

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-1001**

**M. C. M. (Semester - I) Examination - 2013**

**FUNDAMENTALS OF INFORMATION TECHNOLOGY**

**(2012 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.

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**Q.1) Define Computer. Discuss Generations of Computers. [10]**

**Q.2) (A) Solve : [08]**

(a)  $(FAB)_{16} \rightarrow ?_2$

(b)  $(110111010)_2 \rightarrow ?_{10}$

(c)  $(2AC)_{16} \rightarrow ?_{10}$

(d)  $(712)_{10} \rightarrow ?_8$

**(B) Define Virtual Memory. Explain it in brief. [07]**

**Q.3) (A) Define OS with its functions. [08]**

**(B) What is Computer Language ? Explain various type of Computer Languages. [07]**

**Q.4) (A) Explain Coding System. Explain ASCII in detail. [08]**

**(B) Explain different Image Capturing Devices. [07]**

- Q.5)** (A) Discuss Network Topology in detail. [08]  
(B) Discuss Parallel Processors in detail. [07]
- Q.6)** (A) Differentiate between Multiprogramming and Multiprocessing with appropriate diagram. [08]  
(B) What is a Pen Drive ? Explain with diagram. [07]
- Q.7)** (A) Discuss various types of Computers. [08]  
(B) Explain OSI Model with the help of diagram. [07]
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Total No. of Questions : 7]

[Total No. of Printed Pages : 3

**[4377]-1002**

**M. C. M. (Semester - I) Examination - 2013**

**‘C’ PROGRAMMING AND DATA STRUCTURE**

**(2012 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.

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

**[12]**

- (a) 

```
void main() {
    int a = 3, b = 4, c = 2;
    a = b >> c;
    b = a << c;
    c = c << a >> b;
    printf("a = %d, b = %d, c = %d", a, b, c);
}
```
- (b) 

```
void main() {
    int i;
    for(i = 0; i < 10; i++) {
        printf("No Magic, Only Logic !\n");
        i = i + 1; }
}
```

**[4377]-1002**

**1**

**P.T.O.**

```

(c) int x = 10;
    void main( ) {
        printf(“%d”, x);
        {
            int x = 20;
            {
                int x = 30;
                printf(“%d”, x);
            }
            printf(“%d”, x);
        }
    }

(d) void main()
    {
        void ser( );
        int i;
        for(i = 0; i < 10; i++)
            ser( );
    }
void ser( )
{
    static int n = 11;
    printf(“\t %d”, n);
    n = n + 11;
}

```

(B) Explain the following : (Any Two)

[08]

- (a) queue
- (b) recursion
- (c) storage classes

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

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

**Q.3)** Write a 'C' program to accept marks of 60 students of a class in an array and calculate and print average marks. **[10]**

**Q.4)** Write a 'C' program which concatenates a string at the end of another without using standard function. **[10]**

**Q.5)** Write a function to accept an integer no that returns factorial of the number. **[10]**

**Q.6)** Write a program that accepts two files from the user and copies contents of first file to the second. **[10]**

**Q.7)** Accept 60 student records in an array of structure with fields Rollno, Name, Marks. Print student name with highest marks. **[10]**

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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-1003**

**M. C. M. (Semester - I) Examination - 2013**

**SOFTWARE ENGINEERING WITH UML**

**(2012 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.

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**Q.1)** The ABC Hospital Management has decided to computerised their hospital i.e. Hospital Management for IPD and OPD System. There are Doctor's who are full time. Resident and visiting with various specialisations. Consulting doctors visiting hospital at different hours of the week. Charges for the same can vary from doctor to doctor depending on their experience. Patients are admitted to the hospital for various reasons according to the category. Room Charges are also very according to the category of room. In the Hospital Employee are recorded the different information time to time and maintain the different records such as Patient Records, Doctors Records, Bill Records etc.

- (a) Draw ERD diagram **[10]**
- (b) File Layout **[08]**
- (c) Report generation i.e. Output Format (any three) **[07]**

**Q.2)** Explain various Phases of RUP in details. **[10]**

- Q.3)** Draw Activity Diagram for On-line Booking of IPL Cricket Tickets. The payment should be done by credit card. The tickets can be cancelled one day before the match. [10]
- Q.4)** (A) Explain in details Software Requirement Specification. [05]  
(B) Explain Decision Table with suitable example. [05]
- Q.5)** Draw a use case diagram for maintaing FD Account in Bank. [10]
- Q.6)** Write shorts notes : **(Any Three)** [15]
- (a) SDLC
  - (b) Types of Requirements
  - (c) Structured English
  - (d) State Transition Diagram
-

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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-1004**

**M. C. M. (Semester - I) Examination - 2013**

**DATABASE MANAGEMENT SYSTEM (DBMS)**

**(2012 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.*

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**Q.1) (A)** In a library material like books, journals, magazines and CDs are stored. This material is of various subjects of various courses run by the institute within the subject there are various topics for which these materials can be used. One material can be used for many subjects and for many courses.

The members like students, teaching staff, visitors and non-teaching staff can get issued these materials on their names and they return these books after 7 days. If the book is not returned on time, a fine is charged to the member.

Draw ER Diagram and convert it into Relational Database (Tables).

**[10]**



(B) Normalize the following layout upto 3NF : [10]

<b>Service Call Report (ABC Home Appliances)</b>					
Customer Code : _____		Customer Name : _____			
Customer Address : _____					
Date of Call : _____			Time : _____		
Sr. No.	Machine Name	Problem	Spares used	Qty.	Amount
Total					
Service Charge : _____		Grand Total : _____			
Customer Remarks : _____			Date : _____		
Engineer Code and Name : _____					
Customer Sign.					

**Q.2)** Explain 3-tier Architecture of DBMS. [10]

**Q.3)** (A) What is Transaction ? Explain ACID Properties of Transaction. [05]

(B) Explain States of Transaction with neat diagram. [05]

**Q.4)** Explain any 5 Codd Rules. [10]

**Q.5)** Explain how concurrency is controlled using Locking Technique ? [10]

**Q.6)** (A) Explain Unary Operation in Relational Algebra. [06]

(B) What are Database Security issues ? [04]

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

(a) Application of Data Mining

(b) Data Independence

(c) Log base Recovery

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Total No. of Questions : 8]

[Total No. of Printed Pages : 3

[4377]-101

M. C. M. (Semester - I) Examination - 2013

'C' PROGRAMMING

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

*Instructions :*

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

---

---

**Q.1) Explain the following outputs : (Any Four)**

**[10]**

(a) #include <stdio.h>

main()

{

int a = 300, b = 100, c = 200;

if (a > c > b)

printf("a = %d, b = %d, c = %d\n", ! a, b, c);

else

printf("%d %d", a);

}

(b) void main()

{

int a = 20, b = 10;

int \*p = \*a, \*q = \*b;

\*p = \*p + \*q;

\*q = \*p - \*q;

\*p = \*p - \*q;

printf("q = %d b = %d", a, b);

}

[4377]-101

1

P.T.O.

(c) enum colours { BLACK, BLUE, GREEN}

main()

```
{
    printf("%d, %d, %d", BLACK, BLUE, GREEN);
    return(1);
}
```

(d) void main()

```
{
    static char *s[] = {"black", "white", "yellow", "violet"};
    char**ptr[] = {s + 3, s + 2, s + 1, s}, **p;
    p = ptr;
    **++p;
    printf("%s", * - - * ++ p + 3);
}
```

(e) void main()

```
{
    int k, i = 30, j = 90, l;
    clrscr();
    i = i | (j && 100);
    k = i || (j || 100);
    printf("%d %d \n", i, j);
    printf("%d %d", k, i);
}
```

**Q.2)** Write a function void copychars (int n, char \*x, char \*y) which copies first n characters from the given string x into another string y. [10]

**Q.3)** Write a program to print the following pattern using nested loop : [10]

```
      Z
     Y  Z
    X  Y  Z
```

**Q.4)** Write a program to read a “C Program File” and count total number of statements in the complete ‘C’ program. [10]

**Q.5)** Accept 50 student record in an array of structure with fields rollno, name, marks. Print student name with highest marks. [10]

**Q.6)** Write function Lucky(n) where n is an integer and return single digit lucky no. The lucky no is calculated by product of digits of the number repeatedly till you get a single digit. [10]

**Q.7)** Write a program to accept three numbers from command line arguments and display the largest one. [10]

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

- (a) Logical Operators
  - (b) Preprocessor Directives
  - (c) Sping Manipulation Functions
-

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Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[4377]-102

M. C. M. (Semester - I) Examination - 2013

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 and explain digital block diagram of Computer with functions of each unit. [12]
- (B) Explain the following terms : [08]
- (a) RAM
  - (b) ROM
  - (c) PROM
  - (d) EPROM
- Q.2)** Define Operating System and explain its functions. [10]
- Q.3)** Define Computer Network and explain its types. [10]
- Q.4)** Explain any two Output Devices in detail. [10]

**Q.5)** Explain Multiprogramming with a diagram. **[10]**

**Q.6)** Explain OSI Model (Seven Layers) in detail. **[10]**

**Q.7)** What is meant by Non-positional Number System ? Explain various Positional Number Systems. **[10]**

**Q.8)** Solve the following : **[10]**

(a)  $(1110111)_2 = (?)_{10}$

(b)  $(11.1111)_2 = (?)_{10}$

(c)  $(AC)_{16} = (?)_{10}$

(d)  $(215)_{10} = (?)_2$

(e)  $(28.555)_{10} = (?)_2$



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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-103**

**M. C. M. (Semester - I) Examination - 2013**

**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.

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**Q.1)** Maruti Auto Spare Parts Pvt. Ltd., has decided to computerise its sales order processing. As a system analyst prepare the following :

- (a) ERD **[10]**
- (b) Any two Outpart Reports **[10]**
- (c) Any two File Design **[05]**

**Q.2)** In a Computerised Railway Reservation System a passenger is required to file in a reservation form giving details of his journey. The counter clerk enquires whether the place is available. If so, entries are made in register, tickets are prepared, amount is computed and cash is accepted. A booking statement is prepared in triplicate format from the reservation register, one copy of it is retained as office copy, the other is pasted on compartment and third is passed on the train conductor. Besides Booking Statement, cash statement is also prepared at the end of each shift.

- (a) Draw 1st level DFD
- (b) Draw the ticket with validations **[10]**

**Q.3)** Draw a use as diagram for a On-line Book Shopping System. [10]

**Q.4)** Explain various skills required by Software Engineer. [10]

**Q.5)** For General Category, if fixed deposit amount is more then 2,00,000 and period is more then 5 years then the interest rate is 12.5%, for any amount in multiples of 5,000, the interest rates are 11.5% for 4-5 years, 10% for 3-4 years, 9.5% for 2-3 years and 9.0% for a period of less than a year. 1.5% extra interest would be given to customers of senior citizen. Draw a decision table for the above case. [10]

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

- (a) Prototyping
  - (b) Reverse Engineering
  - (c) CASE Tools
  - (d) Feasibility Study
-



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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-104**

**M. C. M. (Semester - I) Examination - 2013**

**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) Solve **any three** out of the remaining.*
- (3) Figures to the right indicates full marks.*

- 
- 
- Q.1) (A)** Explain the term Organisational Behaviour. Describe various Models of OB. **[15]**
- (B)** Do you feel Maslow's Hierarchy of needs is an appropriate way of looking at human needs in an organisation ? Justify. **[10]**
- Q.2)** Define Management. Discuss various functions of Management in detail. **[15]**
- Q.3)** Discuss the contributions made by F. W. Taylor to the study of Management. **[15]**
- Q.4)** Define Group. Differentiate between Formal and Informal Group. **[15]**
- Q.5)** Explain Leadership with its various styles and importance. **[15]**
- Q.6)** Define Conflict. Explain various stages of Conflict Resolution. **[15]**

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

**[15]**

- (a) System Approach
  - (b) Teams
  - (c) Types of Organisational Structure
  - (d) Theory X
  - (e) Henry Fayol
-

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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-105**

**M. C. M. (Semester - I) Examination - 2013**

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

---

**Q.1)** What is E-commerce ? What are various E-commerce Models ? Also explain E-commerce Framework ? **[10]**

**Q.2)** What are various Electronic Payment Systems ? Explain Credit Card Payment System in detail. **[10]**

**Q.3)** What is Cryptography ? What are two different types of Encryption ? Explain it with proper diagrams. **[10]**

**Q.4)** Why there is need of On-line Marketing ? What are the various ways of On-line Marketing ? **[10]**

**Q.5)** Why there is need of Website for any Business Organisations ? Explain the steps involved in Website Development. **[10]**

**[4377]-105**

**1**

**P.T.O.**

**Q.6)** What is Internet Protocol Suite ? Explain various Protocols available in each Layer. **[10]**

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

- (a) Internet
  - (b) Virus and its types
  - (c) E-mail Marketing
  - (d) Firewalls
  - (e) Mobile Computing
-

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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-2001**

**M. C. M. (Semester - II) Examination - 2013**

**BUSINESS APPLICATION AND ERP TOOLS**

**(2012 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

***Instructions :***

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

- 
- 
- Q.1)** Explain steps involved in Customer Order Processing System with the help of First Level Data Flow Diagram. Draw format of any three reports generated from the system. **[20]**
- Q.2)** Explain ERP Implementation Life Cycle in detail. **[10]**
- Q.3)** Explain Receipt of Material in Procurement System. Draw format of Goods Received Report (GRR). **[10]**
- Q.4)** What is purpose of Balance Sheet ? Draw format of Balance Sheet. **[10]**
- Q.5)** Explain Process of Preparation of Payroll. Draw format of Salary Register. **[10]**
- Q.6)** Elaborate Post Implementation Review of ERP Package in Manufacturing Organisation. **[10]**

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

**[4x5=20]**

- (a) Advantages of ERP
  - (b) PF and Gratuity
  - (c) EOQ
  - (d) Ratio Analysis
  - (e) Employee Appraisal
-

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Total No. of Questions : 7]

[Total No. of Printed Pages : 3

**[4377]-2003**

**M. C. M. (Semester - II) Examination - 2013**

**ADVANCED RELATIONAL DATABASE MANAGEMENT  
SYSTEM (RDBMS) USING ORACLE**

**(2012 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :**

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

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Consider the following tables to solve queries and plsql given below :

**Employees :**

(employee\_id, last\_name, salary, commission\_pct, hire\_date, manager\_id, job\_title, department\_id)

**Departments :**

(department : id, department\_name, location\_id)

**Locations :**

(location\_id, city, street, address)

**Q.1) Solve **any ten** queries given below :**

**[20]**

- (1) Create Employees Table with constraints.
- (2) Count unique department number from employees table.
- (3) Display the last name of employees whose third letter should contains the character 'a'.
- (4) Add column e-mail in employees table.

- (5) Calculate average commission percentage of all employees.
- (6) Display the last name and salary of employees whose salary is not in range of \$5000 to \$12000.
- (7) Display the last name and job title of all employees who do not have a manager.
- (8) Display the last name, years completed of employees from the date of joining the Company.
- (9) Write a query to display the last name, department number and department name for all employees.
- (10) Display the employees whose job title is same as that of employee 141.
- (11) Display the last name and employee number along with their manager's last name and manager number.
- (12) Delete the records of employees whose salary is less than \$12000.

**Q.2)** Write a cursor to displaying top 5 salaried employees. (Display only three column : employee\_id, last\_name, salary). **[10]**

**Q.3)** Write a procedure display\_info to accept the employee\_id and display its following details of that employee : **[10]**  
(employee\_id, last\_name, department\_id, department\_name)

**Q.4)** Write a function tax\_cal to calculate the annual income tax of all employees and return annual income tax. (consider 10% tax per annum) **[10]**

**Q.5)** Write a package specification and body which contains followings : **[10]**

- (a) A procedure which accept the number and calculate the factorial of given number.
- (b) A function which accept the number and return if it is odd or even.

**Q.6)** Write a trigger that will allow user to update record in 'Employees' only between Monday to Friday. **[10]**



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

**[20]**

- (a) Exception Handling
  - (b) Constraints
  - (c) Stages of Database Startup and Shutdown Options
  - (d) Types of Backup and Steps to take Backup without Shutting Down Database
  - (e) Sequence
  - (f) Data Types in Oracle
-

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Total No. of Questions : 8]

[Total No. of Printed Pages : 2

**[4377]-2004**

**M. C. M. (Semester - II) Examination - 2013**

**JAVA PROGRAMMING**

**(2012 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :**

- (1) *Q. Nos. 1 and 8 are compulsory.*
  - (2) *Solve **any five** from the remaining.*
  - (3) *All questions carry equal marks.*
- 
- 

**Q.1)** Solve the following :

- (a) What is Adapter Class ?
- (b) What stages of Thread Life Cycle ?
- (c) What is Null Interface ?
- (d) Draw Panel with Border Layout.
- (e) List any four Methods of File Class.

**Q.2)** Write application that will accept number from user and find whether it is divisible by 19 or not. If it is not divisible file user defined exception "Number Not Divisible Exception".

**Q.3)** Write application that will accept two file names from user. Copy first file to second. Do all possible validations. (Use Character Streams)

**Q.4)** Write an application to create following threads :

- (a) Display series 1, 1, 2, 3, 5, 8, 13, 21..... (50 terms)
- (b) Display series 1, 8, 27, 64, 125..... (50 terms)

**Q.5)** Write an interface to define method calculate Temp( ) which takes two arguments, first - “char c or f” specifies whether to convert temperature to Fahrenheit or Celsius and second argument-float temp, temperature to convert. ( $C = \frac{5}{9} F - 32$ )

Implement this interface and show the functionality.

**Q.6)** Write an applet to display mouse position (co-ordinates) on status line.

**Q.7)** Create class books with attributes bookid, title, author, no\_of\_copies, price. Accept details of 10 books in an array of objects and display the accepted details

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

- (a) Access Specifier
- (b) Differentiate between awt and swing
- (c) StringBuffer Class

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Total No. of Questions : 5]

[Total No. of Printed Pages : 3

[4377]-201

M. C. M. (Semester - II) Examination - 2013

DATA STRUCTURES AND ALGORITHMS

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

*Instructions :*

- (1) *All questions are compulsory.*
- (2) *Figures to the right indicate full marks.*
- (3) *State your assumptions clearly, if any.*
- (4) *Write appropriate structure definitions wherever necessary.*

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**Q.1) (A) Convert following Infix Form to Postfix Form : (Any Two) [08]**

- (a)  $A - B/C + D * E$
- (b)  $A * B - C/D + E \$ F$
- (c)  $A * (B - C) / D + E \$ F$

**(B) Evaluate the following Postfix Form : (Any One) [07]**

- (a)  $ABC * + DE / -$   
where  $A = 6, B = 4, C = 3, D = 9, E = 3$

- (b)  $ABC * + DE \$ +$   
where  $A = 8, B = 6, C = 5, D = 2, E = 3$

Show the contents of the stack at each step in a Tabular Form.

**Q.2)** Answer **any three** of the following : **[15]**

- (a) Write a function to reverse a Singly Linear Linked List.
- (b) Write a function to delete an element from linear queue implemented as a linked list.
- (c) Write push() and pop() functions for a stack implemented as a linked list.
- (d) Write a function to print contents of a Binary Search Tree using Preorder Traversal.

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

- (a) Consider a message :  
LITTLE  
Draw Huffman Tree for the message. What kind of Tree is Huffman Tree ?
- (b) Sort the following numbers using Quick Sort :  
22, 10, 30, 2, 5  
Show all the steps in sorting.
- (c) Define the following terms :
  - (i) Cyclic Graph
  - (ii) Leaf Node
  - (iii) Height of Tree
  - (iv) Stack Overflow
  - (v) BST
- (d) Consider declaration :  
int array [9][23];  
Compute row major and column major address of an element array[5][19], when base address is 100.

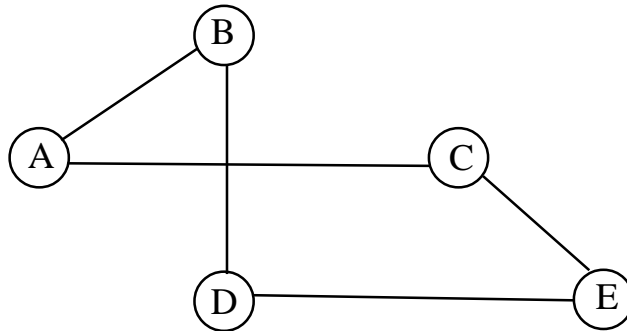
**Q.4) (A)** Answer **any two** of the following : **[10]**

- (a) Write a function to insert an element in Doubly Linear Linked List.
- (b) Write a function to count total number of nodes in Binary Search Tree.
- (c) Construct an AVL Tree for following tokens :  
preeti, farhan, chitra, deepak, babita

**(B)** Write short notes : **(Any One)** **[05]**

- (a) Binary Search
- (b) Hashing

**Q.5) (A)** Answer using the following graph : **[06]**



- (a) Adjacency Matrix Representation
- (b) Adjacency List Representation

**(B)** Write an algorithm for DFS of a graph. **[04]**

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Total No. of Questions : 7]

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M. C. M. (Semester - II) Examination - 2013

DATABASE MANAGEMENT SYSTEM

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

Notes :

- (1) Question No. 1 is compulsory.
- (2) Solve **any 5** from the remaining.

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

[12]

Ticket No :						
Train Number :			Train Name :			
Date of Journey :			Departure Time :			
Type of Journey :			Bogie No. :			
Sr. No.	Name of Passenger	Sex	Age	Seat No.	Reservation Charges	Amount
1.						
2.						
3.						
4.						
Date :					Total Amount	

(B) Explain Codd's Rule.

[08]

Q.2) What is Data Model ? Explain different types of Data Models ? [10]

Q.3) What is Data Recovery ? Explain Log Based Recovery Mechanism ? [10]

**Q.4)** What is Data Warehouse ? Explain Architecture of Data Warehouse in detail. **[10]**

**Q.5)** Explain with example : **[10]**

(a) Project

(b) Generalization

**Q.6)** Explain the following : **[10]**

(a) Integrity Constraints

(b) Database Users

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

(a) Distributed Database

(b) Data Mining

(c) Lock Techniques



Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-203**

**M. C. M. (Semester - II) Examination - 2013**

**ORACLE**

**(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) *Figures to the right indicate full marks.*
- (4) *State your assumptions clearly.*

---

---

**Q.1) (A)** Create the tables mentioned below with required constraints and insert atleast 2 records. **[06]**

Book\_master (Book\_no, Book\_title, Book\_price, Book\_author, Book\_status)

Member\_master (Mem\_no, Mem\_name, Mem\_type, Book\_no)

**(B)** Solve the following queries : **(Any Seven)** **[14]**

- (1) Display number of books in the library.
- (2) Display Mem\_type wise no. of members.
- (3) Display the book having highest price.
- (4) List of books issued to the members.
- (5) List of books not issued.

- (6) List book–title without duplication.
- (7) Display total books’ cost.
- (8) List of books having book\_status null.
- (9) List of books having title first character ‘z’
- (10) Display the book having largest title.

**Q.2)** Write a function display\_title which accept Book\_no and returns the book title. **[10]**

**Q.3)** Write a function No-of-books which accept Book\_Author and returns the no. of books of that Author. **[10]**

**Q.4)** Write a cursor to display all books having price more than Rs. 1,000 in ascending order of price. **[10]**

**Q.5)** Write a trigger which will not allow transaction on book\_master on 15th August and 26th January every year. **[10]**

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

- (a) SQL
  - (b) Aggregate Functions
  - (c) Joins
  - (d) Rollback
  - (e) String Functions
  - (f) Date Functions
-

Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4377]-204

M. C. M. (Semester - II) Examination - 2013

BASIC JAVA

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

*Instructions :*

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

---

---

**Q.1)** Solve the following :

[10]

- (a) List out different Layout Managers.
- (b) Which is the Default Access Modifier for and Interface Method ?
- (c) Use of Final Keyword in Java
- (d) Use of Super Keyword in Java
- (e) Use of finalise( ) method in Java

**Q.2)** (A) Explain Life Cycle of an Applet.

[05]

(B) Design an applet with two text fields and two button on it.

Accept a number in first text field. If SQUIRE button is pressed display square of number in second text field. If CUBE button is pressed display cube of number in second text box.

[10]

**Q.3)** (A) Explain User Defined Exception. What is Checked and Unchecked Exception ?

[05]

(B) Define an exception called 'NoMatchException' that is thrown when string is not equal to 'INDIA' write a program that uses this exception.

[10]

- Q.4)** (A) Explain java.io.File Class ? How file object can be created ? [05]  
(B) Write a program to swap the content of two data file. [10]
- Q.5)** (A) Explain Life Cycle of Thread. [05]  
(B) Write a Java Program to create and run following thread :  
(a) To generate terms of Fibonacci Series  
(b) To Print Mathematical Table up to 20 (Table of 2 to 20) [10]
- Q.6)** Write short notes : (Any Three) [15]  
(a) Thread Synchronization  
(b) Abstract Class and Interface  
(c) Hash Table  
(d) Overloading and Overriding
-

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 3

[4377]-205

M. C. M. (Semester - II) Examination - 2013

CORE RUBY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

*Instructions :*

- (1) Question Nos. 1 and 7 are compulsory.
- (2) Solve **any four** from the remaining.
- (3) Figure to the right indicate full marks.

---

---

**Q.1) Find the output for following program segments : (Any Five) [15]**

(a) `def say_goodnight(name)  
result = "Good night, #{name}"  
return result  
end  
puts say_goodnight('Pa')`

(b) `def fib_up_to(max)  
i1, i2, = 1, 1  
while i1 <= max  
yield i1  
i1, i2 = i2, i1 + i2  
end  
end  
fib_up_to(10) {|f| printf, " "}  
puts`

[4377]-205

1

P.T.O.

```

(c) square = 2
    while square < 1000
    puts square = square*square
    end

(d) inst_section = {
    'cello' => 'string',
    'clarinet' => 'woodwind',
    'durm' = > 'percussion',
    'oboe' => 'woodwind',
    'trumpet' => 'brass',
    'violin' => 'string'
}
puts inst_section['oboe']
puts inst_section['cello']

(e) def say_goodnight(name)
    result = "Good night, #{name.capitalize}"
    return result
    end
puts say_goodnight('uncle')

(f) class Array
    def find
    for i in 0.. size
    value = self[i]
    return value if yield(value)
    end
    return nil
    end
    end
puts [1, 3, 5, 7, 9]. find {|v| v*v > 30}

```

- Q.2)** (A) Write a ruby function that accepts a year and returns “leap” if it is a leap year and “not a leap year” if it is not. [05]
- (B) Write a ruby program that accepts a number from user and find whether it is a single digit, 2 digit or 3 digit no. [05]
- Q.3)** (A) Write a ruby program that accepts 15 numbers in an array and print maximum and minimum of the numbers. [05]
- (B) Write a ruby program that accepts a string of words and reverse contents of every word in the string. [05]
- Q.4)** Design a class Student with instance variables(rollno, name, total\_present\_day). Write a calculate\_fine method to calculate fine of the student (assume total number of lectures = 40 and fine for each day is Rs. 15. Fine should be calculated if percentage of lecturers attended is less than 70%). [10]
- Q.5)** Write a ruby program to create a file, store text in it. Also read the file character by character and display the contents in uppercase letters. [10]
- Q.6)** Design a class Stack with instance variables (array of 10 numbers, top of stack) and methods push(add element in array at top) and pop(remove element from top of array). Create an object and invoke the methods. [10]
- Q.7)** Write short notes : **(Any Three)** [15]
- (a) Block and Procs
  - (b) Ruby Modules
  - (c) Hashes
  - (d) Regular Expressions with suitable example
  - (e) Exception Handling with example

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-206**

**M. C. M. (Semester - II) Examination - 2013**

**OBJECT ORIENTED DESIGNING**

**(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)** A Travel Agency arranges various tours for people. Travel Agency arranges some special tours for Students, Senior Citizens and Women. Travel Agency has buses with them which are of different capacity. Administrator is responsible for allotting bus drives for bus and he is responsible for maintaining driver information. Administrator is also responsible for arrangement of tour and management of tour.

Travel Agency has facility of on-line tour booking from their website. Before booking the tour on-line, customer has to register on the site. After log in on to the site customer can search tours, customer can select a tour as per his/her choice. Customer selects source, destination and tour date from the available information.

If the no. of seats are available for that tour, then customer can book the particular tour by specifying the no. of persons and by doing on-line payment.

Administrator selects a particular bus and driver depending upon the reservations for a particular tour.

Customers can send feedback about the tour on the website.

Draw usecase diagram and class diagram for the above case. **[15]**

(B) Explain Class and Object with example. **[05]**

**[4377]-206**

**1**

**P.T.O.**



- Q.2)** Draw activity diagram for National Conference System with the following key processes : **[10]**
- (a) Registration of Participants
  - (b) Abstract Uploading
  - (c) Display List of Selected Papers
  - (d) On-line Fees Payment
  - (e) Schedule Uploading for the Conference
- Q.3)** A temperature controller has been interfaced with a manufacturing unit in a factory which maintains the moderate temperature of 65°C. If the temperature goes beyond / below the moderate temperature the unit activates cooling / heating units respectively and indicates through different signals. Draw a state diagram for the above case. **[10]**
- Q.4)** Explain Phases of RUP in detail. **[10]**
- Q.5)** (A) Explain CRC in detail. **[05]**  
(B) Explain Jacobson Methodology in detail. **[05]**
- Q.6)** Draw sequence diagram for the following : **[10]**
- (a) Adding your friend in chatting list
  - (b) Chatting with your friend
- Q.7)** Write a short notes : **(Any Two)** **[10]**
- (a) Design Pattern
  - (b) Aggregation and Composition
  - (c) Object Persistence
-

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-301**

**M. C. M. (Semester - III) Examination - 2013**

**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 for accepting username and password in HTML Form and validate username and password from USER table from COLLEGE Database. If username or password is invalid, display appropriate message. **[10]**
- (B) Explain Configuring Virtual Host in Apache Web Server. **[10]**
- Q.2)** Explain MySQL Commands with proper syntax and example for : **[10]**
- (a) Selecting Database
  - (b) Creating Table
  - (c) Updating Data in Table
  - (d) Creating User and Granting Permission
  - (e) Backup Database
- Q.3)** Explain Authentication in Apache Web Server. **[10]**

**Q.4) Explain following Linux Commands : (Any Five)**

**[10]**

- (a) ps
- (b) renice
- (c) top
- (d) grep
- (e) tar
- (f) init

**Q.5) Explain GET, POST, SESSION and COOKIES variables in PHP. [10]**

**Q.6) Explain use of include( ) and require( ) in PHP with suitable example. [10]**

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

**[4x5=20]**

- (a) Associative Array in PHP
  - (b) mysqladmin and mysqlshow
  - (c) Process and Daemons in Linux
  - (d) Loops in PHP
  - (e) Object Oriented PHP
-

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 1

**[4377]-302**

**M. C. M. (Semester - III) Examination - 2013**

**BUSINESS APPLICATIONS**

**(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.*

- 
- 
- Q.1)** Explain the Process of Material Procurement - Indenting, Purchasing with the help of Data. How diagram, any two report layouts and suitable database design ? **[20]**
- Q.2)** Write short notes : **(Any Two)** **[10]**
- (a) General Ledger
  - (b) Pending Customer Orders
  - (c) Leave Accounting
- Q.3)** Explain the concept and calculation logic for Income Tax. **[10]**
- Q.4)** Discuss importance of Delivery Challen by drawing suitable layout. **[10]**
- Q.5)** Write short notes : **(Any Two)** **[10]**
- (a) Material Requirement Planning (MRP)
  - (b) Purchase Indent
  - (c) Vendor Analysis
- Q.6)** Explain the Process of Computerised Level of Inventory in details. **[10]**
- Q.7)** A cinema theatre owner wants to computerise theatre Management System with reference to Enquiry Booking, Payment and shows Management. Design suitable file layouts for the same. **[10]**

Seat No.	
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Total No. of Questions : 2]

[Total No. of Printed Pages : 2

**[4377]-304**

**M. C. M. (Semester - III) Examination - 2013**

**ADVANCED RUBY**

**(New 2008 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :**

- (1) *All questions are compulsory.*
- (2) *Figures to the right indicate full marks.*

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**Q.1) Solve any four :**

**[40]**

- (a) Write a program that accept user name and role from the user and display the welcome message with name only when the role is 1. (i.e. admin). Create a method on soap server. SOAP client invokes this method and print name and role of user.
- (b) Write a Toolkit Program that create a complaint API for mobile phone services.
- (c) Using Ruby Socket API, write a program that client passes date of birth to the server and server responds by sending date of birth of the user to the client by calculating the age of user by using current system data.
- (d) Write migration for creating table 'employee detail' in database having emp\_id, emp\_name, address, phone\_no, designation, department, basic\_sal columns.
- (e) Write a ruby script with multiple views when user enter name and user type. If user type is admin than it will display message "Welcome Administrator" if user type is guest than it will display message "Welcome Guest User" if user type is employee than it will display message "Welcome Employee".

- (f) Write a program in rails that accept Student\_Id and course from student if Student-Id or course is wrong it will return the nil object. If Student\_Id and course is right it will display the welcome message. Create authentication method in model to verify Student\_Id and course of student.

**Q.2) Solve any five :**

**[30]**

- (a) Describe MVC Architecture in details.
  - (b) What is Socket and Socket Classes ?
  - (c) Explain Web Seaffolding with suitable example.
  - (d) Describe Contents of database.yml
  - (e) What is Active Record ?
  - (f) Explain Migration Methods.
  - (g) Define Relationships.
-

Seat No.	
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Total No. of Questions : 8]

[Total No. of Printed Pages : 2

**[4377]-305**

**M. C. M. (Semester - III) Examination - 2013**

**VISUAL BASIC .NET**

**(New 2008 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :**

- (1) Q. No. 1 and 8 are compulsory.
- (2) Solve **any four** from Q. Nos. 2 to 7.

---

**Q.1) Explain ADO.Net Architecture in details. [15]**

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

**Q.3) Explain Exception Handling with suitable examples. [10]**

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

Book\_id (char(10))

Book\_name (varchar(3))

Price (numeric(8, 2))

Available\_flag (Boolean)

**Methods :**

Constructor to store information

issue\_book Make Availabe\_flag false

Check\_Book Return true of Availabe\_flag is true otherwise return false.

Show\_PriceRe Return the price of book

Write a module to implement the class and test the functionality.

**[4377]-305**

**1**

**P.T.O.**

**Q.5)** Accept a number in TextBox if number is Armstrong then add this number in List Box, if not throw your own defined exception 'ArmStronNumberexception'. **[10]**

**Q.6)** Write a sectional code that will copy the contents of source file(d:\student.txt) to destination file (c:\copystudnet.txt) using file stream class. **[10]**

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

Table Name (Loan\_master)

(Loan\_ac\_no, custid, total\_amount, interest\_rate, period)

Database Next Bank

Server SqlServer, Server Name RBI, UserName = "RBI", password = 'RBI'.

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

- (a) Abstract Classes and Interface scope and lifetime of a variable
- (b) Namespaces
- (c) Listview Controls
- (d) DataGrid Controls



Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 1

**[4377]-401**

**M. C. M. (Semester - IV) Examination - 2013**

**MOBILE COMPUTING**

**(New 2008 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

***Instructions :***

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

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

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**Q.1) (A) Explain Call Originating from PSTN to Mobile Station (MS). [10]**

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

**Q.2) What is HYPERLAN ? Explain HYPERLAN Reference Model. [10]**

**Q.3) Discuss Selective Pretransmission in TCP with example. [10]**

**Q.4) Describe WAP Protocol Suite. [10]**

**Q.5) Compare TDMA, CDMA, FDMA. [10]**

**Q.6) What is Snooping ? Why it is used in TCP ? [10]**

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

**(a) Logical Channel**

**(b) TCP-freezing**

**(c) M-TCP**

**(d) Wireless Network Security**

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**[4377]-401/1**

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

**[4377]-402**

**M. C. M. (Semester - IV) Examination - 2013**

**ASP.NET**

**(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 indicate full marks.*

---

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

**Q.2) What is State Management ? Explain Client Side State Management Techniques in detail. [15]**

**Q.3) Design a form and write code to : [15]**

- (a) Add New Record
- (b) Delete Selected Record
- (c) Edit Selected Record
- (d) Use Gridview Control to Display Records

Make use of connected architecture.

Name of Table : Books (BookId, BookName, Author, Price, Publisher)

**Q.4) Explain various Validator Controls available in VS2010. [15]**

- Q.5)** (A) Design a GUI for login page. Make use of database to validate user login. Display welcome page for successful login and error page if login failed. **[10]**
- (B) Create and explain web.sitemap file. And use it by making use of treeview control. **[05]**
- Q.6)** Explain the following controls : **(Any Three)** **[15]**
- (a) AdRotator Control
  - (b) Image Map Control
  - (c) File Upload Control
  - (d) Login Control
  - (e) Check Box List Control
- Q.7)** Write short notes : **(Any Three)** **[15]**
- (a) Exception Handling
  - (b) ASP V/s ASP.NET
  - (c) Web Services
  - (d) Authentication and Authorisation
  - (e) Deploying Web Application
-

Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

[4377]-403

M. C. M. (Semester - IV) Examination - 2013

INFORMATION SECURITY

(New 2008 Pattern)

Time : 3 Hours]

[Max. Marks : 70

*Instructions :*

- (1) Question Nos. 1 and 6 are compulsory.
- (2) Attempt **any three** from the remaining.

---

**Q.1)** For a bank portal, as more users are added, response time gets longer. The EDP 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 server software based. He asks you to assist him to identify problem and suggest solution. Explain the measure you would undertake to trace and resolve the above case. [20]

**OR**

- Q.1)** A Software Company alleged the complaint that some of the former employees had accessed and tampered the vital data of company. As an IT head suggest steps to investigate it. Also suggest controls to avoid the same in the future. [20]
- Q.2)** Explain Security of Wireless Network. [10]
- Q.3)** Discuss the role of Incident Response Team (IRT) in Information Security Mechanism. [10]
- Q.4)** Explain in detail the major pillars of Information Security. [10]
- Q.5)** Discuss SSE - CMM Model in detail. [10]

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

**[20]**

- (a) Biometric Controls
  - (b) Ethical Issues for Information Security
  - (c) Business Continuity Plan
  - (d) Intrusion Detection System
  - (e) Security of E-mail System
  - (f) Role of Internet in Global Information System
  - (g) Technological Impact on Data Privacy
-

Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-404**

**M. C. M. (Semester - IV) Examination - 2013**

**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) Solve any two cases :**

**[2x10=20]**

- (a) Senior Project Manager complaints that project files are accessed by some unauthorized users from Windows Based Systems. As a System Administrator, explain various access controls that can be implemented by Project Manager and by himself to avoid such unauthorized access.
- (b) Company's E-commerce Site seems to be hacked by somebody and certain services are not working. Management asked administrator to find out how it is hacked ? As Administrator, explain what threats to E-commerce Site are and how to protect E-commerce Site ?
- (c) It is observed that employees are not following guidelines laid for use of IT Facilities / Cyber Space. As a Manager identify the management and organisational issues involved in such Act.

**Q.2) Explain Symmetric and Asymmetric Cryptography in detail.**

**[10]**

**Q.3) Explain most common network attacks and how to defend them ?** [10]

**Q.4)** What is Biometrics ? Explain New Biometric Techniques. [10]

**Q.5)** What is Incident Response ? Explain Incident Response Process. [10]

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

- (a) Access Control List
  - (b) Digital Signature
  - (c) Concurrency in Distributed System
  - (d) Electronic Banking
  - (e) Scripts Kiddies
-

Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 2

[4377]-405

M. C. M. (Semester - IV) Examination - 2013

MULTIMEDIA AND WEB DESIGNING

(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.

- 
- 
- Q.1) (A)** Write ASP Code for accepting PlayerNo, PlayerName and BirthDate from the user. On submit of the form check data entered with following validations : **[10]**
- (a) PlayerNo - Numeric and Not Null
  - (b) PlayerName - Not Null
  - (c) BirthDate - Should not earlier than 1995-01-01
- If data is correct write data in database player.mdb.
- (B)** Explain Quantization and Transmission of Audio. **[10]**
- Q.2)** Explain use of functions in JavaScript. **[10]**
- Q.3)** Explain various types of Style Sheets in HTML. **[10]**
- Q.4)** Explain Colour Models in Image and Video. **[10]**
- Q.5)** Explain string functions in VBScript. **[10]**



**Q.6)** Write XML Code to store information about ITEM (ITEMNO, ITEMNAME, UOM, RATE) and write HTML Code to display data in tabular format using DSO Object. **[10]**

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

- (a) Multimedia and Hypermedia
  - (b) Image File Data Types
  - (c) Request and Response Objects in ASP
  - (d) Operators in JavaScript
  - (e) Loop Statement in VBScript
-

Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-406**

**M. C. M. (Semester - IV) Examination - 2013**

**SOFT SKILLS**

**(New 2008 Pattern)**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :**

- (1) *Q. No. 1 is compulsory and carries 25 marks.*
- (2) *Q. Nos. 2 to 6, solve any three. 15 marks each.*

- 
- 
- Q.1)** (A) Define Communication with suitable examples. **[15]**  
(B) Explain the Barriers of Communication. **[10]**
- Q.2)** What is Interview ? Explain types of Interview and preparation for a successful Interview. **[15]**
- Q.3)** What is Listening ? Discuss difference between Good Listner and Bad Listner. **[15]**
- Q.4)** Write an application letter for the post of Programmer with the detailed resume with reference to advertisement appeared in daily new paper Times of India. **[15]**
- Q.5)** Define Business Communication with suitable diagram. **[15]**

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

**[15]**

- (a) Body Language
  - (b) Goal Setting
  - (c) Minutes of Meeting
  - (d) E-mail Etiquettes
  - (e) Business Memo
-

Seat No.	
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Total No. of Questions : 6]

[Total No. of Printed Pages : 2

**[4377]-407**

**M. C. M. (Semester - IV) Examination - 2013**

**QUALITY CONTROL AND SOFTWARE TESTING**

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

- 
- 
- Q.1) (A) What is Testing ? What is test data and what are its norms ? [04]**  
**(B) Write test case for Student Registration Validation Program with following fields : student\_username, student\_password, confirm\_password, student\_email and student\_course. [10]**
- Q.2) What is Review ? What is its purpose ? Explain different types of Reviews. [14]**
- Q.3) What is Test Plan ? Explain IEEE Standards of Test Plain. [14]**
- Q.4) Define Quality Assurance and Quality Control. Support your answer with 'V' Model of Software Testing. [14]**
- Q.5) (A) Define Risk. Explain Risk-based Testing. [07]**  
**(B) Black Box Versus White Box Testing [07]**

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

**[14]**

- (a) TMM
  - (b) COTS
  - (c) Agile Testing
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Seat No.	
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Total No. of Questions : 7]

[Total No. of Printed Pages : 1

**[4377]-408**

**M. C. M. (Semester - IV) Examination - 2013**

**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.*

- 
- 
- Q.1)** (A) Explain installation of Linux Server in Text Mode. [10]  
(B) Explain installation of DHCP Server in Windows Server 2003. [10]
- Q.2)** Explain IIS and steps for implementing Web Services in IIS. [10]
- Q.3)** Explain with example User Management Commands in Linux. [10]
- Q.4)** Explain Active Directory Service in Windows Server 2003. [10]
- Q.5)** Explain various Network Connectivity Components. [10]
- Q.6)** Explain installation and configuration of Packages in Linux. [10]
- Q.7)** Write short notes : **(Any Four)** [4x5=20]
- (a) Application Protocols
  - (b) Wi-Fi Network
  - (c) Default Directories in Linux
  - (d) .NET Framework
  - (e) Firewall in Linux



[4377] – 2002

Seat No.	
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**M.C.M. – I Examination, 2013  
PPM AND OB (2012 Pattern)**

Time : 3 Hours

Max. Marks : 70

**N.B. :** 1) Q. 7 is **compulsory**.

2) Solve **any 5** questions from Q. 1 to Q. 6. **Each** carries **12** marks.

1. What is management ? Explain the different types of managers.
2. Explain the contribution of F.W. Taylor in the evolution of management.
3. “Decision making is important part of every managers life” explain. What is decision making process ?
4. Explain in detail various organization structures.
5. Discuss the concept of Leadership. What are the qualities of good leader ? Explain different leadership styles.
6. Explain the importance of motivation. Explain Maslow’s theory of motivation.
7. Short notes (**any 2**) : **10**
  - a) Management levels
  - b) Tools for decision making
  - c) JOHARI window
  - d) Transactional analysis



[4377] – 303

Seat No.	
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**M.C.M. (Semester – IV) Examination, 2013  
ADVANCED JAVA  
(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Instructions :** 1) Question No. 1 is **compulsory**.  
2) Solve **any three** from remaining.

1. Write the answers for the following : **10**
  - a) Write statement object hierarchy used in JDBC.
  - b) Write difference between TCP and UDP.
  - c) What is BMP ? Explain in brief.
  - d) What is signature of service method in servlet ?
  
2. Write JDBC program to establish connection to “student” table with following structure. **20**

– Roll\_No, Stud\_Name, Course, fees\_paid – Accept Stud\_Name from command line and display the details of that student (using prepared statement)
  
3. Write RMI application : **20**
  - a) Write remote interface named MyRmi which contains following methods ?  
int findLargest (int a, int b, int c)
  - b) Write code to link this interface to MyImp class.
  - c) Start RMIServer.
  - d) Write client side code to invoke remote method.
  
4. Write Java program to count number of vowels from the given file. Accept filename from command line. **20**
  
5. Write short notes on (**any two**) : **20**
  - 1) Servlet life cycle
  - 2) RMI Architecture
  - 3) Types of drivers in JDBC
  - 4) Types of EJB’S.





[4377] – 306

Seat No.	
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**M.C.M. (Semester – III) Examination, 2013**  
**306 – SOFTWARE PROJECT MANAGEMENT**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Instructions :** 1) Question No. 1 is **compulsory**.  
2) Attempt **any five** from the remaining.

1. A) Compare and contrast Black and White Box Testing Methods of Software Testing. 10  
B) What is Software Quality Control and Software Quality Assurance ? Explain in detail SQA. 10
2. Explain various factors considered while setting a Computer Centre. 10
3. What do you mean by Risk ? Explain Software Project Risk Management in detail. 10
4. Describe various Software Project Time Estimation Tools, with suitable illustration. 10
5. Explain in detail various steps, methods and documentation process of User Acceptance Testing. 10
6. Explain procedure followed and care taken while terminating a person in IT organisation. 10
7. Write short notes (**any two**) : 10
  - a) Gantt chart
  - b) Function point analysis
  - c) COCOMO
  - d) Walkthrough.