

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[4077]-101

M. C. M. (Semester - I) Examination - 2011

‘C’ PROGRAMMING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

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

- (a)

```
void main(){
    int a = 25;
    printf(“%d %d %d”, a > 25, a = 50, a == 50);
}
```
- (b)

```
void main(){
    int i = 3, j;
    j = ++i * ++i;
    printf(“\n i = %d, j = %d”, i, j);
}
```

```
(c) void main(){
    void swap (int, int);
    int a = 5, b = 7;
    swap (a, b);
    printf("\na = %d, b = %d", a, b);
}

void swap (int a, int b)
{
    int c;
    c = a;
    a = b;
    b = c;
}
```

```
(d) void main(){
    char s[] = "Just In Time";
    int t = 0;
    while(S[t] != '\0'){
        if(S[t] != ' ')
            S[t] = S[t] + 2;
        t++;
    }
    puts(s);
}
```

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

- (a) Data types in 'C'
- (b) Command Line Arguments
- (c) Loop Statements in 'C'

Q.2) Write a 'C' program to print the following pattern using nested loops : [10]

```
?  
?#  
?#?  
?#?#  
?#?#?
```

Q.3) Write a recursive function to accept a string and display it in reverse. [10]

Q.4) Write a 'C' program to accept two matrices of order 3×3 and display the addition of two matrices. [10]

Q.5) Write a 'C' program to accept two file names and append first file to the second file. [10]

Q.6) Write a 'C' program to accept a string and convert all lowercase characters to uppercase. [10]

Q.7) Write a 'C' program which uses suitable structure array to accept name, telephone no. of 30 people. Sort these records on name in ascending order and display in a tabular form. [10]

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[4077]-102

M. C. M. (Semester - I) Examination - 2011

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) Explain the OSI Model with the help of a diagram. [12]
(B) Give the difference Compiler and Interpreter. [08]
- Q.2) What are Secondary Storage Devices ? Explain any two in detail. [10]
- Q.3) Explain the block diagram of the Computer. [10]
- Q.4) What is a Computer Language ? Explain the different types of Computer Languages. [10]
- Q.5) Define Operating System with its functions. [10]
- Q.6) Explain the terms : Bit, Byte, MB, KB, GB, TB, RAM, ROM, PROM. [10]
- Q.7) Solve : [10]
- (a) $(FAB)_{16} \rightarrow (?)_{10}$
 - (b) $(116)_{10} \rightarrow (?)_2$
 - (c) $(1101101)_2 \rightarrow (?)_{10}$
 - (d) $(101)_{10} \rightarrow (?)_8$
 - (e) $(400)_{10} \rightarrow (?)_{16}$

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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-103

M. C. M. (Semester - I) Examination - 2011

SOFTWARE ENGINEERING AND BUSINESS PROCESS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question Nos. 1 and 6 are compulsory.
- (2) Solve **any three** from the remaining.
- (3) Write assumption (if required).

Q.1) 'Bhojan' - a well-known restaurant wants to start home delivery of food. Following information has been gathered by System Analyst :

- Customer places order by phone or in person.
- Reception Clerk fills the order form in duplicate, one is given to Kitchen Manager and other is retained as an office copy.
- Kitchen Manager prepares KON (Kitchen Order Note) in triplicate sending two to the kitchen and third to Account Department.
- Kitchen prepares food as per the order, sends it to the reception along with signed copy of KON.
- Account Department prepares the bill in duplicate, sending one to reception and other is retained as office copy.
- Delivery boy delivers the food and bill to the customer.
- Customer pays the bill in cash after receiving food.
- Cash is submitted to Account Department by delivery boy at the end of day.

- (a) Draw 1st Level DFD. **[10]**
- (b) Design suitable report layout of daily cash received and daily order booking. **[10]**
- (c) Design KON Format. **[05]**

Q.2) Draw use case diagram for registering new E-mail Account. [10]

Q.3) The institute offers variety of courses under various streams. Each course is made up of set of subjects. Faculty in the institute are assigned courses to teach according to the core area of the faculty and their availability. The institute publishes and maintains calendar of different courses and assigned faculty every year. Each course has a course co-ordinator who manages the courses including course content, assign courses to the faculty and define course schedule. Academic record of the student is maintained by concerned faculty and submitted to course co-ordinator.

(a) Draw E-R Diagram. [05]

(b) Design any four Table Layouts. [05]

Q.4) Draw Decision Table for following : [10]

On the orders books on or before 29-7-2011, offer a discount of 10% on the items displayed in the advertisements. Addition 2% discount is offered to appointed dealers. If customer is within Maharashtra State, then no sales tax is charged, otherwise 8% sales tax is charged on the sale value. Customer from outside Maharashtra State also has to pay 4% Central Sales Tax. For charging excise duty there are two categories. For category A 10% and category B 5% Excise Duty has been charged.

Q.5) Explain various Phases of System Development Life Cycle. [10]

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

(a) Interview Techniques

(b) Codeless System

(c) Reverse Engineering

(d) Role of System Analyst

(e) Types of System

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-104

M. C. M. (Semester - I) Examination - 2011

**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'. Explain the different functions of Management. **[15]**
- (B) Discuss F.W. Taylor's Contribution towards Management Thoughts. **[10]**
- Q.2)** What is an Organisation ? Explain different types of Organisational Structures. **[15]**
- Q.3)** Explain Decision-making. Explain the types of Decision-making. **[15]**
- Q.4)** Define Organisational Behaviour. Explain the nature of Organisational Behaviour and the behavioural challenges faced by Managers. **[15]**
- Q.5)** Define Conflict. Discuss the different measures to avoid Conflict. **[15]**
- Q.6)** Discuss the Theory of Hygiene and Motivation. Compare it with Maslow's Theory of Motivation. **[15]**

Q.7) Short notes : (Any Three)

[15]

- (a) Johari Window
 - (b) Line and Staff Managers
 - (c) Transactional Analysis
 - (d) Conflict Management
 - (e) Henry Fayol's 14 Principles
-

Total No. of Questions : 7]

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[4077]-105

M. C. M. (Semester - I) Examination - 2011
WEB PROGRAMMING AND E-COMMERCE
(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Question Nos. 1 and 7 are compulsory.*
 - (2) *Attempt **any four** from the remaining.*
 - (3) *Figures to the right indicate full marks.*
 - (4) *Draw neat diagrams wherever necessary.*
-
-

- Q.1)** Explain E-commerce and types of E-commerce. Also tell advantages and disadvantages of E-commerce. **[10]**
- Q.2)** Explain various protocols involved in each layer of Internet Protocol Suite. **[10]**
- Q.3)** Explain various On-line Payment Techniques in detail. **[10]**
- Q.4)** Explain Electronic Data Interchange in detail. **[10]**
- Q.5)** Explain types of Firewall and their merits and demerits. **[10]**
- Q.6)** Explain the steps involved in development of E-commerce Website. **[10]**
- Q.7)** Write short notes : **(Any Four)** **[20]**
- (a) E-mail Marketing
 - (b) Cyber Squatting
 - (c) Cryptography
 - (d) Internet
 - (e) Mobile Computing
-

Total No. of Questions : 5]

[Total No. of Printed Pages : 3

[4077]-201

M. C. M. (Semester - II) Examination - 2011

DATA STRUCTURES AND ALGORITHMS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) All questions are compulsory.
 - (2) State your assumptions clearly.
 - (3) Write appropriate structure definitions wherever necessary.
-
-

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

$((A + B) / C) * (D + (E - F) / 9)$ [08]

OR

(A) Evaluate the following prefix form

$- / * A + BCDE$

where $A = 4, B = 2, C = 1, D = 3$ and $E = 2$.

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

(B) The input sequence to a Bubble Sort Algorithm which sorts in ascending order is :

35, 5, 38, 7, 41, 39, 37.

Show the sorting process stepwise. [07]

Q.2) (A) Consider a message :

Polypointer

Draw Huffman Tree for the message. What kind of tree is Huffman Tree ? [06]

- (B) Write ANSI 'C' Code for **any three** of the following : [09]
- (a) For displaying the integer data stored in different nodes of Binary Search Tree using Inorder Traversal.
 - (b) For displaying the integer data stored in different nodes of Binary Search Tree using Pre-order Traversal.
 - (c) For displaying the integer data stored in different nodes of Binary Search Tree using Post-order Traversal.
 - (d) For push operation on a stack, implemented as an Array.

Q.3) Answer **any three** of the following : [15]

- (a) Write ANSI 'C' function to merge Two Singly Linear Linked Lists to create Third List.
- (b) Write ANSI 'C' function to delete a node of a Linear Doubly Linked List.
- (c) Write ANSI 'C' function to reverse Linear Singly Linked List of Integers.
- (d) Write ANSI 'C' function to insert an element in a circular queue implemented as a Linked List.

Q.4) Solve **any three** of the following : [15]

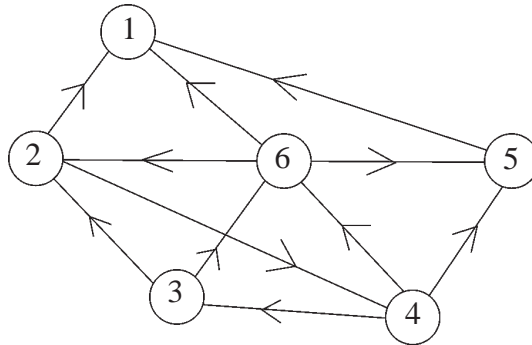
- (a) Consider the declaration :

```
int num[20][60];
```

Compute the address of an element num[18][25], if starting address of the array is 400. (Row and Column Major). Each member occupies 2 bytes.
- (b) Construct an AVL Tree for the following :
double, int, struct, while, break, case, char, float, const.
- (c) Write an algorithm for the Binary Search Method.
- (d) Write ANSI 'C' function to create a copy of Binary Search Tree.

Q.5) (A) Answer using following graph :

[06]



- (a) Write Adjacency Matrix.
- (b) Write Adjacency List representation.
- (c) Obtain the Indegree and Outdegree of each Vertex.

(B) Write an algorithm for Breadth First Search of a graph.

[04]

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-202

M. C. M. (Semester - II) Examination - 2011

DATABASE MANAGEMENT SYSTEM

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

Q.1) (A) Normalise following case upto 3NF :

[12]

Category Number

Category Name

Customer Name

Customer Address

Telephone Number

Bill Number

Bill Date

Due Date

Previous Reading

Current Reading

Metered Calls

Debit Calls

Credit Limit

Free Calls

Net Chargeable Calls

Call Charges

[4077]-202

1

P.T.O.

Rent

Service Tax

Previous Balance

Bill Amount

Amount to be paid after due date

Make necessary assumptions wherever required.

- (B) Explain various types of attributes in ER Diagram. [08]
- Q.2) Explain NDM. Explain all types of relationship in NDM. [10]
- Q.3) What is Transaction ? Explain various states of Transactions. [10]
- Q.4) What is Join ? Explain all types of Join with example. [10]
- Q.5) What is Concurrent Access ? Explain Concurrency Control Mechanism in detail. [10]
- Q.6) Explain Log Based Recovery in detail. [10]
- Q.7) Write short notes : (Any Two) [5x2=10]
- (a) Data Warehousing
 - (b) Data Distribution Techniques
 - (c) Integrity Constraints
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-203

M. C. M. (Semester - II) Examination - 2011

ORACLE

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. Nos. 1 and 7 are compulsory.*
 - (2) *Solve any four from the remaining.*
-
-

Q.1) University wants to develop a system for maintaining paper setters' data and their paper setting attendance record. Consider the following tables :

- (1) Paper_setter_master (paper_setter_id, name, course, experience, college.
- (2) Paper_setting_attendance (SRNo, paper_setter_id, paper_setting_lastdt, setting_start_dt, setting_end_dt, subject, duration, subject_pattern_year)
- (a) Create above tables with suitable constraints and add two records in each. [10]
- (b) Solve **any five** SQL Queries for the following : [10]
 - (1) Display paper setter dtls, those who have attended paper setting meeting more than 5 times.
 - (2) Create index on subject.
 - (3) Display number of paper setters, who attended a meeting for a subject 'S.E.'.
 - (4) Display all paper setters from 'XYZ' College.
 - (5) Change the college name of paper setter id is 'ϕ'.
 - (6) Delete all paper setters' record for payment, who have submitted paper sets after schedule date.

- Q.2)** Write a PL/SQL block to accept a paper_setter_id and display his details using procedures. [10]
- Q.3)** Write a function to accept the starting_date of a paper setter and return the number of hours he has attended on that date. [10]
- Q.4)** Write a trigger which will populate the 'new_paper setter' table whenever insertion or deletion is done on paper setter table. [10]
- Q.5)** Write any suitable programme for exception handling. [10]
- Q.6)** Write a PL/SQL block to display the paper setter details, those who are working under the same college and experience is greater than 10 years. [10]
- Q.7)** Write short notes : **(Any Two)** [10]
- (a) Date Functions (any five)
 - (b) Grant and Revoke
 - (c) Set Operators
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-204

M. C. M. (Semester - II) Examination - 2011

BASIC JAVA

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) Question Nos. 1 and 7 are compulsory.
 - (2) Solve **any three** questions from Q. Nos. 2 to 6.
 - (3) Figures to the right indicate full marks.
-
-

Q.1) (A) Solve the following : **[10]**

- (a) What is Applet Tag ? Which are its attributes ?
- (b) What is Thread Priority ?
- (c) What are Adapter Classes ?
- (d) Write code to add textfield in north region of Border Layout.
- (e) What is Abstract Class ?

(B) Write Java Application to generate following output : **[05]**

```
          *
        * *
      * * *
    * * * *
  * * * * *
```

Q.2) Write an application to define an interface 'CalculateResult' with methods CalculatTotal(), CalculatePercentage() and CalculateGrade(). Write student class with implementation of 'CalculateResult'. Create student object and display total marks, percentage and grade of student.

[15]

- Q.3)** Write program to accept runs scored in one over of cricket match. If no run is scored, user will enter zero or the runs scored for the ball. User will enter -1 if umpire declares 'No Ball' and count extra one run. In this case fire user defined exception 'NoBallException'. Display total runs scored in an over. **[15]**
- Q.4)** Write Java Application to generate following threads : **[15]**
- (a) To print string 'Space' in round robin fashion (space, paces, acesp, cespa, espac, space)
 - (b) Display numbers divisible by 5 from 1 to 100.
- Q.5)** Write applet application that will accept radius of circle and colour for circle. On click of 'draw' button show circle with given radius and given colour filled in it. **[15]**
- Q.6)** Write Java Application to accept 10 float values in an array. Display sum and average of values. **[15]**
- Q.7)** Write notes : **(Any Two)** **[10]**
- (a) Java io. File Class
 - (b) Vector Class
 - (c) Layout Managers
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[4077]-205

M. C. M. (Semester - II) Examination - 2011

CORE RUBY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

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

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

[15]

(a) `i = 0`

`while (i < 15)`

`i+ = 1`

`next if i % 2 == 0`

`puts i`

`end`

(b) `puts "this is a test".reverse.upcase.split(' ').reverse.join("-")`

(c) `a = []`

`a << 1`

`a << 2 << 3`

`a << [4, 5, 6]`

`puts a`

(d) `r = 'e' .. 'k'`

`r.step(2) {|x| print "[#{x}]"}`

```

(e) def mtd(*my_string)
    my_string.each do |words|
      puts words
    end
  end

  mtd('Welcome', 'to', 'Ruby', 'World')

(f) newarr = [53, 73, 3, 10]
    puts newarr.sort
    puts newarr.length
    puts newarr.first
    puts newarr.last

(g) collection = [12, 23, 456, 123, 4579]
    collection.each do |i|
      if i % 2 == 0
        puts "#{i} is even"
      else
        puts "#{i} is odd"
      end
    end
  end

```

Q.2) Write a program that checks the entered number is a perfect number or not. **[10]**

Q.3) Write a program that swaps the contents of two files. **[10]**

Q.4) Design a class Accounts with instance variables (accno, accname, acctype and balance) and four methods – Assign() that initializes the instance variables, Deposit (d) that returns the balance after deposit, Withdraw (d) which returns the balance after withdrawal and Display() that displays all information. **[10]**

Q.5) Accept an array of 10 integers and print maximum and minimum number. **[10]**

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

```
1  0  0  0  0
0  1  0  0  0
0  0  1  0  0
0  0  0  1  0
0  0  0  0  1
```

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

- (a) Exception Handling
 - (b) Unit Testing
 - (c) Duck Typing
 - (d) Symbols
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-206

M. C. M. (Semester - II) Examination - 2011

OBJECT ORIENTED DESIGNING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Notes :

- (1) Question No. 1 is compulsory.
- (2) Answer **any five** from the remaining.
- (3) Mention assumptions made for solving case study.

Q.1) (A) Draw Usecase Diagram and Class Diagram for following case :

A Kohinoor Hall wants to have an Online Hall Booking System. Through this system the customer can book hall online for specific date(s) and time along with the following details :

- (1) Lunch / Dinner Menu
- (2) Decoration details for Hall
- (3) Music Band details
- (4) Advance Payment details
- (5) Mode of Advance Payment
- (6) Approx. number of guests attending the function

The Manager of the Kohinoor Hall can add new menu items, decoration details etc. as well as can accept or reject hall booking. The customer can cancel the hall booking anytime, but accordingly the amount would be deducted from the advance paid by him.

After the function, bill is generated by the system. [15]

(B) What is Multiplicity ? Explain with example. [05]

- Q.2)** What is RUP ? Explain RUP in detail. [10]
- Q.3)** (A) Draw a sequence diagram for Deleting a contact number from your mobile. [05]
(B) Differentiate OOAD and SSAD. [05]
- Q.4)** Explain OMT in detail. [10]
- Q.5)** Draw activity diagram for arranging Alumini Meet for a Management College. [10]
- Q.6)** Draw a state transition diagram for Bank Safety Locker System which consist of a sensor and the system has following facilities :
- (1) Sensing the Intruders
 - (2) Taking their Photographs
 - (3) Scanning their Finger Prints
 - (4) Alarm System
 - (5) Auto Dialing to the Authorities [10]
- Q.7)** Write short notes : **(Any Two)** [10]
- (a) Object Persistence
 - (b) Benefits of Pattern
 - (c) Guidelines for Developing Test Plans
 - (d) OODBMS
-

Total No. of Questions : 5]

[Total No. of Printed Pages : 3

[4077]-21

M. C. M. (Semester - II) Examination - 2011

DATA STRUCTURE AND ALGORITHM

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) All questions are compulsory.
- (2) State your assumptions clearly.
- (3) Write appropriate structure definitions wherever necessary.

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

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

OR

(A) Evaluate the following prefix form :

$-/* A + B C D$

where $A = 5, B = 3, C = 2, D = 1$

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

(B) Write ANSI 'C' function to sort an array of integers according to descending order using Bubble Sort. [07]

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

'POSITIVE'

(a) Draw Huffman Tree for symbols of this message. [04]

(b) What kind of tree is Huffman Tree ? [02]

- (B) Write ANSI 'C' code for the following : **(Any Three)** [09]
- (a) For Preorder Traversal of Binary Search Tree.
 - (b) For converting linear queue to circular queue implemented as linked list.
 - (c) For counting number of nodes in a Single Linear Linked List.
 - (d) For Postorder Traversal of Binary Search Tree.

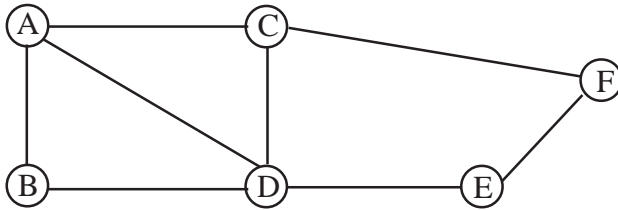
- Q.3)** (A) Answer **any two** of the following : [10]
- (a) Write ANSI 'C' function to implement push operation on a stack implemented as a linked list.
 - (b) Write ANSI 'C' function to add an element in a circular queue implemented as an array.
 - (c) Write ANSI 'C' function to print data elements of nodes in given Linear Doubly Linked List.

- (B) Define the following terms : [05]
- (a) Algorithm
 - (b) Tree

- Q.4)** Solve **any three** of the following : [15]
- (a) Consider the following declaration :
`int A[30][40]`
Compute Row Major and Column Major address of the Member A[21][25], where base address of the array is 200 and each member occupies 2 bytes.
 - (b) Construct AVL Tree with the following :
MANJIRI, SARIKA, NIKHIL, DEEPA, VARUN, RAVI, SUVARNA
 - (c) Write an algorithm for searching an element from integer array using Binary Search. Assume array is stored in ascending order.
 - (d) Write short notes :
 - (i) Stack
 - (ii) Linked List

Q.5) Answer using following graph :

[10]



- (a) Write Adjacency List.
 - (b) Write Adjacency Matrix.
 - (c) Generate output of Breadth First Search (BFS) Algorithm when starting vertex is A. Adjacent Vertex should be picked up in alphabetical order.
 - (d) Generate output of Depth First Search (DFS) Algorithm when starting vertex is A. Adjacent Vertex should be picked up in alphabetical order.
-

Total No. of Questions : 5]

[Total No. of Printed Pages : 3

[4077]-22

M. C. M. (Semester - II) Examination - 2011

VISUAL BASIC

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) All questions are compulsory.

(2) Figures to the right indicates full marks.

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

(a) Print StrComp (Null, "Hello" , vbTextCompare)

(b) dim j%

Print TypeName (j)

Print VarType (j)

Print Len (j)

(c) Dim Var

Var = DateAdd ("d", 10, #10/03/2011#)

Print Var

Print Format (var, "dd, mm, yyyy")

(d) Dim str as string

Str = "Pune University"

Print StrConv (str, 2)

Print Format (str, <

- (e) result = Fix (- 4.5)
Print result
Print abs (result)
- (f) Print Val ("202 Visual Basic")

Q.2) Explain the following properties : (Any Five) [10]

- (a) Multiline Property of Text Box
- (b) List Property of Combo Box
- (c) Interval Property of Timer
- (d) Picture Property of Command Button
- (e) Drive Property of DriveListBox
- (f) Stretch Property of Image
- (g) UseMnemonic Property of Label

Q.3) Design a form and write a code using ADODB.

Consider Table Student (StudID, StudName, Qualification, Percentage).
Write a code to perform ADD, Update, Delete and Navigations. [10]

Q.4) Name the following : [05]

- (a) Any two built in Active-X Controls
- (b) Different types of Errors
- (c) Three objects used in ADODB
- (d) Loops in VB
- (e) Data Types in VB

Q.5) Write short notes : (Any Five)

[25]

- (a) Date Functions
 - (b) Cursor Types in ADO
 - (c) Event Driven Programming
 - (d) IF and IIF Statement
 - (e) Concept of Control Array
 - (f) Conversion Functions
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-23

M. C. M. (Semester - II) Examination - 2011

ORACLE

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

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

Q.1) Consider the following table structure and write the SQL Statements for the following :

EMP (Empno, ename, sal, join_date, job, deptno)

DEPT (Deptno, dname, Loc)

- (a) Create the above two tables with proper constraints. [06]
- (b) Add new column commission in emp table. [02]
- (c) Delete the record from emp table where ename is 'Amol'. [02]
- (d) Display employee those who are joined in the month of 'March'. [02]
- (e) Display all employee's details sorted on ename by descending order. [02]
- (f) Display all employees whose names are 5 letters long. [02]
- (g) Display list of employee whose names ending with 'R'. [02]
- (h) Display list of employees who joined earliest and latest. [02]

- Q.2)** Write any PL/SQL Block using implicit Cursor. [10]
- Q.3)** Write a PL/SQL Block to display top five highest paid employees. [10]
- Q.4)** Write any suitable programme for Exception Handling based on above table of Q. No. 1. [10]
- Q.5)** Write a trigger which will be fired on emp table whenever there is an Insertion or updation or deletion on Sunday. [10]
- Q.6)** Write a PL/SQL Block to display alternate record from emp table. [10]
- Q.7)** Write short notes : (**Any Two**) [10]
- (a) Group by Having Clause
 - (b) Sub-queries
 - (c) Date Functions
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4077]-24

M. C. M. (Semester - II) Examination - 2011

SOFTWARE PROJECT MANAGEMENT AND IT MANAGEMENT

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

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

-
-
- Q.1)** (A) You are required to give cost estimation for the project whose size is estimated to 45000 LOC. Give cost estimation for all 3 class. [08]
- (B) Management wants to take the expert opinion from you to support the decision of accepting the resignation given by DBA/Network Administrator. Suggest the necessary precautions and controls to be exercised to do so. [07]
- Q.2)** Describe the aspect of Software Teams with different types of Teams with their suitability of Projects. [10]
- Q.3)** Describe the importance of Software Quality Standard. Explain CMM. [10]
- Q.4)** Explain in detail IT - HRM System. Your answer should include about selection, retention of Employee. [10]
- Q.5)** Write down Software Configuration Items. How they are managed ? [10]
- Q.6)** What is acquisition process for Hardware and Software in IT Industry ? [10]
- Q.7)** What are the Time Estimation Tools ? Explain CPM/PERT with example. [10]

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

[15]

- (a) MS Project
 - (b) Software Security
 - (c) Change Management
 - (d) Acceptance Testing
 - (e) Software Project Management
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-25

M. C. M. (Semester - II) Examination - 2011

BUSINESS APPLICATION

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Question No. 1 is compulsory. Attempt any five from the remaining.*

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

Q.1) Explain the process of customer order processing including order acknowledgment, dispatch and invoicing with the help of data flow diagram, any two report layouts and suitable database design. [20]

Q.2) Write short notes : (Any Two) [10]

- (a) Employee Appraisal
- (b) Journals / Day Books
- (c) Work Order Management

Q.3) Explain Concept of Calculation Logic for Income Tax. [10]

Q.4) Discuss importance of Invoice by drawing suitable layout. [10]

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

- (a) Employee Training
- (b) Balance Sheet
- (c) ABC Analysis

Q.6) Explain the Process of Computerised Material Requirement Planning in detail. **[10]**

Q.7) A Co-operative Bank is proposing to computerise its Fixed Deposit System. Design a Data Entry Screen for Fixed Deposit Application Form with appropriate validation checks. **[10]**

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-301

M. C. M. (Semester - III) Examination - 2011

LINUX PROGRAMMING

(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) (A) Write PHP program which accepts classid and display list of students studying in that class from table STUDENT having fields rollno, name, classid, feespaid of database COLLEGE. [10]

(B) Explain Apache Directives written in httpd.conf file. [10]

Q.2) Write MySQL Commands for following : (Any Five) [10]

(a) To create database INVENTORY of type MYISAM.

(b) To create table ITEM with proper constraints.

(c) To create user staff having permission to access INVENTORY database.

(d) To take backup of ITEM table in text file.

(e) To display items having stock zero.

(f) To add column inventoryclass in table ITEM.

Q.3) Explain following Linux Commands with example : **(Any Five) [5x2=10]**

- (a) Cat
- (b) Find
- (c) Kill
- (d) Sort
- (e) Renice
- (f) Tar

Q.4) What are services in Linux ? Explain how you configure services in Linux and how to start and stop services ? **[10]**

Q.5) Explain Object Oriented PHP with suitable example. **[10]**

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

- (a) SESSION and COOKIES
 - (b) Include and require function in PHP
 - (c) Virtual Host in Apache
 - (d) Package Management in Linux
 - (e) MySQL GUI Tools
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[4077]-302

M. C. M. (Semester - III) Examination - 2011

BUSINESS APPLICATION

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

Q.1) Explain the process of employee appraisal with the help of data flow diagram, any two report layouts and suitable database design. **[20]**

Q.2) Write short notes : **(Any Two)** **[10]**

- (a) Recruitment Process
- (b) Balance Sheet
- (c) Accounts Receivable and Accounts Payable

Q.3) Explain the concept and calculation logic for PF and Gratuity. **[10]**

Q.4) Discuss importance of Trial Balance by drawing suitable layout. **[10]**

Q.5) Write short notes : **(Any Two)** **[10]**

- (a) Supplier Bill Passing
- (b) Equipment Down Time Analysis
- (c) BOM (Bill Of Material)

Q.6) Explain the Process of Computerized Stock Valuation Methods in detail. **[10]**

Q.7) A Co-operative Bank is proposing to computerise its Fixed Deposit System. Design a Data Entry Screen for Fixed Deposit Application Form with appropriate validation checks. **[10]**

[4077]-302/1

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-303

M. C. M. (Semester - III) Examination - 2011

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) Solve the following : **[10]**

- (a) Write a code to call stored procedure using JDBC.
- (b) Write Down Socket and Server Socket Class Constructor.
- (c) What is RMI Registry ?
- (d) Difference between GenericServlet and HTTPServlet.
- (e) Life Cycle Methods of Bean

Q.2) Write a Socket Program that run on Server and echoes back all the strings sent by Client after receiving string. If Client sends string EXIT, Server should get terminated. **[15]**

Q.3) Write RMI to accept a number and display its factorial value using remote method fact(). **[15]**

Q.4) Write a Servlet with following specification - Servlet will accept user name, password and foreground colour and display 'hello' message in accepted colour. **[15]**

Q.5) Write a program that will open department table allow user to insert, modify, delete record from table. (Take suitable table structure) **[15]**

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

[15]

- (a) Java Beans
 - (b) MVC Architecture
 - (c) JNDI
 - (d) JSP Directive
-

Total No. of Questions : 2]

[Total No. of Printed Pages : 2

[4077]-304

M. C. M. (Semester - III) Examination - 2011

ADVANCED RUBY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Q.1) Solve any five :

[5x6=30]

- (a) Explain MVC Architecture in Rails.
- (b) Write Validation Code in model for Valid E-mail Address.
- (c) Explain Menu Widget with all options and submenu items in Ruby with example.
- (d) Explain MessageBox function with all options. Write a Ruby Application which displays a message 'clicked' when a button is clicked.
- (e) Explain routes.rb file.
- (f) How many types of Caching is available in Rails ? Explain each in short.
- (g) Explain Restful Architecture in Rails.

Q.2) Solve any five :

[5x8=40]

- (a) Write migration for creating table 'Item' in database having item_no, name, stock, created_at, updated_at columns.
- (b) Write authentication method in ATM Model which will accept ATM Card Number and pinno as parameters. If ATM Card with provided pinno is present in database then return ATM object otherwise return nil.
- (c) Write a Ruby Script to generate a ComboBox of items. When a button is clicked, the caption / text of the button is changed to item selected in the ComboBox.

- (d) Write a Server Socket Application that accepts a number from client and returns whether number is odd or even. Also write the Client Socket Application.
 - (e) Write a SOAP Server which defines a method that accepts 2 strings from client and returns the concatenated string. Write SOAP Client Application also.
 - (f) Using MySql Connection Object, write a Ruby Script to display all records in Accounts Table (AccNo, Name, Bal).
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4077]-305

M. C. M. (Semester - III) Examination - 2011

VB.NET

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

Q.1) What is ADO.NET ? Draw and explain ADO.NET Architecture. [15]

Q.2) Write a program which opens the file in a rich text box, accept strings to search and replace all occurrences of the search string in the rich text box. Later save the file with the changes. [10]

Q.3) (A) Explain at least five different string functions with examples. [05]

(B) Explain Polymorphism with an example. [05]

Q.4) Create a Structure Institute having : [10]

Data Members : InstID, InstName, Address, YearOfEst, PhoneNo, FaxNo, WebSite, EmailID and Courses.

Method : WriteData() to write the Institute Information into a 'Inst.Dat' file.

Show Data() to display the Institute Information on the console.

Accept the data from the user and make use of Binary Reader and Binary Writer.

Q.5) Define a Class employee having member variables – empno, empname and designation. Define another class salary which has been inherited from class employee, having member variable Basic_Sal. Write appropriate method which will calculate basic salary depending on designation and constructor to initialize member variables. [10]

Q.6) Write code to perform (Add, Delete, Cancel, Update, First, Last, Previous, Next) on Author table (AuthorId, AuthorName, Phone, Address, City, State, Pin). Database → “Pubs”, UserId → “Librarian”, Password → “UOP”, Server → SQL Server. (Draw the GUI and clearly mention all the controls with properties set at design time)

Q.7) Write a Windows Application Program which will accept the birthdate from the user in a DateTimePicker Control. Write a function to calculate the age. If age is below 18, raise user defined exception - Illegal Age Exception. **[10]**

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

- (a) System.Array Class
 - (b) Dialog Controls
 - (c) List Box and Checked List Box
 - (d) Different Loops in VB.Net
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-306

M. C. M. (Semester - III) Examination - 2011

SOFTWARE PROJECT 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) Q. No. 1 carries 20 mark. Remaining questions carry 10 marks each.

Q.1) (A) Explain in detail Umbrella Structure of Software Project Management. [10]

(B) Using the following activities table draw PERT diagram and find out critical path : [10]

| Activity | From | To | Duration |
|----------|------|----|----------|
| A | 1 | 2 | 8 |
| B | 1 | 3 | 6 |
| C | 1 | 5 | 3 |
| D | 2 | 6 | 4 |
| E | 2 | 8 | 4 |
| F | 3 | 2 | 5 |
| G | 3 | 4 | 3 |
| H | 4 | 6 | 4 |
| I | 4 | 7 | 2 |

- Q.2)** Describe various Software Project Time Estimation Tools, with suitable illustration. [10]
- Q.3)** What is Software Testing ? Explain its different techniques. [10]
- Q.4)** What do you understand IT Operation Management ? Explain in details role and responsibility in IT Operation. [10]
- Q.5)** What is a Acquisition Process for Hardware and Software in IT Industry ? [10]
- Q.6)** Compare and contract Black and White Box Testing Methods of Software Testing. [10]
- Q.7)** Write short notes : (**Any Two**) [10]
- (a) Walkthrough
 - (b) Rayleigh Curve
 - (c) CMM Model
 - (d) Test Plan
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[4077]-31

M. C. M. (Semester - III) Examination - 2011

OBJECT ORIENTED CONCEPT AND BASIC JAVA

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Question No. 1 is compulsory.*
 - (2) *Solve any five from the remaining.*
 - (3) *Draw diagram whenever necessary.*
-
-

Q.1) (A) Which is the output of the following program ? **(Any Two) [10]**

(a) Which of the following does not denote a primitive data type ?

- (i) "p"
- (ii) "k"
- (iii) 50.50 F
- (iv) "Pune"
- (v) False

(b) Given are the following declarations :

String S1 = new string ("Hello");

String S2 = new string ("There");

String S3 = new string ();

Which of the following are legal operations ?

- (i) S3 = S1 + S2
- (ii) S3 = S1 - S2
- (iii) S3 = S1 & S2
- (iv) S3 = S1 && S2

- (c) Final statement is used :
 - (i) To avoid overriding
 - (ii) To avoid overloading
 - (iii) To enhance smooth overriding
 - (iv) None of the above

(B) Write a code for the following : [10]

- (a) Define constant pi as 3.14.
- (b) Write an applet tag to execute Myapplet · Class.
- (c) Set layout to applet as grid with 3 columns and 4 rows.
- (d) Define Static Variable and Static Method in Class.
- (e) Create Thread and Execute Method.

Q.2) Accept number from Command Line, if number is odd then fire odd NumException. [10]

Q.3) Write a Java Application Program to copy contents from one file into another. [10]

Q.4) Print the following structure using loop : [10]

```

      *
    * *
  * * *
* * * *
```

Q.5) Write a item class with item_no, item_name, total_quantity and price. Calculate price for the given total quantity of item. [10]

Q.6) Write a Java Program to create following threads : [10]

- (a) Thread A - Print 1 to 10 Numbers
- (b) Thread B - Print 10 to 1 Numbers

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

[10]

- (a) Access Specifier
 - (b) Exception Handling
 - (c) Inheritance
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4077]-32

M. C. M. (Semester - III) Examination - 2011

INTERNET TECHNOLOGY

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

All questions carry equal marks. Attempt any seven.

Q.1) Write Style Sheet for following :

- (a) Displaying Arial Font Text with 14 pt font size.
- (b) Displaying Para with Blue Colour.
- (c) Set Border to H2, apply border colour red.
- (d) Display Para with background image bold text.
- (e) Set Paragraph to font size 20 px.

Q.2) Write ASP Code to display admission information in tabular format. Consider following table :

Admission (adm_id, adm_dt, std_name, std_addr, course_name)

Q.3) Accept birth date from user and display his age in year and month format.

(Eg. 24 years and 3 months)

Q.4) Explain the Inbuilt ASP Object.

Q.5) How to maintain session in ASP with example ?

Q.6) Explain Image Mapping with example.

Q.7) (A) Create XML file for a storing student data (roll_no, name, fees_paid, course).

(B) Use above XML file and display it in HTML format using DSO Object.

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

(a) XML DTD

(b) E-commerce

(c) Loop Statement in JavaScript

(d) Style Sheet

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-33

M. C. M. (Semester - III) Examination - 2011

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 steps to install Windows Server 2003. **[10]**
(B) Explain procedure to install DHCP Server in Linux. **[10]**
- Q.2)** Explain File and Print Services in Windows Server 2003. **[10]**
- Q.3)** Explain Active Directory features and procedure to implement it in Windows Server 2003. **[10]**
- Q.4)** Explain Process Management Commands in Linux. **[10]**
- Q.5)** Explain .Net Frame work and procedure to install it on Client. **[10]**
- Q.6)** Explain procedure to configure a Firewall in Linux. **[10]**

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

[4x5=20]

- (a) Client - Server Networks
 - (b) VPN
 - (c) HTTP Protocol
 - (d) LAN Topologies
 - (e) Linux Directory Structure
 - (f) FTP
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 1

[4077]-34

M. C. M. (Semester - III) Examination - 2011

INFORMATION SYSTEM AUDIT

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

- (1) *Q. No. 8 is compulsory.*
- (2) *Solve **any five** from the remaining.*

-
-
- Q.1)** What is Risk ? Explain the steps involved in Risk Management. [10]
- Q.2)** Explain the need of IS Audit. What are the goals achieved by IS Audit ? [10]
- Q.3)** Describe the Evidence Collection and Evaluation Methods in detail. [10]
- Q.4)** Define Audit Controls. Explain the Application and Management Control. [10]
- Q.5)** Describe the role of Data Base Administrator in Auditing Process. [10]
- Q.6)** What are the Physical and Logical Security of IS Assets that an Auditor should Audit in an Organisation. [10]
- Q.7)** What do you mean by Computer Crimes ? Elaborate the different types of Crimes. [10]
- Q.8)** Write short notes : (**Any Four**) [20]
- (a) BCP
 - (b) Trojan Horse
 - (c) Steering Committee
 - (d) ISACA
 - (e) E-commerce
 - (f) Digital Signature

[4077]-34/1

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-35

M. C. M. (Semester - III) Examination - 2011
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 Management. Explain the Managerial Functions and Managerial Skills. **[15]**
- (B) What is Planning ? Explain merits and demerits of Planning. **[10]**
- Q.2)** Are conflicts integral part of Organisation ? Discuss. How conflicts can be resolved with the help of 'JOHARI WINDOW' ? **[15]**
- Q.3)** Explain Maslow's Need Hierarchy Theory along with its limitations. **[15]**
- Q.4)** Define Leadership. What are the different Styles of Leadership ? **[15]**
- Q.5)** Define Decision-making. Discuss Decision-making Process and different Techniques. **[15]**
- Q.6)** What do you mean by Team in an Organisation ? How does a Team differ from a Group ? **[15]**

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

[15]

- (a) TQM
 - (b) Nature of Organising
 - (c) Span of Control
 - (d) Recruiting
 - (e) Importance of Controlling
-

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4077]-401

M. C. M. (Semester - IV) Examination - 2011

MOBILE COMPUTING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Notes :

(1) Question No. 1 is compulsory and Attempt **five** from the remaining.

(2) Figures to the right indicate full marks.

Q.1) (A) Define the following terms and write their functions : **(Any Four) [10]**

- (a) MSRN
- (b) MSC
- (c) BSC
- (d) SIM
- (e) Bit Rate
- (f) VLR

(B) Explain Call Handover in GSM Network. **[10]**

Q.2) How DHCP can be used for Mobility Management ? Explain. **[10]**

Q.3) Define MANET. Explain design issues and characteristics of MANET. **[10]**

Q.4) What is Snooping ? Why it is used in TCP. **[10]**

Q.5) Explain Dynamic Source Routing with example. **[10]**

Q.6) Explain Blue Tooth Architecture in detail. **[10]**

Q.7) Explain case-of-address mechanism used in Mobile-IP. **[10]**

Q.8) Write short notes : **(Any Two)** **[10]**

(a) Dynamic DNS

(b) HIPERLAN

(c) Freezing

(d) CDMA

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-402

M. C. M. (Semester - IV) Examination - 2011

ASP.NET

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

Q.1) Explain ASP.NET Architecture in detail. [10]

OR

Q.1) Explain ADO.NET Object Model in detail. [10]

Q.2) Explain Server Side State Management Techniques in detail. [15]

Q.3) Explain methods, properties and events of the following controls : [15]

- (a) CheckBoxList Control
- (b) ImageMap Control
- (c) SiteMap Control

Q.4) What is Web Service ? Explain the steps and code to create and consume Webservice. [15]

Q.5) Write a Sectional Code for following :

- (a) Disable the past dates and Sundays in calendar control. [06]
- (b) Create an application using File Upload Control. Which will upload your photo and display it in a image control ? The file type must be image only and file size should not exceed 1 MB. [09]

Q.6) Design a form and write code to :

- (a) Populate and display books names in a drop down list.
- (b) Select a book from drop down list and display its details in underlying text boxes.
- (c) Add a record
- (d) Delete Selected Record
- (e) Edit Selected Record

Use connected architecture.

Name of Table : BookMaster (BookID, Title, Author, Publisher, Price)

Name of Server : MyAspDB (SQL Server) [15]

Q.7) Write short notes : [15]

- (a) Namespace
- (b) Validator Controls (any two)
- (c) Login Controls (any two)

Total No. of Questions : 3]

[Total No. of Printed Pages : 2

[4077]-403

M. C. M. (Semester - IV) Examination - 2011

INFORMATION SECURITY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

All questions are compulsory.

Q.1) Case Study : (Solve any one)

[20]

Case A :

Super BPO Company is a company providing customer care and phone banking facilities. Its main customers are some of the biggest banks of USA. It employs 200 BPO executives who have access to all the financial and personal data and credit card information of nearly 1 million clients of these banks.

You have been appointed as the security administrator and have been assigned the work to study the possible security lapses which might occur.

- (a) What are the different types of threats and vulnerabilities you might find in this BPO Company ?
- (b) Give your recommendation so as to control these threats.

Case B :

Intellectual Property Theft :

The complainant (Software Company based in Bangalore) alleged that some of the company's former employees had accessed the company's IT System and tampered with the Source Code of the Software under Development.

- (a) What precaution was not taken by the organisation to prevent it ? What is your suggestion in this regard ?
- (b) Write down the steps to investigate and suggest required internal control on this.

Q.2) Solve **any three** from the following :

[3x10=30]

- (a) What do you understand by the term 'Encryption', 'Private Key Encryption' and 'Public Key Encryption' ?
- (b) Explain the need of Physical Security. What are the different types of Physical Threats and what are the measures to counter them ?
- (c) Create a Sample Password Policy for an Organisation.
- (d) Explain the different types of Bio-metric Controls that can be used for Information System Security.

Q.3) Write short notes : (**Any Four**)

[4x5=20]

- (a) Firewall and its types
 - (b) Copyright Act
 - (c) Disaster Recovery Planning
 - (d) Security of E-mail System
 - (e) Sarbanes - Oxley Act
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-404

M. C. M. (Semester - IV) Examination - 2011

CYBER LAW

(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) Case Study : (Solve any two)

[2x10=20]

- (a) A company observes frequent attacks on their network by insiders and outsiders. Explain different types of attacks and suggest company defensive mechanism to prevent attacks.
- (b) Sita complains to her boss that somebody use her password and sends fraudulent mails from her account. The boss explains her to change her password. As a cyber consultant describe various ways of cracking password and preventive measures to avoid such cracking of password.
- (c) IT Company suggest its employees to use Electronic Banking for their transactions. Explain these employees 'What is E-banking and how transactions are recorded and processed in E-banking ?'

Q.2) Explain Client Concurrency and Server Concurrency.

[10]

Q.3) What is Public Key and Private Key ? Explain Public Key Infrastructure in detail.

[10]

Q.4) What is Fault Tolerance ? How fault recovers in Distributed System.

[10]

Q.5) What is Incident ? Explain Incident Reporting and Incident Response Team.

[10]

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1

P.T.O.

Q.6) Write notes : (Any Four)

[20]

- (a) Hash Functions
 - (b) Organisational Issues
 - (c) Behavioural Biometric Techniques
 - (d) Multilevel Security
 - (e) Alarms
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-405

M. C. M. (Semester - IV) Examination - 2011

MULTIMEDIA AND WEB DESIGNING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instruction :

Q. No. 1 is compulsory. Attempt any four from Q. 2 to Q. 7.

Q.1) Explain Built-in Objects in ASP. [10]

OR

Q.1) Explain difference between XML and HTML. [10]

Q.2) (A) What is Multimedia ? Explain Components of Multimedia. [10]

(B) Explain MIDI Messages. [05]

Q.3) (A) Write HTML Code to draw table : [10]

| | | | |
|---|----|----|---|
| 1 | 2 | | |
| 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | |
| | 10 | 11 | |

(B) Explain Loop Statements in JavaScript. [05]

Q.4) (A) Explain Colour Models. [10]

(B) Explain 1-bit and 8-bit Images. [05]

- Q.5) (A)** Design Interface for accepting id, name, DOB, passwd, from user. Check following validations on submit and show error messages to user. If data is valid then transfer control to insert.asp page. **[10]**
- (a) id : Not null, Numeric
 - (b) name : Not null
 - (c) passwd : password length should be greater than 8 characters
- (B)** Create a cookie to store user name and login time and display total time used by the user when he clicks logout. **[05]**
- Q.6)** Accept userid for login and save the login information (userid, login time, logout time) using application level variables. Save logout time for the user when he logout. Create a page to display login details of the users. **[15]**
- Q.7)** Write short notes : **(Any Three)** **[15]**
- (a) Analog and Digital Signal
 - (b) Image File Data Types
 - (c) Array Object in ASP
 - (d) XSLT
 - (e) Style Sheets
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-406

M. C. M. (Semester - IV) Examination - 2011

SOFT SKILLS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) *Q. No. 1 is compulsory. Out of remaining attempt any three questions.*

(2) *Figures in the brackets indicate marks to the questions.*

Q.1) (A) What is the importance of Business Communication in today changing Business Scenario ? [15]

(B) What are the different Electronic Devices used in Business ? [10]

Q.2) What are the different types of Interviews conducted in selection of right candidate in Software Industry ? [15]

Q.3) Draft a Resume in response to the following job requirement of company Technova Inc, P. 482, Inova House, D.P. Road., Baner, Pune. [15]

Java Programmer Java/J2EE/Spring/Velocity/XML XLT, AJAX

Experience : No Bar

Qualification : Any Graduate + MCM from a recognised University.

You are Mr. S. S. Patil.

Q.4) Explain importance of Oral Communal in Project Viva. [15]

Q.5) Explain different methods of Presentation with their significance. [15]

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

[15]

- (a) Communication Situation
 - (b) Video Conferencing
 - (c) Signs and Symbols
 - (d) Tips for Effective Listening
 - (e) Do's and Don't's of Group Discussion
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 1

[4077]-407

M. C. M. (Semester - IV) Examination - 2011

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 Test Data ? What are its norms ? [04]
(B) Write Test Cases for Washing Machine. [10]
- Q.2)** Define Software Quality. Describe reasons for Poor Quality. Explain reasons for Product Quality and Process Quality. [14]
- Q.3)** What is Software Testing ? What is its need ? Explain levels of Testing. [14]
- Q.4)** What is Functional Testing ? Explain various types of Functional Testing. [14]
- Q.5)** Prepare BVA and ECP for below scenario login window : [14]
(a) Use-id – allow alphanumerics 4 to 16 characters long
(b) Password – allow alphabets 4 to 8 characters long
- Q.6)** Write short notes : (Any Two) [14]
(a) Types of Defect Management
(b) Test Automation
(c) TMM

[4077]-407/1

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[4077]-408

M. C. M. (Semester - IV) Examination - 2011

NETWORK TECHNOLOGY

(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) *Write your assumptions.*
- (4) *Figures to the right indicate full marks.*
- (5) *Draw neat diagrams wherever necessary.*

-
-
- Q.1)** (A) Explain steps for installation of Windows Server 2003. [10]
(B) Write the steps for configuring DHCP Server in Windows Server 2003. [10]
- Q.2)** Explain the steps for Linux Installation in Graphical Mode. [10]
- Q.3)** Explain Windows Rights Management Services in detail. [10]
- Q.4)** Explain how we Configure Backup in Windows Server 2003 ? [10]
- Q.5)** Explain Network Management and File Management Commands in Linux. [10]
- Q.6)** Explain how we can Configure X-windows in Linux ? [10]
- Q.7)** Write short notes : **(Any Four)** [20]
- (a) Application Protocols
 - (b) Ethernet
 - (c) Process Management Commands in Linux
 - (d) VPN
 - (e) Hub, Switch and Router

[4077]-408/1

Total No. of Questions : 6]

[Total No. of Printed Pages : 1

[4077]-41

M. C. M. (Semester - IV) Examination - 2011

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 the remaining.*

-
-
- Q.1)** (A) Write PHP Script which accept username and password and validate it with user table of ABC Database, if username and password is not correct then display the proper messages. [10]
- (B) Explain Authentication types in Apache. [10]
- Q.2)** Explain Object Oriented PHP with example. [10]
- Q.3)** Explain Services in Linux. How Services are selected for start-up in Linux ? [10]
- Q.4)** Explain the function in PHP. [10]
- Q.5)** Explain with example how to connect to MySQL Database using PHP ? [10]
- Q.6)** Write short notes : (Any Four) [5x4=10]
- (a) User Space
 - (b) Array Operation in PHP
 - (c) Session Variable in PHP
 - (d) Data Types in MySQL
 - (e) Backup Commands
 - (f) Partition in Linux

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Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4077]-42

M. C. M. (Semester - IV) Examination - 2011

VB.NET

(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.*

Q.1) What is .NET ? Draw and explain .NET Framework Architecture. [15]

Q.2) Explain the Architecture of an ASP.NET Web Application. [10]

Q.3) Design a Web Application which displays all quotation Ids from Quotation Master Table in a drop down list. On selection of a particular quotation Id display Quotation Details in a DataGrid control using DataReader. (Make your necessary assumptions, if any) [10]

Q.4) Write a program to copy content of one file into another after encrypting it. Use Stream Reader and Stream Writer. [10]

Q.5) Define a Class Library having member variables - Lib_Id, Studens_Name, Course, Book_Id, Issue_Date, Return_Date. Define another class Book_Return which is inherited from class Library, having member variables Date Of Return and Fine. Write a function which will calculate fine if the book is returned after Return_Date and constructors to initialize member variables. [10]

Q.6) Write a code to perform (Add, Delete, Update, First, Last, Previous, Next) on ItemMaster Table (ItemID, Item_Name, Description, UOM and Qty).

Database → Inventory, UserId → MCM,

Password → MCM, Server → MS Access [10]

[4077]-42

1

P.T.O.

Q.7) Write a console application program which will accept the birthdate of a senior citizen from the user. Write a method to calculate the age. If age is below 60, raise user defined exception - Illegal Age Exception. **[10]**

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

- (a) Validation Controls
 - (b) Label and Link Label Controls
 - (c) Exception Handling
 - (d) Constructor and Destructor
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4077]-43

M. C. M. (Semester - IV) Examination - 2011

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) Solve the following :

[10]

- (a) List EJB Session Bean Lifecycle Methods.
- (b) What is UDP ?
- (c) Write about the Interfaces used in JDBC.
- (d) What's the difference between SendRedirect() and Forward() Methods ?
- (e) Write code to call a stored procedure using JDBC.

Q.2) Write an application to accept Customer Details on html page and send to servlet. Servlet will insert record in Customer Table after validating credit limit. If the credit limit is above 5,00,000, display error message, otherwise insert the record in the table.

Customer : CustomerID, Name, Address1, Address2, City, State, PIN,
Credit Limit.

[15]

Q.3) Create a bean that will calculate square and cube of a given number. Use bean in JSP Program. Accept number from user and display square and cube of that number.

[15]

Q.4) Write program segment : (Any Three) [15]

- (a) To get row count from a table.
- (b) To declare function in JSP using JSP Expression.
- (c) To register out parameter with data type string.
- (d) To create DatagramPacket to send to specified address and port number.
- (e) To retrieve information from cookies in Servlet.

Q.5) Write a threaded echo Server - Client Socket Program. [15]

Q.6) Write RMI application to invoke remote method to reverse a given string. [15]

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

- (a) JNDI
- (b) Session Tracking in Servlets
- (c) RMI Architecture
- (d) JSP Directives

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

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M. C. M. (Semester - IV) Examination - 2011

CYBER LAW

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

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

-
-
- Q.1)** What are the different techniques for protecting E-commerce System ? [10]
- Q.2)** (A) Write the procedure to get Digital Signature. [08]
(B) What are Common Network Attack and their defenses ? [07]
- Q.3)** (A) Define the term Computer and Access, under the IT Act, 2000 and explain Unauthorized Computer Access. [08]
(B) Discuss the scope and objects of the Information Technology. [07]
- Q.4)** (A) What is Biometrics ? Explain different Physical and Behavioural Biometrics. [08]
(B) What are Access Control Lists ? [07]
- Q.5)** (A) Define and explain Hacking. What is the punishment for the offence of Hacking ? [08]
(B) What is Hash Function ? Explain its role in detail. [07]

Q.6) Write notes : (Any Three)

[15]

- (a) PKI
 - (b) Multilevel Security
 - (c) Organisational Issues
 - (d) Client - Server Concurrency
-

Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4077]-45

M. C. M. (Semester - IV) Examination - 2011

SOFTWARE QUALITY ASSURANCE

(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) Why Software Quality is required in Software Development Process ?
Explain. [10]

Q.2) What is use of SEI-CMM Level for Software Organisation ? Explain
CMM Level-3 in detail. [15]

Q.3) Define the following terms with example : [15]

(a) Bug

(b) Defect

(c) Audit

Q.4) (A) Explain 'V' Model in Software Testing. Give example. [10]

(B) Block Box Testing [05]

Q.5) Explain the terms in short : [15]

(a) Load Testing

(b) Stress Testing

(c) α and β Testing (Alpha and Beta)

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

[15]

- (a) KPA
 - (b) Quality Control
 - (c) Inspection
 - (d) Role of Customer in Quality
-

Total No. of Questions : 7]

[Total No. of Printed Pages : 1

[4077]-46

M. C. M. (Semester - IV) Examination - 2011

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)** Explain different features of Internet Banking and explain any one of them. Draw any four GUI related to the features. **[20]**
- Q.2)** What are the current trends of I.T. in Hospital Management ? **[10]**
- Q.3)** Explain Customer Acquisition and Customer Retention Process with reference to Insurance Sector from Agent's Perspective. **[10]**
- Q.4)** What is ERP ? Explain different modules involved in ERP with its block diagram. **[10]**
- Q.5)** What is SCM ? Explain different stages of SCM. **[10]**
- Q.6)** What is IPR ? Explain different IPRs in brief. **[10]**
- Q.7)** Short notes : **(Any Two)** **[10]**
- (a) WAP
 - (b) BPR
 - (c) BCP

Total No. of Questions : 4]

[Total No. of Printed Pages : 1

[4077]-47

M. C. M. (Semester - IV) Examination - 2011
COMPUTER AIDED SYSTEM ENGINEERING
(CASE TOOLS)
(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions.

- (1) *Q. No. 1 is compulsory.*
 - (2) *Attempt **any two** from the remaining.*
 - (3) *Assume the required data whenever necessary.*
-
-

- Q.1)** (A) Draw a USE CASE and Class Diagram by assuming suitable data for Student's Admission Process at Post-graduate Level. [20]
(B) What are the characteristics having CASE Tool ? [10]
- Q.2)** (A) Explain Automated CASE Tool. [10]
(B) What is use of CASE Tool for Re-engineering Application ? [10]
- Q.3)** (A) What are the types of CASE Tool used in Software Engineering ? [10]
(B) Explain any two major types of CASE Tool. [10]
- Q.4)** (A) "Rational Rose as CASE Tool for Analysis and Design."
Comment. [10]
(B) How CASE Tool improves the productivity ? Justify your answer. [10]
-

[4077]-47/1

Total No. of Questions : 8]

[Total No. of Printed Pages : 1

[4077]-48

M. C. M. (Semester - IV) Examination - 2011

BUSINESS PROCESS OUTSOURCING (BPO)

(Old 2005 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Instructions :

(1) Solve any seven questions.

(2) All questions carry equal marks.

Q.1) What are the Models in BPO ? Explain any one model in detail.

Q.2) What are the challenges faced by Indians in BPO ?

Q.3) Explain 3 Layers of BPO.

Q.4) What is the need for Outsourcing ? Explain its advantages and disadvantages.

Q.5) Illustrate the opportunities in various sectors for BPO Service Provides.

Q.6) What is BPO ? List the opportunities in BPO.

Q.7) Why is India chosen as a major Hub or BPO Sector ? Comment.

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

(a) Skill Set required by Employees in BPO

(b) Current Trends in BPO

(c) Scope of BPO in India

[4077]-48/1