the Database Approach and the Filebased Approach. **[10]**
- Q.4)** What do you mean by Transaction in a Database ? What are the Properties of Transaction ? Explain. **[10]**
- Q.5)** Explain Deadlock in the Context of Database System with the help of an example. **[10]**
- Q.6)** Explain Codd's Rule. **[10]**
- Q.7)** Write short notes : **(Any Two)** **[10]**
- (a) Data Independence
 - (b) Distributed Databases
 - (c) Data Warehousing
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-13

M. C. M. (Semester - I) Examination - 2010

SOFTWARE ENGINEERING

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions

- (1) *Question Nos. 1 and 6 are compulsory.*
- (2) *Solve **any three** from Q. Nos. 2, 3, 4 and 5.*
- (3) *State assumptions clearly.*

Q.1) Bank collects fixed deposits from general public. Fixed Deposits carry different interest rates according to their duration. Customers have to fill FD application form mentioning duration, amount, nominee etc. FDs can be owned individually or jointly.

Customer can withdraw it prematurely.

(with some interest deduction)

OR. They are paid by bank on maturity.

For the above case

- (a) Draw CLD, DFD **[10]**
- (b) File Design **[10]**

Q.2) Explain various Fact-finding Methods. **[10]**

Q.3) Admission of MCA Course follows below given procedural rules :

- Student must have minimum 45% in any degree from any recognized university.
- Must have Maths/Stat subject in 12th or degree.
- For reserved category exemption of 5% is given.
- CET Score should be minimum 50%.

Draw Decision Table for the above case. **[10]**

Q.4) Design Screen for Opening Savings Account. Give proper validations. [10]

Q.5) Explain Classic Waterfall Model in comparison with Spiral Model. [10]

Q.6) Give short notes : **(Any Four)** [20]

- (a) CASE Tools
 - (b) Role of System Analyst
 - (c) Object Oriented Concepts
 - (d) Reverse Engineering
 - (e) STD
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-14

M. C. M. (Semester - I) Examination - 2010

MANAGEMENT INFORMATION SYSTEM

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Notes :

(1) Question No. 1 is compulsory.

*(2) Solve **any five** from the remaining.*

Q.1) Write short notes : (Any Four) [20]

- (a) Law of Requisite Variety
- (b) Types of Memories
- (c) Decision Table/Tree
- (d) Artificial Intelligence
- (e) Expert System
- (f) GDSS

Q.2) MIS supports a Manager in his functional responsibilities. Explain. [10]

Q.3) Explain 'Herbert Siamon' Principle of Decision-making. [10]

Q.4) Explain Classification of Information. [10]

Q.5) Explain the term Data Warehouse, Data Mart and Data Mining. [10]

Q.6) Explain Input and Output Devices with suitable examples. [10]

Q.7) Explain Concept of Database ? What is the difference between Data File, Data Bank and Database ? **[10]**

Q.8) (A) Compare Administrative and Classical Decision-making Models. **[05]**

(B) Compare Line Printer and Page Printer. **[05]**

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-15

M. C. M. (Semester - I) Examination - 2010

BUSINESS COMMUNICATION

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Question Nos. 1 and 8 are compulsory.

*(2) Solve **any four** from the remaining.*

(3) Figures to the right indicate full marks.

-
-
- Q.1)** Define Business Communication. Explain its importance in today's business world. **[15]**
- Q.2)** Distinguish between Oral and Written Communication. **[10]**
- Q.3)** Explain Do's and Don'ts of Process of Group Discussion. **[10]**
- Q.4)** Discuss importance of Electronic Communication with examples. **[10]**
- Q.5)** What is the importance of a Job Application ? Discuss qualities of a well drafted written Job Application. **[10]**
- Q.6)** Discuss "Feedback completes Process of Communication". **[10]**
- Q.7)** How will you prepare an effective Public Speech ? **[10]**

Q.8) Write short notes : (Any Three)

[15]

- (a) Reading Skill
 - (b) Voice Mail
 - (c) Time Management
 - (d) Kinesics
 - (e) Telephone Etiquette
-

Total No. of Questions : 9]

[Total No. of Printed Pages : 2

[3877]-201

M. C. M. (Semester - II) Examination - 2010

DATA STRUCTURES AND ALGORITHM

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question Nos. 1 and 9 are compulsory.
 - (2) Answer **any five** from the remaining.
 - (3) Figures to the right indicate full marks.
 - (4) State your assumptions clearly.
 - (5) Write appropriate structure definitions wherever necessary.
-
-

Q.1) (A) Convert the following infix expression into prefix. Show contents of stack at each step in tabular form :

$A * ((B + C) / D) - E$ **[08]**

(B) What is Hashing ? Give two applications where Hashtable is used. **[04]**

Q.2) (A) Consider the following message :

“INDIA”

(a) Draw Huffman Tree for the message.

(b) What kind of tree is Huffman Tree ? **[05]**

(B) Write a function that takes only a pointer to the root of a binary tree T and computes number of non-leaf nodes in it. **[05]**

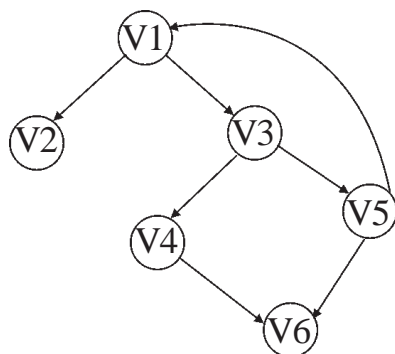
Q.3) (A) Construct an AVL Tree for the following data : **[05]**

MER, VEN, EAR, MAR, JUP, SAT, EUR, NEP

(B) Write a function for the left rotation of a Binary Search Tree. **[05]**

- Q.4)** (A) Sort sequence 4, 8, 11, 6, 2, 1, 15, 26, 3 using Heap Sort. (Ascending Order) [05]
 (B) For an integer array defined as A[20] [40], if A[0] [0] is located at memory address 200, compute address of A[17] [24] using Row and Column Major representation. [05]
- Q.5)** (A) Write a function to reverse a Linear Single Link List. [05]
 (B) Write a function that returns length of a Linear Circular Link List. [05]
- Q.6)** (A) Write a function that returns height of a Binary Tree. [05]
 (B) Write a function that creates a mirror of Binary Tree. [05]
- Q.7)** Write a function that accepts data element, address of head, address of tail node of a Linear Double Linked List and deletes node containing that data element. [10]
- Q.8)** (A) What is Generalized List ? Explain with example. [05]
 (B) Write functions to convert : [05]
 (a) LDLL to CDLL
 (b) CDLL to LDLL

Q.9) Answer using the following graph :



- (a) Write Adjacency Matrix. [02]
 (b) Write Adjacency List. [02]
 (c) Generate output of Breadth First Search (BFS) when starting vertex is V1. [02]
 (d) Generate output of Depth First Search (DFS) when starting vertex is V1. [02]

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-202

M. C. M. (Semester - II) Examination - 2010
DATABASE MANAGEMENT SYSTEM (D.B.M.S.)
(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Q. No. 1 is compulsory.*

(2) *Solve any five from the remaining questions.*

Q.1) (A) Normalize the following :

[12]

| LIBRARY SYSTEM | |
|----------------|-----------------|
| Student No. : | |
| Name : | Lib. Card No. : |
| Class : | |
| Book A/c No. : | |
| Title : | |
| Author : | Price : |
| Publication : | |
| Issue Date : | Return Date : |
| Extra Days : | Fine Rs. : |

(B) Explain the following with example :

[08]

(a) Join

(b) Mapping Cardinalities

- Q.2)** Explain differences between NDM and RDM with proper example. [10]
- Q.3)** Explain differences between Data Mining and Normal Query. [10]
- Q.4)** Explain Codd's Rule. [10]
- Q.5)** Explain Time-stamp based Protocols in detail. [10]
- Q.6)** What do you mean by the term 'Database Recovery' ? Explain any two recovery techniques. [10]
- Q.7)** Write short notes : (**Any Two**) [10]
- (a) State of Transaction Execution
 - (b) Advantages and Disadvantages of DDBMS
 - (c) Integrity Constraints
-

Total No. of Questions : 3]

[Total No. of Printed Pages : 2

[3877]-203

M. C. M. (Semester - II) Examination - 2010

ORACLE

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

All questions are compulsory.

Q.1) Consider the following tables :

- (1) Purchase-Order-Header : (PONo, PODate, SupplierCode, TotalAmount)
- (2) Purchase-Order-Detail : (PONo, ItemNo, ItemName, Qty, Rate)

Write SQL queries : **(Any Ten)**

[20]

- (a) Create Purchase-Order-Header table with proper constraints.
- (b) Add column expected - delivery - date to the table Purchase-Order-Header.
- (c) Display total cost (qty * rate) of every Purchase Order.
- (d) Display PODate as '5th April 2010, Monday'.
- (e) Write a query to count total no. of Suppliers.
- (f) Display item names having 'a' in them.
- (g) Display all PO's having total amount > 10,000.
- (h) Display all Purchase Orders whose Expected Delivey Date is the same month.
- (i) Display PODatewise POs.
- (j) Count number of items in every PO.

- (k) Display PONo, PODate, SupplierCode and ItemName for all POs.
- (l) Display PO details of items with 8 no. of characters in item name.

Q.2) Write PL/SQL block for the following : (Attempt Any Five) [25]

- (a) Display top 5 PO records with highest TotalAmount.
- (b) Accept PONo and display PODate and SupplierCode.
- (c) Write a procedure that accepts PONo as parameter. Search this PONo in Purchase-Order-Header. If found, set expected-delivery-date to current date. If not found, raise an exception which displays error message 'PONo NOT FOUND'.
- (d) Write a function that accepts PONo as a parameter and returns true if TotalAmount is greater than 6,000; otherwise returns false.
- (e) While inserting a record in Purchase-Order-Detail table, if qty is less than or equal to ϕ , trigger should be fired and message "qty \leq ϕ not allowed" should be displayed.
- (f) Accept PONo from user and delete that record from Purchase-Order-Header.

Q.3) Write short notes : (Any Five) [25]

- (a) Group Functions in SQL
- (b) Views
- (c) Set Operators
- (d) Data types of PL/SQL
- (e) Grant and Revoke
- (f) Any five character functions with examples

Total No. of Questions : 8]

[Total No. of Printed Pages : 3

[3877]-204

M. C. M. (Semester - II) Examination - 2010

BASIC JAVA

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Q. Nos. 1 and 8 are compulsory.
 - (2) Solve **any five** from the remaining.
-
-

Q.1) Justify your answer :

[12]

(a) Select correct options :

- (i) Interface must have at least one method.
- (ii) Interface can have only abstract methods.
- (iii) Interface can have constants.
- (iv) Interface can have hierarchy.

(b) Select correct options :

Interface MyConstants

```
{    Int r = 42;
    Int s = 69;
    // insert code
}
```

Select which of the following codes can be inserted at insert code comment line which will not generate errors :

- (i) Final double c = 2*Math.PI*r;
- (ii) int area = r*s;
- (iii) int result = result + r + s;
- (iv) public static Main = 20;
- (v) protected int code = 311;

(c) What will be the output ?

```
public class Super {
    public static String greet(){
        return "Pune";
    }//greet
    public String getName(){
        return "University";
    }//getName
}//super
class Sub extends Super{
    public static String greet(){
        return "Banaras";
    }//greet
    public String getName(){
        return "Vidyalaya";
    }//getName
}//sub
public class Demo{
    public static void main(String[] args)
    {
        Super s = new Sub();
        System.out.print\n(s.greet() + " " + s.getName());
    }
}
```

(d) When thread will die ? (Select correct answer)

- (i) Execution of run() method ends
- (ii) Sleep () is called
- (iii) Wait () is called
- (iv) Execution of thread's constructor ends

- Q.2)** Write INTS class which has 2 integers as instance variables, print() method, compare () method which will compare 2 objects, overloaded constructors. Create 3 different objects. **[10]**
- Q.3)** Write an awt application which will accept rollno, name and marks of the student in three text fields. When add button is clicked the contents of text fields should be added in list. **[10]**
- Q.4)** Write a threaded applet which will display circle with different colours. Colour will change after 1 second. Accept radius of the circle as parameter. **[10]**
- Q.5)** Write an application which will accept 5 strings from command line. If any of the strings is palindrome then throw “GotPalindrom” user defined exception. **[10]**
- Q.6)** Write an application which will accept 2 file names using BufferedReader. Then swap contents of those files. Do necessary validations. **[10]**
- Q.7)** Write code snippet : **[10]**
- (a) Set layout of frame as grid with 4 columns and 5 rows.
 - (b) Anonymous class to close Window.
 - (c) Find first occurrence of character “U” in the string “Pune University”.
 - (d) Call sleep method for 100 milliseconds.
 - (e) Check whether file “abc.txt” is readable or not.
- Q.8)** Write short notes : **(Any Two)** **[08]**
- (a) Thread Synchronisation
 - (b) Access Modifiers
 - (c) Hash Table
-

Total No. of Questions : 7]

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[3877]-205

M. C. M. (Semester - II) Examination - 2010

CORE RUBY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

Question Nos. 1 and 7 are compulsory. Solve any four from the rest.

Q.1) Find output of the following : (Any Five)

[15]

- (a) `arr = [1, 2, 3, 4, 5]`
`sum = 0`
`arr.each {|i| sum + = i}`
`puts sum`
- (b) `s = 'Ruby=Gems'`
`i = s.index('=')`
`puts s[0...i]`
`puts s[i + 1, s.length]`
- (c) `i = 0`
`while (i < 15)`
`i + = 1`
`next if i % 2 == 0`
`puts i`
`end`

- (d) `class Square`
 `def initialize (side_length)`
 `@side_length = side_length`
 `end`

 `def area`
 `@side_length * @side_length`
 `end`

 `end`

 `a = Square.new(25)`
 `puts a.area`
- (e) `x = {"a" => 5, "b" => 7, "c" => 9}`
 `x.each {|key, value| puts "#{key} equals#{value}"}`
 `puts x.keys.inspect`
- (f) `def basic_method`
 `x = 75`
 `puts x`
 `end`

 `x = 10`
 `basic_method`
 `puts x`
- (g) `a = [2, 4, 6, 8, 10, 12]`
 `puts a[1..4].inspect`
 `a[1..3] = ["a", "b", "c"]`
 `puts a.inspect`

Q.2) Write a program to print prime numbers between 200 to 300. **[10]**

Q.3) Write a program that reads a file and prints total number of words in the file. **[10]**

Q.4) Design a class for Book_Master with instance variables (Bookid, Bookname, AuthorName, and Price)

Write a routine to accept 10 records and store it in array.

Write a method MaxBooks that prints author's name who had written maximum books and also prints book details of that author. **[10]**

Q.5) Accept an array of 10 integers and count total number of odd and even numbers. **[10]**

Q.6) Write a Ruby program to print the following pattern : **[10]**

```
1   2   3   4   3   2   1
    1   2   3   2   1
      1   2   1
        1
```

Q.7) Write short notes : **(Any Three)** **[15]**

- (a) Nested Classes
- (b) Blocks and Iterators
- (c) Collections
- (d) Procs and Lamdas
- (e) Exception Handling

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-206

M. C. M. (Semester - II) Examination - 2010

OBJECT ORIENTED DESIGN (OOD)

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. No. 1 is compulsory.*
- (2) *Solve any five from the remaining.*

Q.1) (A) Based on the following description, design an Usecase and Class Diagram :

An Engineering College has organised an International Research Conference with various subject tracks. A website is developed by the college where all the conference details are uploaded.

The participant has to register online under category - Student, Faculty, Research Scholar, Corporate. He has to upload an abstract of his paper. If it gets selected, he has to upload final paper along with the registration fee. The registration fees varies according to the category of the registrant. The payment can be done online or through DD. The paper presentation schedule is put up on the website under the defined tracks.

After the conference the participant can give his feedback online. **[15]**

(B) Explain Inheritance and its types with example. **[05]**

Q.2) Draw an activity diagram for syllabus revision with the following processes : **[10]**

- (a) Registration of Faculties and Chairman of the Subject
- (b) Upload subject guidelines
- (c) Upload subjectwise suggestion (by faculties)
- (d) Syllabus compilation and approval by the Chairman of the Subject
- (e) Upload and view final syllabus

- Q.3)** Design state transition diagram for a machine which checks weight of a person (generally found on Railway Platforms). The machine displays message to insert 1 Re. coin, checks it or rejects it, displays weight and prints it on a ticket and dispenses it. **[10]**
- Q.4)** Explain RUP in detail. **[10]**
- Q.5)** (A) Explain CRC in detail. **[05]**
(B) Explain OMT in detail. **[05]**
- Q.6)** Draw sequence diagram for the following scenarios : **[10]**
- (a) Adding contacts in Mobile.
 - (b) Searching for a contact in Mobile and calling your friend on Mobile.
- Q.7)** Short notes : **(Any Two)** **[10]**
- (a) Design Pattern
 - (b) Object Persistence
 - (c) Guidelines for developing test cases
-

Total No. of Questions : 9]

[Total No. of Printed Pages : 2

[3877]-21

M. C. M. (Semester - II) Examination - 2010

DATA STRUCTURES AND ALGORITHMS

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question Nos. 1 and 9 are compulsory.
- (2) Answer **any five** from the remaining.
- (3) Figures to the right indicate full marks.
- (4) State your assumptions clearly.
- (5) Write appropriate structure definitions wherever necessary.

Q.1) (A) Evaluate the following postfix form :

ABC + D / * E -

where

A = 6, B = 5, C = 2, D = 4, E = 3

Show contents of stack at each step in a tabular form. **[08]**

(B) Write a note on - Stack as a Data Structure and write applications of Stack. **[04]**

Q.2) (A) Consider the following message :

“Bharat”

(i) Draw a Huffman Tree for the message.

(ii) What kind of tree is Huffman Tree ? **[05]**

(B) Write a function to count non-leaf nodes of a binary tree. **[05]**

Q.3) (A) Construct an AVL Tree for the following data :

Violet, Indigo, Blue, Green, Yellow, Orange, Red **[05]**

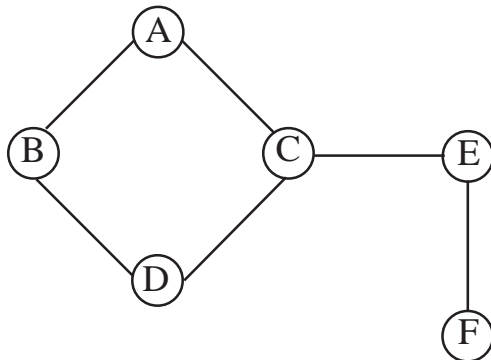
(B) Write functions to add and delete elements from a Queue using array. **[05]**

[3877]-21

1

P.T.O.

- Q.4)** (A) Write a function for sorting a 1-D array of integers in descending order using Bubble Sort. [05]
- (B) Consider the following declaration `float F[10][10]`;
Compute Row Major and Column Major address of the Member `F[a][b]` where base address of array is 200. [05]
- Q.5)** (A) Write a function to Reverse Print a Linear Single Linked List. [05]
- (B) Write a function to Count Nodes having odd data values in a Linear Linked List. [05]
- Q.6)** (A) Write a function to Print Binary Search Tree in Ascending Order of its Data Elements. [05]
- (B) Write a function for Left Rotation of a Binary Search Tree. [05]
- Q.7)** Write a function for deleting a node from a Circular Linked List. [10]
- Q.8)** (A) Write a function to search a given element in an array using Sequential Search Method. [05]
- (B) What is Hashing ? Explain any one Hashing Technique. [05]
- Q.9)** Answer using following graph :



- (a) Generate Output of Breadth First Search (BFS) algorithm for the above graph when starting vertex is A. [02]
- (b) Generate Output of Depth First Search (DFS) algorithm for the above graph when starting vertex is A. [02]
- (c) Write Adjacency Matrix. [02]
- (d) Write Adjacency List. [02]

Total No. of Questions : 5]

[Total No. of Printed Pages : 3

[3877]-22

M. C. M. (Semester - II) Examination - 2010

VISUAL BASIC

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

All questions are compulsory.

Q.1) Give output for the following sections of code and explain : (Any Five) [20]

- (a) Dim d As Date, a
d = DateSerial(2009, 3, 12)
print d
d = DateAdd("Q", 2, d)
print d
a = DatePart("m", d)
print a
- (b) A = "12"
B = "13"
print val(A) + val(B)
print 2* val(B)
- (c) print WeekdayName(Chr(50))
- (d) dim mystr@
print VarType(mystr)
print Left("Visual Basic", VarType(mystr))
- (e) print Int(89.8)
print Fix(89.8)
print Round(-89.8)

```

(f) for i = 20 To 10 Step -2
      select case (i)
        case 15 to 20
          print "*"
        case 10 to 14
          print "#"
      end select
next

```

Q.2) Write ADO Code for the following table Item_mst : **[10]**

| Field Name | Type |
|------------|----------------------|
| It_no | Number |
| It_name | Text |
| tran_type | Text (Issue/Receipt) |
| Qty | Number |
| Rate | Number |

Perform operations Add, Update, Delete, View, First, Last, Next and Previous Records.

Q.3) Write a Sectional Code for the following : **(Any Three)** **[15]**

- (a) Invoke a colour dialogbox and give colour to textbox.
- (b) Write a function to display sum of digits by accepting a number from user.
- (c) Design an Interface. Take a combo box, fill it with colours. Change background colour of the form as you select the colour from it.
- (d) Invoke font dialogbox and change font in a textbox object to "Verdana", 18, **Bold**, Underline and ~~Strikeout~~.

Q.4) Define User defined datatype student having data members stud_code, studname, course and fees_paid. Design an interface and write a code which will accept student information from user and will store it in textfile as record. Provide facility to see First, Next, Previous and Last Record. (Use Random Access File) **[10]**

Q.5) Write short notes : **(Any Three)** **[15]**

- (a) Fixed and Dynamic Array
 - (b) 5 Conversion String Functions with e.g.
 - (c) Scope of the Variables - Public, Private
 - (d) Controls in Microsoft Common Control 6.0
 - (e) Concept of User Defined Data Types
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-23

M. C. M. (Semester - II) Examination - 2010

ORACLE

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question Nos. 1 and 6 are compulsory.*

(2) *Solve any three from the remaining.*

Q.1) Consider the following tables :

(1) Policyholder (Policy No, Policyholder_NM, Policy_Desc,
Policy_Yrs, No. of Premium, Premium_Type)

Premium_type : 'Q' - Quarterly, 'M' - Monthly, 'H' - Halfyearly
'Y' - Yearly.

(2) Premium (Policy No., Premium Paid_Dt, Premium_Amt,
Premium_Paid_Status)

(A) Create above tables with suitable constraints. [08]

(B) Solve the following : (Any Six) [6x2=12]

(a) Allow user to input values from keyboard and insert it into
table as record.

(b) Create view with Policy No, Polciyhodler_NM, Premium
Paid Date, Premium Amount.

(c) Create Indices for above tables.

(d) Write a command to generate value for policy number for
every policyholder record.

(e) Display all Policyholders, whose premiums are not paid.

[3877]-23

1

P.T.O.

- (f) Add new column 'premium_paid_type' in premium table. Premium paid types are cash, cheque, internet.
- (g) Display all policyholder details, who pay premium by Internet facility.

Q.2) What is Cursor ? Write Implicit Cursor using any of the above tables. **[10]**

Q.3) Write PL/SQL, which will raise an exception for No Data Found. (Use table from Q.1) **[10]**

Q.4) Explain user defined function, with suitable example. (Use tables from Q.1) **[10]**

Q.5) Explain Package with its proper syntax. Give suitable example. **[10]**

Q.6) Short notes : **(Any Four)** **[4x5=20]**

- (a) Five Attributes for Report Writing (SQL)
- (b) Set Operators
- (c) Constraints
- (d) Exception Handling
- (e) Commit, Roll Back, Save Point

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-24

M. C. M. (Semester - II) Examination - 2010

SOFTWARE PROJECT MANAGEMENT AND IT MANAGEMENT

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Q. Nos. 2 and 7 are compulsory.

(2) Answer **any four** from the remaining.

Q.1) Compute Function Point Value for the given Software Project with the following information : **[10]**

| | | |
|---------------------|---|----|
| Data Entry Screens | : | 08 |
| Reports | : | 30 |
| Enquiries | : | 12 |
| Programs | : | 20 |
| External Interfaces | : | 04 |
| Files | : | 14 |

Q.2) Draw PERT diagram for the following project information. Find start time, end time and slack time. Also find critical path : **[15]**

| Activity | Predecessor | Time (Weeks) |
|-----------------|--------------------|---------------------|
| A | – | 6 |
| B | – | 6 |
| C | A | 5 |
| D | B | 4 |
| E | B | 3 |
| F | D, E | 7 |

[3877]-24

1

P.T.O.

| Activity | Predecessor | Time (Weeks) |
|-----------------|--------------------|---------------------|
| G | C, F | 8 |
| H | D | 5 |
| I | G, H | 2 |

Q.3) Define Software Configuration Management. Explain it in detail. **[10]**

Q.4) Explain various Cost Estimation Techniques. **[10]**

Q.5) Discuss Risk Management in detail. **[10]**

Q.6) Explain IT - HR Management Process in detail. **[10]**

Q.7) Write short notes : (**Any Three**) **[15]**

- (a) QA and QC
- (b) Team Organisation
- (c) WBS
- (d) Stress Testing
- (e) Benchmarking

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-25

M. C. M. (Semester - II) Examination - 2010

BUSINESS APPLICATIONS

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. 1 is compulsory. Attempt any five from the remaining.*
 - (2) *State your assumptions clearly.*
 - (3) *Figures to the right indicate full marks.*
-
-

Q.1) Hind Cloth Store, Pune is in the business of selling clothes. It stocks 300 varieties of clothes. Some varieties are very popular, whereas some are not. The owner considers items which are not sold within 6 months as 'non-moving' and those not sold within 3 to 6 months as 'Slow Moving'.

- (a) Draw format for slow moving and non-moving items reports. **[10]**
- (b) Design suitable files required to design these reports. **[10]**

Q.2) Explain in detail the Process of Computerised Employee Recruitment with suitable input form layout. **[10]**

Q.3) Explain Material Rejection Analysis with suitable proforma. **[10]**

Q.4) What is BOM ? Explain its importance in Production Planning. **[10]**

Q.5) (A) Explain in brief 'Leave Accounting'.

- (B) Explain in brief 'Sales Budgeting'. **[10]**

Q.6) Explain Process of Employee Appraisal. Explain various techniques of Employee Appraisal. **[10]**

Q.7) Write short notes : **(Any Two)** **[10]**

(a) Supplier Bill Passing

(b) Bin Card

(c) Financial Ratios

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-301

M. C. M. (Semester - III) Examination - 2010

LINUX PROGRAMMING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Q. Nos. 1 and 7 are compulsory.

(2) Solve *any three* from the remaining.

Q.1) (A) Write PHP Script which accepts customer number and displays details of customer in HTML format. Use suitable database and table. [10]

(B) Explain Five System Permission in Linux with suitable example. [10]

Q.2) Explain the following Linux Commands : [10]

(a) mkg

(b) kill

(c) less

(d) grep

(e) cpio

Q.3) Write MySQL Commands for the following : [10]

(a) Create Customer Table with proper constraints.

(b) Take backup of Customer Table.

(c) Display list of all customers whose names start with 'B'.

(d) Copy all records of Customer Table whose names start with 'K'.

(e) Copy all records of Customer Table in text file file.txt.

Q.4) Explain User defined function in PHP with example. [10]

Q.5) Explain Server Side includes in Apache with example. [10]

Q.6) Explain procedure to connect to MySQL Database using PHP. [10]

Q.7) Write short notes : (**Any Four**) [4x5=20]

- (a) MySQL GUI Tools
 - (b) Data Types in MySQL
 - (c) Array Operation in PHP
 - (d) Virtual Hosts
 - (e) Run Levels in Linux
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-302

M. C. M. (Semester - III) Examination - 2010

BUSINESS APPLICATION

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Q. No. 1 is compulsory. Attempt **any five** from the remaining.*
- (2) Figures to the right indicate full marks.*
- (3) State your assumptions clearly.*

Q.1) Hitech Chemicals Ltd. employes about 1,000 Staff Members including Managerial and Non-managerial Staff. The company has identified about 140 training programs which various employees have to undergo at some stage or the other.

The company desires to develop a system which will keep track of training needs with reference to the above programs and programs completed. The system is expected to provide database related to faculty members for each training program keeping in mind that some faculty members are useful for many programs.

You are required to design complete Training System with file layouts and output formats. **[20]**

Q.2) Explain procedure for preparation of Computerised Trial Balance. State format and limitations of Trial Balance. **[10]**

Q.3) What is MRP ? Discuss various problems with MRP Systems. **[10]**

Q.4) Discuss Sales and Distribution Process in detail with the help of CLD and ERD. **[10]**

Q.5) Explain PPC Cycle with diagram. **[10]**

Q.6) Explain in detail any three Earning Heads and Deduction Heads. Design Proforma for Computerised Pay Slip. **[10]**

Q.7) Write short notes : **(Any Two)** **[10]**

(a) Accounting - General Ledger

(b) Sales Analysis

(c) Sub-contracting



Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-303

M. C. M. (Semester - III) Examination - 2010

ADVANCED JAVA

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Question No. 1 is compulsory.

*(2) Solve **any four** out of the remaining.*

Q.1) Answer the following :

[10]

- (a) What is URI ?
- (b) Difference between Application and Web Server.
- (c) Difference between Send, Redirect and Forward.
- (d) Scopes in JSP
- (e) Role of Connection in JDBC

Q.2) Write program segments for the following : (Any Three)

[15]

- (a) Create an ErrorPage.jsp and display Exception.
- (b) Create a Scrollable Resultset Object.
- (c) Create a Cookie to Store Username.
- (d) Accept table name (as Command Line Argument) and display number of columns along with name.

- Q.3)** Write an HTML Page which will accept details about mobile (m_id, model, price, features and company). Insert details into mobile table using JSP. **[15]**
- Q.4)** Accept Username and Password from user and also accept whether user wants to be logged in for a week. If yes, then store this information in cookies. When user will visit page again, directly display 'Welcome' message. Use Servlets. **[15]**
- Q.5)** Write a Client-Server Application where client will send filename to server and server will return length of file. **[15]**
- Q.6)** Write short notes with example : **(Any Three)** **[15]**
- (a) JSP Life Cycle
 - (b) JDBC Drivers
 - (c) MVC Architecture
 - (d) Difference between Servlet Context and Servlet Config.
-

Total No. of Questions : 1]

[Total No. of Printed Pages : 2

[3877]-304

M. C. M. (Semester - III) Examination - 2010

ADVANCED RUBY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Q.1) (A) Write short notes : (Any Five) [30]

- (a) Database Relationships
- (b) Plugins
- (c) Layouts in Rails
- (d) MVC Architecture in Rails
- (e) Label and Radiobutton widget in RubyTK
- (f) Threading
- (g) MessageBox widget with example

(B) Solve the following : (Any Five) [40]

- (a) Write migration for creating table 'Customer' having cust_id, firstname, lastname, cust_name, creditcardno, created_at, updated_at columns.
- (b) Write rhtml code for creating login page. After submitting login form it should call create action of session controller.
- (c) Write callback method in customer model which will update cust_name as follows :
If first name is 'Abhinav' and last name is 'Bindra', then cust_name should be 'AbhinavBindra'.
- (d) Create a TK window that has 2 check boxes "RUBY" and "JAVA", a label and a button "Select". The label should change its caption according to the selection.

[3877]-304

1

P.T.O.

- (e) Using Ruby Socket API, write a client that passes a string to the server and server responds by sending length of the string to the client.
 - (f) Write a SOAP Server and SOAP Client such that server defines a method that accepts a number as a parameter and returns whether the number is odd or even. Client invokes this method and prints result returned by the server.
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-305

M. C. M. (Semester - III) Examination - 2010

VB .NET

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Q. Nos. 1 and 8 are compulsory.
- (2) Solve **any four** from the remaining.

Q.1) What is .Net ? Explain CLR, CTS and JIT Compiler in detail. [15]

Q.2) Explain structured exception handling with suitable example. [10]

Q.3) Define Employee Class with suitable example. Inherit Manager Class from Employee Class. Override FindSalary() Method. Write module to test your functionality. [10]

Q.4) Define Interface Shape having the following methods :

- (a) Area
- (b) Perimeter

Define Class Circle that implements shape interface. The Class Circle has attribute radius. [10]

Q.5) Write a program which will count number of lines, characters and numbers in a given file. (Accept a file name using open file dialog box). Draw proper GUI. [10]

Q.6) What do you mean by Delegates ? Explain with suitable example. [10]

[3877]-305

1

P.T.O.

Q.7) Write a code to perform (Add, Edit, Delete, First, Next, Previous, Last and Exit) on the following table :

Table Name : Employee (EmpID, Name, Designation, Department)

Database Name : Company

Server : SQL Server, Name : UOP, User Name : Pune,
Password : MCM.

[10]

Q.8) Write short notes : **(Any Three)**

[15]

- (a) DataGrid Control
 - (b) Picture Box and Scroll Bars
 - (c) File and Directory Class
 - (d) Access Modifiers
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-306

M. C. M. (Semester - III) Examination - 2010

SOFTWARE PROJECT MANAGEMENT AND IT MANAGEMENT

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question No. 1 is compulsory.
- (2) Attempt **any five** from the remaining.
- (3) Neat diagrams carry marks.
- (4) State assumptions made, if any.
- (5) Question 1 carries **20 marks**. Remaining questions carry **10 marks each**.

Q.1) (A) Listed in the table are the activities and sequencing necessary for a maintenance job on the heat exchangers in a refinery :

| Activity | Description | Predecessor Activity |
|----------|--|----------------------|
| A | Dismantle Pipe Connection | — |
| B | Dismantle Heater, Closure and Floating Front | A |
| C | Remove Tube Bundle | B |
| D | Clean Bolts | B |
| E | Clean Heater and Floating Head Front | B |
| F | Clean Tube Bundle | C |
| G | Clean Shell | C |
| H | Replace Tube Bundle | F, G |
| I | Prepare Shell Pressure Test | D, E, H |
| J | Prepare Tube Pressure Test and Reassemble | I |

Draw a network diagram for the project.

[05]

(B) Explain COCOMO Model in depth with all its models and example.

[15]

- Q.2)** Describe various Software Project Time Estimation Tools, with suitable illustration. [10]
- Q.3)** Explain in detail Function Point Analysis. [10]
- Q.4)** Explain different Software Testing Methods. Compare Black Box and White Box Testing Methods. [10]
- Q.5)** Explain CMM in all its phases with example. [10]
- Q.6)** Explain in depth the Concept of Software Configuration Management. [10]
- Q.7)** Write short notes : **(Any Two)** [10]
- (a) Software Maintenance
 - (b) Software Reviews
 - (c) Risk Management
 - (d) Soft Acquisition Procedure
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[3877]-31

M. C. M. (Semester - III) Examination - 2010

OBJECT ORIENTED CONCEPTS AND BASIC JAVA

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Question No. 1 is compulsory.*
 - (2) *Solve **any four** from the remaining.*
-
-

Q.1) What will be the output ? Justify your answer :

[14]

- (a) A class contains the following declarations of an instance variable
`boolean flags[] = new boolean[100];`

The value of `flags[0]` is

- (i) true
 - (ii) null
 - (iii) false
 - (iv) none
- (b) Which of the following are valid constructors within a class `Test` ?
Select correct answers :
- (i) `test() {}`
 - (ii) `Test() {}`
 - (iii) `void Test() {}`
 - (iv) `private final Test() {}`
 - (v) `abstract Test() {}`
 - (vi) `Test(Test t) {}`
 - (vii) `Test(void) {}`

- (c) Which event is generated when the position of a scrollbar is changed ? Select **any one** correct answer :
- (i) KeyEvent
 - (ii) MouseEvent
 - (iii) ItemEvent
 - (iv) ActionEvent
 - (v) AdjustmentEvent
- (d) When will thread die ? (select correct answer)
- (i) execution of run() method ends
 - (ii) sleep() is called
 - (iii) wait() is called
 - (iv) execution of thread's constructor ends

Q.2) Write an application which will accept a string and a character from user and will print second occurrence of that character in the string. **[14]**

Q.3) Write an awt application which will show different colours in the list. When user will click on 'select' button, then set background colour of the application with the selected colour. **[14]**

Q.4) Write a threaded applet which will display circle with different colours. Colour will change after 1 second. Accept radius of the circle as parameter. **[14]**

Q.5) Write an application which will accept 5 strings from command line. If any of the strings is palindrome, then throw 'GotPalindrom' user defined exception. **[14]**

Q.6) Write an application which will accept a file name from user and print how many words are present in the file. Do necessary validations. **[14]**

Q.7) Write short notes : (Any Two)

[14]

(a) Thread Life Cycle

(b) Packages

(c) Exception Handling

Total No. of Questions : 9]

[Total No. of Printed Pages : 1

[3877]-32

M. C. M. (Semester - III) Examination - 2010

INTERNET TECHNOLOGY

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions.

(1) Solve **any seven** questions. All questions carry equal marks.

(2) Make your own assumptions, if required.

Q.1) Explain E-commerce. Write steps for Website Hosting. [10]

Q.2) Explain DOM. [10]

Q.3) Explain various string functions of VbScript with examples. [10]

Q.4) Explain External and Internal Style Sheets with example. [10]

Q.5) Explain Table Tag and all its attributes. [10]

Q.6) Design Interface and write code to accept cust-id, cust name and cust address. After validation, record should be added to the table customer. (Use ASP) [10]

Q.7) Write JavaScript to move label randomly on screen after every 1 sec. [10]

Q.8) Explain **any two** with examples : [10]

(a) XSLT

(b) CSS

(c) XML Parsers viz SAX and DOM

Q.9) Write XML and internal DTD to save movies information.

Movies - Movie (name, producers, actors, writers, remark) [10]

[3877]-32/1

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[3877]-33

M. C. M. (Semester - III) Examination - 2010

NETWORK TECHNOLOGY

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question Nos. 1 and 7 are compulsory.*
- (2) Solve **any three** from the remaining.*
- (3) Draw neat diagram wherever necessary.*

-
-
- Q.1)** (A) Explain procedure to install Windows 2003 Server. **[10]**
(B) Explain steps involved to configure Apache Web Server in Linux. **[10]**
- Q.2)** Explain Storage Management Services in Windows 2003 Server. **[10]**
- Q.3)** Explain Microsoft .NET Framework. **[10]**
- Q.4)** Explain Process Management in Linux with commands. **[10]**
- Q.5)** Explain Function of DHCP Server in Windows 2003 Server and state procedure for configuring it. **[10]**
- Q.6)** Explain Windows Streaming Media Services in Windows 2003 Server. **[10]**
- Q.7)** Write short notes : **(Any Four)** **[4x5=20]**
- (a) Default Directories in Linux
 - (b) Application Protocols
 - (c) Wireless Networks
 - (d) Modems
 - (e) VPN
 - (f) TCP/IP Protocol

[3877]-33/1

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-34

M. C. M. (Semester - III) Examination - 2010

INFORMATION SYSTEM AUDIT

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Question No. 1 is compulsory.

*(2) Solve **any five** from the remaining.*

Q.1) Write short notes : (Any Two) [20]

- (a) Compare Financial Audit versus IS Audit
- (b) CAATT
- (c) Digital Signature
- (d) Objectives of EDP Audit
- (e) Code of Ethics

Q.2) What is IS Audit ? Explain in brief need of IS Audit and what are the goals achieved by IS Audit ? [10]

Q.3) Define the term 'Audit'. What are the IS Auditing Steps ? [10]

Q.4) What is Evidence ? How evidence can be collected ? How is it evaluated ? Also describe Evidence Reporting Techniques used by IS Auditor. [10]

Q.5) Explain various factors to be considered while designing report on pre-printed and blank stationery. [10]

Q.6) What do you mean by Computer Crime ? Elaborate different types of Crimes. [10]

[3877]-34

1

P.T.O.

Q.7) Explain requirement of Data Entry Screen Design. **[10]**

Q.8) What is a Control Flowchart ? What are the purposes of a Control Flowchart ? How does availability of Flowcharting Software assist Auditors to prepare and maintain Control Flowcharts ? **[10]**

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-35

M. C. M. (Semester - III) Examination - 2010

**PRINCIPLES AND PRACTICES OF
MANAGEMENT AND ORGANISATIONAL BEHAVIOUR**

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Question No. 1 is compulsory.*
- (2) *Attempt **any three** from the remaining.*
- (3) *Figures to the right indicate full marks.*

-
-
- Q.1)** (A) Define Decision-making. Explain process and types of Decision-making. [15]
(B) Explain Herzberg's Model. [10]
- Q.2)** Define the term Management. Explain in brief different Schools of Management Thoughts. [15]
- Q.3)** What is Organising ? Explain different Organisation Structures and their purposes. [15]
- Q.4)** Define Organisational Behaviour. Explain its significance in 21st Century. [15]
- Q.5)** Define Motivation. Explain Theory X, Y and Z. [15]
- Q.6)** What is Organisational Conflict ? Discuss in detail. [15]

Q.7) Short notes : (Any Three)

[15]

- (a) MBO
 - (b) Team Building
 - (c) Johari Window
 - (d) Transactional Analysis
 - (e) Planning
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-401

M. C. M. (Semester - IV) Examination - 2010

MOBILE COMPUTING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question Nos. 1 and 7 are compulsory.*

(2) *Attempt **any three** from the remaining.*

(3) *Figures to the right indicate full marks.*

Q.1) (A) Define the following : (Any Five) [10]

- (a) HLR
- (b) AUC
- (c) GMSC
- (d) BSC
- (e) WTP
- (f) Bit Rate

(B) Explain each Layer in WAP Architecture. [10]

Q.2) Explain states of Bluetooth. [10]

Q.3) Explain challenges of MANET. Define Infrastructure and Infrastructureless Network. [10]

Q.4) What are different realtime protocols available for realtime data transmission over IP ? Explain. [10]

Q.5) What is Selective Retransmission in TCP ? Explain TCP Snooping. [10]

Q.6) Explain different channel allocations in GSM Network. Explain importance of Framing and Logical Channel in GSM. [10]

Q.7) Write short notes : (**Any Four**) [20]

- (a) CDMA
 - (b) Application of Hyper LAN
 - (c) DHCP
 - (d) Mobile IP
 - (e) Digital Video Broadcasting
 - (f) 802.11 MAC
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-402

M. C. M. (Semester - IV) Examination - 2010

ASP.NET

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. Nos. 1 and 8 are compulsory.*
- (2) *Solve **any four** from the remaining.*

Q.1) Design Interface and write code for the following : [15]

- Add a new record
- Delete a record
- Edit a record
- Use gridview to display records
- Use connected architecture
- Name of Database : Inventory

Name of Table : Product (Product ID, Desc, Rate, Stock)

Server : SQL Server

Server Name : ABCD

Q.2) State with example various Client Side State Management. [10]

Q.3) Explain Working of Adroator with example. (write xml file also) [10]

- Q.4)** Design Interface and write code for shopping cart application :
- Take a drop down list to display product.
 - Display product rate in a label when the product is selected.
 - Accept Quantity in a textbox and add it to the cart when add button is clicked.
 - Display order on next page when display order button is pressed. (Use product table described in Q. No. 1) **[10]**
- Q.5)** Explain any four Validator Controls with examples. **[10]**
- Q.6)** What are Web Services ? Explain with example. **[10]**
- Q.7)** Explain important properties and method with example for the following Server Controls :
- (a) Calendar Control
 - (b) File Upload
 - (c) Checkbox Control
 - (d) Gridview **[10]**
- Q.8)** Write short notes : **(Any Three)** **[15]**
- (a) Authentication and Authorisation
 - (b) ASP Vs ASP.Net
 - (c) Exception Handling
 - (d) Deploying Web Application
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-403

M. C. M. (Semester - IV) Examination - 2010

INFORMATION SECURITY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. No. 6 is compulsory.*
- (2) *Solve **any one** case from Q. No. 1.*
- (3) *Solve **any three** questions from Q. Nos. 2 to 5.*
- (4) *State your assumptions clearly.*

Q.1) You are a Security Consultant of World Bank, a large International Bank. The bank has purchased an old warehouse, internally it has a secure facility. The location and its purpose is known only to a small number of people who are employees of the bank. These persons have signed a secrecy agreement in relation to the operations and locations of the warehouse. As a part of your review of physical controls, you examine adequacy of controls to prevent and detect fire. You notice that there are no hand-held fire extinguishers kept at strategic locations through out the room. After questioning Operations Manager, you find that it is clear that they are familiar with the procedures and they are practised regularly.

What is your conclusion about the adequacy of controls described by the Operations Manager ? How will you proceed in terms of investigation of the fire prevention and detection controls of the warehouse ?

OR

Q.1) As more users are added in an interactive system, response time gets longer. The Project Manager is perplexed that system can cope up with many more users without noticeable response time. He cannot determine whether the problem occurred is of hardware or software based. He asks you to assist him to identify problem. During your meeting with the Project Manager, you ask him to provide configuration of hardware and software for the interactive system.

Identify system events that might be measured to determine, whether the response time problems are software based or hardware based. Explain type of measure you would undertake to trace, activate, duration and so on. (State your assumptions, if any)

Q.2) Discuss basics of Information Security and its evolution.

Q.3) What are the threats in Infrastructure Security ?

Q.4) Discuss in brief the building block diagram of Information Security.

Q.5) Discuss SSE-CMM Model in detail.

Q.6) Write short notes : **(Any Four)**

- (a) Firewall
- (b) Security of E-mail System
- (c) COBIT
- (d) Role of Internet and www
- (e) VPN

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-404

M. C. M. (Semester - IV) Examination - 2010

CYBER LAW

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question Nos. 1 and 6 are compulsory.*

(2) *Solve any three from Q. Nos. 2 to 5.*

Q.1) Case Study : (Solve any two cases)

[10x2=20]

- (a) A Co-operative Bank has recently introduced e-banking facility for its customers. The Bank Authorities have observed several breaches in security while performing e-transactions by the customers. State various probable breaches and security measures to avoid such breaches in e-banking.
- (b) Mr. Ramlal is newly promoted as Cyber Security Officer. Management of the firm has given him responsibility to prevent hacking of Corporate Computer Systems. But Mr. Ramlal has not undertaken such kind of work before. So how will you guide Mr. Ramlal with different techniques of hacking, who can be a hacker and what is hacking ?
- (c) Many a user while accessing website of a corporate observes sometimes a window appears on a page displaying some erroneous messages eventhough the page is loaded correctly. Mr. Babu, cyber security, feels that the site is being hacked by intruder using some kind of Technical Attack and some code is introduced by the hacker. Guide Mr. Babu with various types of technical attacks and measures to prevent such attacks.

- Q.2)** What is Hash Function ? Explain its role in detail. **[10]**
- Q.3)** What is Access Control ? Explain deferent Levels of Access Control. **[10]**
- Q.4)** What is Asymmetric Cryptography ? **[10]**
- Q.5)** What is Incident Response ? Explain Incident Response Process and term in detail. **[10]**
- Q.6)** Write short notes : **(Any Four)** **[20]**
- (a) Digital Signature
 - (b) Face Recognition
 - (c) PKI
 - (d) Organisational Issues related to Management
 - (e) Multilevel Security
 - (f) Granularity
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-405

M. C. M. (Semester - IV) Examination - 2010

MULTIMEDIA AND WEB DESIGNING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

Q. No. 7 is compulsory. Solve any four from the remaining.

Q.1) (A) What is Multimedia ? Explain types of Multimedia Presentations. [10]

(B) How does video work ? [05]

Q.2) (A) Write HTML Code to design the following table : [10]

| | | | | |
|----|---|----|----|----|
| 1 | | 2 | 3 | 4 |
| 5 | 6 | 7 | | |
| | 8 | 9 | 10 | 11 |
| 12 | | | | |
| 13 | | 14 | 15 | |

(B) Explain various attributes of table tag. [05]

Q.3) (A) What is DHTML ? Explain with example. [08]

(B) Display Clock in a Textbox. (Use Java Script) [07]

Q.4) (A) Create an array to store information of 10 customers (ID, Name, City, Rating) [10]

- Design Interface and write code to Accept Information.
- Display Names of Customers staying in Pune when Display Customer Button is pressed.
- Display Name of the Customer having highest rating when Rating Button is clicked.

(B) Explain five methods used for String Object (Java Script). [05]

[3877]-405

1

P.T.O.

Q.5) (A) Design Interface and write code for Chat Server. **[10]**

(B) Explain various Loops in VB with example. **[05]**

Q.6) (A) Write XML Code to store information about Product(ProductID, Name, Rate) **[07]**

(B) Write CSS to apply the following style sheet on the tags : **[08]**

Product : Display in Block

Background Colour : gray

Top Margin : 2 cm

ProductID : Bold

Name : Bold, blue colour, fontsize is 12 Arial Italics

Rate : Underline

Q.7) Write short notes : (Any Two) [5x2=10]

(a) Session Tracking

(b) XSLT

(c) Image Mapping

(d) Data Object (Java Script)

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-406

M. C. M. (Semester - IV) Examination - 2010

SOFT SKILLS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Q. 1 is compulsory.

*(2) Out of remaining attempt **any three** questions.*

(3) Figures in the brackets indicate marks to the questions.

Q.1) (A) Define Communication. Explain Process of Communication with the help of block diagram. [15]

(B) Describe Layout of a Business Letter with suitable example. [10]

Q.2) Write an Application Letter along with C.V. in response to an advertisement that has appeared in The Economic Times of the 15th April, 2010. Details are as under :

Name of the Applicant : Ashutosh Jadhav

Company : Zensar Technologies Ltd.

Zensar Knowledge Park, Plot 4, MIDC,
Kharadi, Off Nagar Road,

Pune - 411 014

Post : Software Engineer

Job Location : Pune

Educational Qualifications : MCM / MCA / BE / B Tech /
MS in Computer Science

Domain : Investment Banking,
Telecommunication, Retail

[15]

[3877]-406

1

P.T.O.

- Q.3)** The students of your MCM class have visited WIPRO at Rajeev Gandhi InfoTech Park, Hinjewadi as a part of field study. Prepare a report of your observations and findings to the Director, Knowledge Institute of Management, Pune. **[15]**
- Q.4) (A)** What are the essential factors of an effective Telephonic Communication ? **[08]**
- (B)** Explain in brief the difference between a Letter and a Memo ? As an HR Head, you are planning to finalise Training Calendar for the year 2010-11. As such you want to ascertain from various departmental heads the training requirements of their staff. Draft a suitable Memo. **[07]**
- Q.5)** What are the essential features of Effective Business Presentation ? Explain various Modes of Business Presentation. **[15]**
- Q.6)** Write short notes on **any three** of the following : **[15]**
- (a) Rapid Reading
 - (b) Barriers in Communication
 - (c) Agenda and Minutes of a Meeting
 - (d) Importance of Time Management
 - (e) Goal Setting
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 1

[3877]-407

M. C. M. (Semester - IV) Examination - 2010

QUALITY CONTROL AND SOFTWARE TESTING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Q. No. 1 is compulsory.*
- (2) Solve **any four** from the remaining.*
- (3) Figures to the right show marks.*

-
-
- Q.1)** (A) What is a Test Case ? How is a Test Case recorded ? **[04]**
(B) Write Test Cases for User Login and Password Validation Program. **[10]**
- Q.2)** Define Software Quality. Describe reasons for poor quality. Explain Concepts of Product Quality and Process Quality. **[14]**
- Q.3)** What is Software Testing ? What is its need ? When is it done ? Explain basic 4 types of Testing. **[14]**
- Q.4)** What is Defect Management ? How is it important ? Explain Process of Defect Recording and Tracking. **[14]**
- Q.5)** Define Risk. How to manage Risk ? Explain Risk-based Testing. **[14]**
- Q.6)** Write short notes : **(Any Two)** **[14]**
- (a) Reviews
 - (b) Foreign Language Testing
 - (c) TMM

[3877]-407/1

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[3877]-408

M. C. M. (Semester - IV) Examination - 2010

NETWORK TECHNOLOGY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Q. Nos. 1 and 7 are compulsory.*
- (2) Solve **any three** from the remaining.*
- (3) Draw neat diagrams whenever necessary.*

-
-
- Q.1)** (A) Explain steps for installation of Windows 2003 Server. [10]
(B) Explain Process Management in Linux with commands. [10]
- Q.2)** Explain Procedure to configure DHCP Server in Windows 2003 Server. [10]
- Q.3)** Write steps to configure Backup in Windows 2003 Server. [10]
- Q.4)** Explain installing and configuring packages in Linux. [10]
- Q.5)** Explain File Management Commands in Linux. (Any Five) [10]
- Q.6)** Explain Automate Deployment Service for Windows 2003 Server. [10]
- Q.7)** Write short notes : **(Any Four)** [4x5=20]
- (a) E-mail Protocols
 - (b) HTTP
 - (c) Firewall
 - (d) Network Topology
 - (e) Ethernet Frames
 - (f) VPN

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-41

M. C. M. (Semester - IV) Examination - 2010

LINUX PROGRAMMING

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question Nos. 1 and 6 are compulsory.*

(2) *Solve any three from Q. Nos. 2 to 5.*

Q.1) (A) Write PHP Code which accepts e-mail address and message from user and sends e-mail on entered address. Use from address as root@system.com. [10]

(B) Explain backup and restore commands of MySQL with example. [10]

Q.2) Explain with example setting NameVirtualHost in Apache. [10]

Q.3) Explain Linux Commands with example : (Any Five) [10]

(a) grep

(b) init

(c) sort

(d) kill

(e) top

(f) cpio

Q.4) Explain with example how to connect to MySQL database using PHP and various ways of retrieving data from such connection. [10]

Q.5) Explain Services in Linux and Service Management Commands. [10]

[3877]-41

1

P.T.O.

Q.6) Write short notes : (Any Four)

[5x4=20]

- (a) MIME Setting in Apache
 - (b) Arrays in PHP
 - (c) Partitions in Linux
 - (d) SELECT INTO.... in MySQL
 - (e) Authentication in Apache
 - (f) Functions in PHP
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[3877]-42

M. C. M. (Semester - IV) Examination - 2010

VISUAL BASIC .NET

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Q. Nos. 1 and 8 are compulsory.*

(2) *Solve **any four** from Q. Nos. 2 to 7.*

Q.1) Explain ASP .Net Framework in detail. [15]

Q.2) What do you mean by Exception Handling ? Explain with suitable examples. [10]

Q.3) Explain Crystal Reports in detail. [10]

Q.4) Define Bank Class having following attributes and methods : [10]

Cust_id (char(10))

Cust_name (varchar(3))

Balance (numeric(8,2))

Mode_of_Transaction (char(8))

Methods

Constructor to store information

Deposite_Bal(balance) update balance with amount

Withdraw_Bal(balance) update balance with amount

Check_Balance Return Current Balance

Note : Mode_of_Transaction must be either "Deposit" or "Withdraw".

Write a module to implement class and test functionality with all necessary validations.

Q.5) Accept a number in TextBox. If number is Prime, then add this number in ListBox, if not throw your own defined exception “PrimeNumberException”. **[10]**

Q.6) Explain Abstract Class and Interface with suitable examples. **[10]**

Q.7) Write a code to perform (Add, Update, Delete, Exit, First, Next, Last, Previous) on the following table : **[10]**

Table Name (Student)

(Roll_No, Name, Address, ContactNumber, Fees_Paid)

Database Admission

Server Sql Server, ServerName MCM, UserName=“MCM”, Password = “MCM”.

Q.8) Write short notes : (**Any Three**) **[15]**

- (a) Collection Object
- (b) Overloading and Overriding
- (c) CLR
- (d) Scope and Life of Variable

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[3877]-43

M. C. M. (Semester - IV) Examination - 2010

ADVANCED JAVA

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question No. 1 is compulsory.*

(2) *Solve **any four** from the remaining.*

Q.1) Answer the following :

[10]

- (a) Explain Statement Hierarchy in JDBC.
- (b) Different types of Session Handling.
- (c) Built-in Objects in JSP.
- (d) Explain Java Naming and Directory Interface API.
- (e) List down all the classes and interfaces required to compile and execute an RMI Program.

Q.2) Write an HTML Page to accept student details (Take suitable structure).

Using servlet insert these details into student table. Display the same record in tabular format and allow user to edit/delete the same record. **[15]**

Q.3) Create JSP Page which will contain a text box to accept department number and submit button. When user clicks on submit, show employees working in that department ? If records not found, display error message. **[15]**

Q.4) Write network application for Echo Server.

[15]

Q.5) Write program segments for the following : (Any Three) [15]

- (a) To get IP address of specified URL.
- (b) To get object of HTTP Session.
- (c) Restrict Session Object for Current JSP Page.
- (d) Bind Remote Object into RMI Registry.

Q.6) Write short notes with example : (Any Three) [15]

- (a) JDBC Drivers
 - (b) RMI Architecture
 - (c) Difference between Stateless and Statefull Session Bean
 - (d) Servlet Life Cycle
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 1

[3877]-44

M. C. M. (Semester - IV) Examination - 2010

CYBER LAW

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Q. Nos. 1 and 6 are compulsory.

*(2) Solve **any three** from Q. Nos. 2 to 5.*

Q.1) What is Cryptography ? Explain Symmetric and Asymmetric Cryptography Algorithms commonly used. **[20]**

Q.2) Explain provision of Digital Signature Certificate in IT Act, 2000. **[10]**

Q.3) Explain Access Control in Windows and Unix. **[10]**

Q.4) Explain Common Networks and Technical Attacks and their defences. **[10]**

Q.5) Explain Hacker, Hacking and Hacking Techniques. **[10]**

Q.6) Write short notes : **(Any Four)** **[5x4=20]**

(a) Hash Function

(b) PKI

(c) Biometric Techniques

(d) Concurrency in Distributed Systems

(e) Unauthorised Computer Access under IT Act, 2000

(f) Incident Response Team

[3877]-44/1

Total No. of Questions : 5]

[Total No. of Printed Pages : 1

[3877]-45

M. C. M. (Semester - IV) Examination - 2010

SOFTWARE QUALITY MANAGEMENT

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *All questions are compulsory.*

(2) *Figures to the right indicate full marks.*

Q.1) Solve any two : **[20]**

- (a) What important factors are considered in CMM ?
- (b) What is Review ? Explain with example.
- (c) Discuss Quality and Productivity

Q.2) Discuss the term Verification and Validation ? Give one example of each. **[10]**

Q.3) Explain 'V' Model of SDLC. **[10]**

Q.4) What is the role of Quality Department in Software Company ? **[10]**

Q.5) Solve any two : **[20]**

- (a) What is the use of Software Testing in SDLC ?
- (b) Define with example :
 - (i) Flow Testing
 - (ii) Defect Testing
 - (iii) Load Testing
- (c) What types of Risks are involved in IT Project ?

[3877]-45/1

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-46

M. C. M. (Semester - IV) Examination - 2010

ADVANCED BUSINESS APPLICATIONS

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. Nos. 1 and 7 must be answered.*
- (2) *Attempt any four from the remaining.*
- (3) *Draw neat diagrams. Neat diagrams carry marks.*

-
-
- Q.1)** (A) Good-paints Trading Company deals in building paints. The sale of various paint products is maintained in a suitable computerised database. Management needs the following reports on periodical basis. Describe process to prepare these reports. Also draw report layouts :
- Customerwise / Productwise Sale
 - Productwise / Customerwise Sale
 - Customerwise Outstandings [15]
- (B) What is Workflow Management ? [05]
- Q.2)** What is DEMAT ? What are the advantages of DEMAT Account ? [10]
- Q.3)** State 7R's – prerequisites of ERP. [10]
- Q.4)** Explain steps involved in Disaster Recovery Plan. [10]
- Q.5)** Describe Supply Chain Management Cycle in brief. Draw block diagram of SCM. [10]

[3877]-46

1

P.T.O.

Q.6) What are the current trends in Hospital Management System using IT Tool ? **[10]**

Q.7) Write short notes : **(Any Two)** **[10]**

- (a) Data Mining
 - (b) Insurance Premium
 - (c) TQM
 - (d) Fixed Deposit Scheme in Nationalised Banks
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[3877]-47

M. C. M. (Semester - IV) Examination - 2010

COMPUTER AIDED SYSTEM ENGINEERING TOOL (CASE TOOL)

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Question No. 1 is compulsory.

*(2) Attempt **any five** from the remaining.*

Q.1) University of Pune wants to conduct Online Examination for Ph.D. Admission for various courses.

You, as a System Analyst, do the following :

(a) Draw Usecase Diagram and Class Diagram for above System ? **[10]**

(b) How you are going to use CASE TOOL for above System during designing ? Explain. **[10]**

Q.2) What is the use of Rational Rose and VisioNet Case Tool in Software Engineering ? **[10]**

Q.3) Why do we need to evaluate Automated Support Tool and SDLC ? Justify. **[10]**

Q.4) Define :

(a) Re-engineering and Reverse Engineering **[05]**

(b) Re-documenting **[05]**

Q.5) How and in what way Project Support Tools are useful for Software Development ? **[10]**

[3877]-47

1

P.T.O.

Q.6) What are the strategies required for CASE Adoption ? **[10]**

Q.7) Write short notes : **(Any Two)** **[10]**

- (a) Front End CASE TOOL
 - (b) Integrated TOOLS
 - (c) CASE TOOL
-

Total No. of Questions : 7]

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M. C. M. (Semester - IV) Examination - 2010

BUSINESS PROCESS OUTSOURCING

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Solve *any five* questions.
 - (2) All questions carry equal marks.
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Q.1) What is BPO ? Explain significance of BPO.

Q.2) Is statement made by President of USA going to change BPO scenario ?

Q.3) What are the opportunities in various sectors for BPO Service Provider ?

Q.4) Why is India choosen as the major hub for BPO Sector ? Explain.

Q.5) What are the models in BPO ? Explain any one model in detail.

Q.6) What is ITES ? State Role of ITES in India.

Q.7) Write short notes : **(Any Two)**

- (a) Knowledge Process Outsourcing (KPO)
 - (b) Off-shore Outsourcing
 - (c) HR Outsourcing
 - (d) On-site and Off-site Outsourcing
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