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M.C.M. (Semester-I) EXAMINATION, 2018

C PROGRAMMING

(2008 PATTERN)

Time : *Three* Hours

Maximum Marks : 70

N.B. :— (i) Q. No. 1 is compulsory.

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

1. (A) Trace the output and justify the answer. Assume suitable header files. [12]

(a) Void main()
{
int x ;
x = 4 % 9 + 6/5 ;
printf("\nx = %d", x);
}

(b) int x = 10 ;
void main()
{
printf("\n%d", x);
{
int x = 20;
{
int x = 30;
printf("\n%d", x);
}
printf("%d", x);
}
}

P.T.O.

```

(c) Void main()
    {
    int x = 2, y = 3 ;
    x = ++ x * ++ x ;
    y = ++ y * ++ y ;
    x = x ++ * y ++ ;
    y = y ++ * x ++ ;
    Printf("x=%d\t y = %d," x, y);
    }

```

```

(d) void main()
    {
    void ser();
    int i;
    for (i = 0 ; i < 10; i ++ )
    ser();
    }

void ser()
{
static int n=9;
printf("\t%d," n);
h = n+9;
}

```

(B) Explain the following (any *two*) : [8]

- (a) Data types in C
- (b) Recursion.
- (c) Dynamic memory allocation.

2. Write a program to display the following pattern using nested loops : [10]
- ```
1
2 2
3 3 3
4 4 4 4
```
3. Write a program to accept two  $3 \times 3$  matrices and display the addition on the screen. [10]
4. Write a recursive function which receives the string and return the length of the string. [10]
5. Write a program to accept bill no., customer code, name and amount of 100 bills and print the details of the customer with maximum amount. [10]
6. Write a program to accept two file names from the user and copy the contents of first file to the second file. [10]
7. Write a program to accept the 10 numbers and display the numbers by sorting them in descending order. [10]

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**M.C.M. (Semester IV) EXAMINATION, 2018**

**CYBER LAW**

**(2008 Pattern)**

**Time : 3 Hours**

**Maximum Marks : 70**

*NB.:*—(i) Q. Nos. 1 and 6 are compulsory.

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

1. Solve any *two* cases.

[20]

**Case 1**

Key Power Software developer is a growing I.T company developing different software product. The company wants to use original programming code for the software development but the employee used the readymade code from internet to complete development task as security expert create security policy to protect coping code and also suggest some security to protect unauthorized access of data from external users.

**Case 2**

The institute wants to use biometric device for attendance and keeping watch on movement of students. As a security manager suggest proper biometric device for the purpose along with its merits and demerits.

**Case 3**

Aryan Private LTD Company is Government Company developing missile. The production going on remote place which is far away

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from India. The plan and design for missile designed by group of people from India. This group shares the design of missile over the internet by sending the mail to each other as well as production department. As security expert find out threats for design exchange and also implements security.

2. Explain cyber-crime with different type ? [10]
3. What is Cryptography with its type ? [10]
4. Describe Biometrics control with Advantage and Disadvantage ? [10]
5. Explain Functioning of Incident Response Team [10]
6. Write short notes on (any *four*) : [20]
  - (1) Digital Signature,
  - (2) Multilevel Security
  - (3) Network Attack
  - (4) Protecting E-Commerce System
  - (5) Ethical Hacking

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[5367]-10A

**M.C.M. (Semester IV) EXAMINATION, 2018**

**MULTIMEDIA AND WEB DESIGNING**

**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question No. 1 and 7 are compulsory.

(ii) Attempt any *four* from the Q. Nos. 2 to 6.

(iii) Neat Diagrams carry marks.

Q.1) (A) Explain Built-in Object in ASP? State purpose of each object? [10]

(B) Explain Basic building block of Multimedia, Discuss any one application of Multimedia.

Q.2) (A) What is Multimedia? Explain Components of Multimedia. [5]

(B) Explain MIDI Messages. [5]

Q.3) (A) Write HTML Code to draw table: [5]

|   | A | B  | C |   |
|---|---|----|---|---|
| 1 |   | 2  | 3 | 4 |
|   |   | 5  | 6 | 7 |
| 8 | 9 | 10 |   |   |

(B) Explain Loop Statements in JavaScript. [5]

Q.4) (A) Create User Information Cookies with Keys? [5]

(B) Write code with the help of Request.ServerVariables for Display the HTTP Headers

Q.5) (A) Explain Application & Session object? [5]

(B) Explain MIDI messages? [5]

P.T.O.

- Q.6) (A) Explain Difference between XML and HTML? [5]  
(B) Explain Error Handling in ASP with example. [5]
- Q.7) Write Short note (**any Three**) [15]
- a) Analog and Digital Signals
  - b) 1-bit and 8-bit Images
  - c) Colour Models
  - d) Image File Data Types
  - e) Quantization and Transmission of Audio

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[5367]-10C

M.C.M. (IV Semester) EXAMINATION, 2018

408 : NETWORK TECHNOLOGY

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 70

*N.B.* :— (i) Q. No. 1 & 7 are compulsory.

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

(iii) Figures to the right indicate full marks.

1. (A) Explain process management in Linux with command. [10]  
(B) Explain steps for configuring DHCP server in Windows server 2003. [10]
2. Explain steps for installation of Windows server 2003. [10]
3. Explain installing & configuring packages in Linux. [10]
4. Explain Windows Rights management services in detail. [10]
5. Explain network management and file management commands in linux.[10]
6. Explain file management command in Linux (any *five*) [10]

P.T.O.

7. Write short notes (any *four*) :

[20]

(a) Application Protocols

(b) HTTP

(c) Firewall

(d) Network Topology

(e) Ethernet

(f) VPN.

Total No. of Questions—7]

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**M.C.M. (Semester I) EXAMINATION, 2018**  
**FUNDAMENTALS OF INFORMATION TECHNOLOGY**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question No. 1 is compulsory.

(ii) Solve any *four* questions from the remaining.

(iii) Figures to the right indicate full marks.

1. Define computer and explain various characteristics of computer. [10]

2. (a) Solve : [8]

(i)  $(182)_{10} = (?)_2$

(ii)  $(1111011)_2 = (?)_{10}$

(iii)  $(536)_{10} = (?)_8$

(iv)  $(CDA)_{16} = (?)_2$ .

(b) Explain memory management function of operating system in detail. [7]

3. (a) Explain Hard Disk in detail. [8]

(b) What is meant by computer language ? Give difference between High Level and Low Level language. [7]

P.T.O.

4. (a) Explain any *two* output devices in detail. [8]  
(b) Discuss microprocessor in detail. [7]
5. (a) Give difference between multiprogramming and multiprocessing with appropriate diagram. [8]  
(b) Discuss various topologies with a neat labelled diagram. [7]
6. (a) Discuss various functions of operating system. [8]  
(b) Discuss various coding systems in brief. [7]
7. (a) Explain various types of computer. [8]  
(b) What is meant by communication media ? Explain different communication channels with an example of each. [7]

Total No. of Questions—7]

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**M.C.M. (Sem. I) EXAMINATION, 2018**  
**‘C’ PROGRAMMING AND DATA STRUCTURE**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

- N.B. :—** (i) Question No. 1 is compulsory.  
(ii) Solve any *five* from the remaining.  
(iii) Figures to the right indicate full marks.

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

(a) Void main( )

```
{
 int a = 13, b = 40;
 b = (a) 5 ? (b > 10 ? 200 : 300) : 100);
 printf ("b = %d", b);
}
```

(b) Void main( )

```
{
 int no = 457;
 while (no > 0)
 {
 printf ("%d", no% 10);
 no = no/10;
 }
}
```

P.T.O.

```

(c) Void main()
 {
 void disp (char *);
 char n[] = "University of Pune";
 disp (n);
 }
Void disp (char * s)
{
 if (* s)
 disp (s + 1);
 put char (* s);
}

(d) Void main()
{
 int a, s = 0;
 for (a = 0; a <= 6; a++)
 {
 switch (a - 2)
 {
 case 0 :
 case 1 : s = s + 2; break;
 case 2 :
 case 3 : s = s - 1; break;
 default : s = s + 4;
 }
 printf ("%d\n", s);
 }
}

```

(B) Explain the following (any *two*) : [8]

(i) Stack

(ii) Queue

(iii) Data Types in C.

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

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

3. Write a 'C' program to accept single line text from the user. The program should print : [10]

(1) No. of alphabets

(2) No. of digits

(3) No. of special characters present in the text.

4. Write a C program to accept two file names from the user and copy the contents of first file to the second file. [10]

5. Write a C program to accept 10 nos, sort them in descending order and display on the screen. [10]

6. Write a recursive function that will accept two numbers and returns the multiplication of two numbers. [10]
  
7. Define a structure array with roll no, name, mark 1, mark 2, total and percentage. Write a C program to accept data of 50 students as rollno, name, mark 1 and mark 2. Calculate and store total and percentage of the respective student. Display all records. [10]

Total No. of Questions—6]

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**[5367]-13**

**M.C.M. (Semester-I) EXAMINATION, 2018  
(103) SOFTWARE ENGINEERING WITH UML  
(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

- N.B.** :— (i) Question Nos. 1 and 6 are compulsory.  
(ii) Answer any 3 from the remaining.  
(iii) Mention assumptions made for solving case study.  
(iv) Net diagrams carry marks.

1. A computer Based Library System, that will handle the book-keeping aspects of a library and provide user browsing facilities. The library contains books, journals, magazines and research projects. It may have several copies of the same books. Books may borrow by any library members for 3 weeks only. Only members of staff may borrow journals, magazines and research projects. Members of the library can normally borrow up to 6 books at a time, but member of staff may borrow up to 12 items at a time. New contains books, journals, magazines and research projects arrive regularly and sometime disposed of; the catalogues needs to be updated regularly. The current years contains books, journals, magazines and research projects are sent away to be bound at the end of each year.

- (a) Draw ERD and Context level diagram [10]  
(b) File Layout and [10]  
(c) Draw Membership Form [05]

P.T.O.

2. A simple flight simulator to build / developed, using a bit mapped display, present a perspective view from the cockpit of a small airplane, periodically updated to reflect the motion of the plane. The world in which flights take place includes mountains, rivers, lakes, roads, bridges a radio tower and of course, a runway. Control inputs are from two joysticks. The left joystick operates the radar and engine. The right one controls ailerons and elevator.

**Draw Class diagram.** [10]

3. Explain Decision Tree and Decision Table with suitable example. [10]

4. Explain Functional and Non-functional Requirements in detail. [10]

5. Explain System Analysis and describe skill required for System Analyst ? [10]

6. Write short notes on (Any *three*) : [15]

- (i) Prototyping Model of SDLC
- (ii) User Interface Design
- (iii) Rational Unified Process (RUP)
- (iv) SSAD Vs. OOAD.

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**M.C.M. (Semester I) EXAMINATION, 2018**  
**104 : DATABASE MANAGEMENT SYSTEM**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

- N.B. :-** (i) Question No. 1 is compulsory.  
(ii) Solve any *five* from the remaining.  
(iii) Figures to the right indicate full marks.

1. (a) Study the following patient bill and normalize the project table upto 3NF : [12]

| Patient bill                      |              |              |                         |               |        |         |
|-----------------------------------|--------------|--------------|-------------------------|---------------|--------|---------|
| Patient #: 12345                  |              |              | Date: 7/20/08           |               |        |         |
| Patient Name: Mary Baker          |              |              | Date admitted: 7/14/08  |               |        |         |
| Patient Address: 300 Oak Street   |              |              | Discharge date: 7/17/08 |               |        |         |
| City-State-Zip: Boulder, CO 80638 |              |              |                         |               |        |         |
| Cost Center                       | Cost Name    | Date Charged | Item Code               | Desc          | Charge | Bal Due |
| 100                               | Room & Board | 7/14/08      | 2000                    | Semi-prv room | 200.00 |         |
|                                   |              | 7/14/08      | 2005                    | Television    | 5.00   |         |
|                                   |              | 7/15/08      | 2000                    | Semi-prv room | 200.00 |         |
|                                   |              | 7/16/08      | 2000                    | semi-prv room | 200.00 |         |
|                                   |              |              |                         | Subtotal      |        | 605.00  |
| 110                               | Laboratory   | 7/14/08      | 1580                    | Glucose       | 25.00  |         |
|                                   |              | 7/15/08      | 1585                    | Culture       | 20.00  |         |
|                                   |              |              |                         | Subtotal      |        | 45.00   |
| 125                               | Radiology    | 7/15/08      | 3010                    | X-ray chest   | 30.00  |         |
|                                   |              |              |                         | Subtotal      |        | 30.00   |
|                                   |              |              |                         | Balance due   |        | 680.00  |

P.T.O.

- (b) Explain two phase locking protocol. What are its variations ? [8]
2. Illustrate the difference between hierarchical and network data models. Explain why relational data model is better choice over the others. [10]
3. Briefly explain the deferred update technique of recovery. What are its advantages and disadvantages ? Why is it called the NO-UNDO/REDO method ? [10]
4. What are schedules ? Explain the serializability of schedules with an example. [10]
5. What is Timestamp ? Discuss wait-die and wound-wait protocols for deadlock prevention with suitable example. [10]
6. What is Data Warehouse ? Explain three-tier Data Warehousing Architecture. [10]
7. Write short notes on (any *two*) : [10]
- (a) Role of DBA
  - (b) Database Manager
  - (c) Users of DBMS.

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**M.C.M. (First Semester) EXAMINATION, 2018**  
**(105) WEB PROGRAMMING AND E-COMMERCE**  
**(2008 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B.** :— (i) Q. No. 7 is compulsory.

(ii) Attempt any 5 (*five*) questions from remaining.

(iii) Figures to the right indicate full marks.

(iv) Draw neat diagrams wherever necessary.

1. What is E-commerce ? Explain its types and also mention its advantages and disadvantages. [10]
2. Explain need along with advantages of on-line marketing. [10]
3. Why auditing is important in e-commerce applications. [10]
4. Discuss the role of Internet Service Providers (ISP) in electronic commerce. [10]
5. Explain various network security issues in e-commerce applications. [10]

P.T.O.

6. Explain the steps involved in website development. Also discuss various characteristics of website. [10]
7. Write short notes on (any *four*) : [20]
- (a) Mobile computing
  - (b) WWW
  - (c) EPS (Electronic Payment System)
  - (d) Cyber squatting crimes
  - (e) Software agent
  - (f) Firewall.

Total No. of Questions—7]

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**M.B.A. (IT) (Semester II) EXAMINATION, 2018**  
**201 : BUSINESSS APPLICATION AND ERP TOOL**  
**(2015 Pattern)**

**Time : 3 Hours**

**Maximum Marks : 70**

*NB.:*—(i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

1. (a) What is ERP ? What are the different phases of ERP implementation life cycle ? [10]

*Or*

(b) Explain post implementation review of ERP package with respect service industry ? [10]

2. (a) Explain steps involved in customer order processing system with the help of FDP. Draw format of any three reports generated from the system. [10]

*Or*

(b) What do you mean by BOM ? List the types of BOM. Draw the layout of BOM ? [10]

3. (a) Explain EOQ & Labour efficiency with example ? [10]

*Or*

(b) Explain FIFO and LIFO methods with examples ? [10]

P.T.O.

4. (a) What is sales budget ? Explain the different market segments used to boost sales ? [10]

*Or*

- (b) Design a quotation for the following items. Consider you as sales manager of net soft computer services Mumbai. [10]

| Sr. No. | Particular | Quantity |
|---------|------------|----------|
| 1       | Laptop     | 3        |
| 2       | Keyboard   | 6        |
| 3       | CD Drive   | 3        |
| 4       | Printer    | 2        |
| 5       | Monitor    | 5        |

5. (a) Explain the procedure to prepare Profit and Loss A/c along with it's format for any small scale company who engaged in automobile sector. [10]

- (b) Draw layout of Trial Balance. Explain the significance of Trail Balance in Financial Accounting System ? [10]

6. (a) Design an employee database for Software Company and explain the need of employee database in current scenario. [10]

*Or*

- (b) Define recruitment ? Explain the Sources of Recruitment ?

7. (a) What is the role of ERP implementation team ? [10]

*Or*

- (b) Write a short notes on (any two) : [10]

(i) Product Life Cycle

(ii) Trial Balance

(iii) Ratio Analysis.

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M.C.M. (II Semester) EXAMINATION, 2018

PPM & OB (202)

(2012 PATTERN)

Time : Three Hours

Maximum Marks : 70

*N.B.* :— (i) Question No. 1 is compulsory.

(ii) Solve any *three* out of the remaining.

(iii) Figures to the right indicate full marks.

1. (A) Define management Discuss various functions of management in detail. [15]  
(B) Discuss F.W. Taylor's contribution towards management thoughts. [10]
2. "Leaders are born and not made". Comment by enumerating the essential qualities and functions of a leader. [15]
3. What are the various theories of motivation ? Discuss any *one* of them with suitable examples. [15]
4. Define conflict. Discuss the different measures to avoid conflict.[15]
5. Explain decision-making. Explain the types of decision-making.[15]
6. Classify different structures of organisation with examples. [15]

P.T.O.

7. Write short notes on (any *three*) :

[15]

- (a) Henry Fayol
- (b) Decentralization
- (c) Ego states
- (d) Participative Decision-making
- (e) Planning.

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**M.C.M. (II Semester) EXAMINATION, 2018**  
**203 : ADVANCED RDBMS USING ORACLE**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

- N.B. :—** (i) Question No. 1 and 7 are compulsory.  
(ii) Attempt any *three* from remaining.  
(iii) Figures to the right indicate full marks.

Consider the following tables to solve PL/SQL given below :

DEPT (D-id, Dname)

SIG (SIG-id, SIG-Name, D-id)

MEMBER (M-id, MName, T-Type, SIG-id)

PROJECT (P-id, PName, S-Date, E-Date, Domain)

PROJECT-MEMBER (M-id, P-id, Status)

1. Solve any *ten* queries : [20]
- (1) Display SIG-Name of each department.
  - (2) Display “staff” members of SIG\_Name. “Data Mining”.
  - (3) Display the list of all projects started before “1-6-2017”.
  - (4) Display the Name of projects which are “Completed”.
  - (5) Display total projects completed SIG-wise.
  - (6) Display Total No. of SIG in each department.
  - (7) Display Members of SIG “Data Mining” of MCM Department.

P.T.O.

- (8) Display Total No. of Projects completed in less than 2 months time.
  - (9) Display SIG-Name which has maximum number of members.
  - (10) Add one column “P-cost” in Project Table.
  - (11) Display total No. of Project developed by each SIG.
2. Write a function Display-SIG( ) which accept the SIG-id and display SIG-Name. [10]
  3. Write a package specification and body which contain the following : [10]
    - (a) A procedure which accept the M-id and display Member Name.
    - (b) A function which accept SIG-ID and display total No. of Members in that SIG.
  4. Write a trigger program which restrict data entry in Dept table in between any two dates. [10]
  5. Explain various database backup techniques. [10]
  6. Write short notes on (any *four*) : [20]
    - (a) Data Pump
    - (b) Types of Join
    - (c) Aggregate Functions
    - (d) Set Operators
    - (e) TCL Commands
    - (f) Locks in oracle.

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**M.C.M. (II Sem.) EXAMINATION, 2018**

**204 : JAVA PROGRAMMING**

**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question No. 1 is compulsory.

(ii) Solve any *six* from remaining.

(iii) Figures to the right indicate full marks.

- Q.1** Answer the following (10)
1. What is thread synchronization?
  2. What is adapter class?
  3. List any four methods of java.io.File class.
  4. What is vector?
  5. Which method is called to invoke garbage collection?
- Q.2** Create GUI to accept employee details using appropriate components. After clicking “SHOW” button accepted details will be displayed in text area.(Use Applet or JApplet class) (10)
- Q.3** Write java application to create following threads (10)
- To print string ‘Space’ in round robin fashion (space, paces, acesp, cespa, espac, space)
  - Display numbers divisible by 7 from 1 to 100.
- Q.4** Write java application that will accept student’s details who are attending send-off party. If roll number entered is not between 901 and 1500, fire user defined exception “NotSPPUStudent”. (Assume suitable data) (10)
- Q.5** Write application to accept file name from user. Display content of file along with line numbers. (10)

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- Q.6** Accept 10 float elements in array. Display sum and average of all numbers **(10)**
- Q.7** Write Java code for displaying amount of simple interest. Accept principle, interest rate and duration in years from user **(10)**
- Q.8** Write Notes on (Any two). **(10)**
1. Differentiate between swing and AWT
  2. Thread life cycle.
  3. Explain final, finally and finalize keywords.

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M.C.M. (II Semester) EXAMINATION, 2018

201 : DATA STRUCTURE AND ALGORITHMS

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 70

*N.B.* :— (i) Q. No. 1 and Q. No. 9 are compulsory.

(ii) Answer any *five* questions from the remaining.

(iii) State your assumption clearly, if any.

1. (A) Convert the following Infix to Postfix show the contents at stock at each step in tabular form : [8]

$((a + b) + c * (d + e) \$ f) / (g + n)$

(B) Explain threaded binary tree. [4]

2. (A) Consider the following message : [5]

LIMITATION

Draw Huffman Tree for the message. What kind of tree in Huffman tree ?

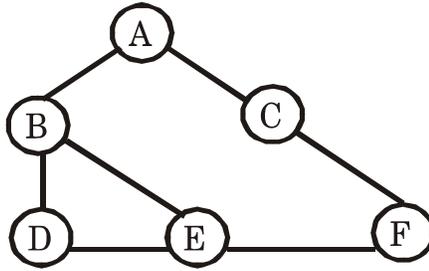
(B) Write a function for non recursive for post order travelsal of binary search tree. [5]

P.T.O.

3. Obtain the height balance trees (AVL) for the following : [10]  
December, January, April, March, July, August, October, February,  
June, May.
4. (A) Write a function for sorting in ASCENDING order by Insertion  
sort method. [5]
- (B) Consider the following declaration double arr [30] [40] ;  
Compute the Row major and column major address of the  
member arr [21] [15] where base address is 7000. [5]
5. (A) Write 'C' function for insert and delete operation for queue. [5]
- (B) Write 'C' function for to merge two linked list and create  
IIIrd linked list. [5]
6. Write the functions for Binary search tree : [10]
- (A) To count non leaf nodes.
- (B) To print mirror image of the tree.
7. Write the functions for doubly linked list : [10]
- (a) For deleting element from any location.
- (b) For sum of even and odd +ve integers.
8. (A) Write a algorithm for HEAP sort. [5]

- (B) Write a function for FOLDING hashing technique. [5]

9.



Answer using the graph :

- (A) Generate the output of BFS algorithm when starting vertex is A
- (B) Generate the output of DFS algorithm when starting vertex is A.
- (C) Write Adjacency matrix.
- (D) Write Adjacency list.

Total No. of Questions—6]

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[5367]-31

**M.C.M. (Semester III) EXAMINATION, 2018**  
**301 : INFORMATION SECURITY AND AUDIT**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Q. Nos. 1 and 6 are compulsory.

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

(iii) Figures to the right indicate full marks.

1. Solve any *one* case study : [20]

**Case 1 :**

The Tech Hub is 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.

**Case 2 :**

Aryan Private Ltd. Company is Government Company developing missile. The production going on remote place which is far away from India. The plan and design for missile designed by group of people from India. This group shares the design of missile over the internet by sending the mail to each other as well as production department. As security expert find out threats for design exchange and also implements security.

P.T.O.

2. Explain in detail the major pillars of Information Security. [10]
3. What is VPN ? How to protect VPN from unauthorized accessed ? [10]
4. What is Firewall ? Explain with merits and demerits. [10]
5. What is Cryptographic techniques ? How does it work ? [10]
6. Write short notes on (any *four*) : [20]
  - (a) Business Continuity Plan
  - (b) Role of Security in the Internet
  - (c) Intrusion Detection System
  - (d) Physical Security
  - (e) Copyright.

Total No. of Questions—7]

[Total No. of Printed Pages—2

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[5367]-32

**M.C.M. (Semester-III) (Specialization) EXAMINATION, 2018**

**302 NT : BASICS OF NETWORK TECHNOLOGIES**

**(2012 PATTERN)**

**Time : *Three* Hours**

**Maximum Marks : 70**

***N.B.* :— (i) Solve any 5 questions from Q. Nos. 1 to 6.**

**(ii) Question No. 7 is compulsory.**

1. Explain Active Directory Service in Windows Server 2003. [10]
2. Explain installation and configuration of Packages in Linux. [10]
3. Explain Right Management and Group Policies in windows Server 2003. [10]
4. Explain Default Directories in Linux. [10]
5. Explain various mail protocols. [10]
6. What is Internet Service Provider ? Explain various types of ISP. [10]

P.T.O.

7. Write short notes on (any *two*) :

[20]

- (a) Terminal Server
- (b) Peer-Peer Networks
- (c) Partitions in Linux.

Total No. of Questions—7]

[Total No. of Printed Pages—2

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[5367]-33

**M.C.M. (Semester-III) EXAMINATION, 2018**

**(Management Faculty)**

**303 NT : SERVER AND DESKTOP TECHNOLOGIES**

**(Specialization-II)**

**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

*N.B.* :— (i) Question Nos. 1 and 6 are compulsory.

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

1. Explain microprogrammed control units along with its operations and advantages. [10]
2. What is Drive ? What are the different types of drives ? Explain. [10]
3. Draw and explain 64 bits Pentium dual core architecture. [10]
4. Explain pipelining and pipelining types in detail. [10]
5. Elaborate recovery console process. Also focus on partition types in windows XP. [10]
6. Explain the process of hardware and driver installation in windows 7. Discuss network installation process in windows 7. [10]

P.T.O.

7. Write short notes (any *four*) :

[4×5=20]

- (a) User Management in Windows XP
- (b) Addressing modes
- (c) CD and DVD
- (d) SMPS
- (e) Wi-Fi configuration in Windows-7

Total No. of Questions—7]

[Total No. of Printed Pages—2

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**[5367]-34**

**M.C.M. (Semester III) EXAMINATION, 2018**

**304NT : SYSTEM ADMINISTRATION AND SERVER INTEGRATION**

**(Specialization-III)**

**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

- N.B. :—**
- (i) Question Nos. 1 and 7 are compulsory.
  - (ii) Answer any *three* questions from remaining.
  - (iii) Figures to the right indicate full marks.
  - (iv) Draw neat diagram wherever necessary.

1. Explain the detail installation procedure of Window 2003 Server. [20]
2. What are the features of Windows Server 2008 ? Explain functionality of Directory domain services. [10]
3. Explain File Management and User Management Commands in Linux. [10]
4. Explain configuration steps of DHCP server in Windows 2003. [10]
5. Explain services in Linux. How services are selected for startup in Linux ? [10]

P.T.O.

6. Explain the detail installation procedure of Linux server in Graphical mode. [10]
7. Write short notes on (any *four*) : [20]
- (a) Package Management
  - (b) Firewall
  - (c) Linux Apache Server
  - (d) Distributed Operating System
  - (e) Windows 2003 Server Role.

Total No. of Questions—8]

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[5367]-35

M.C.M. (Semester-III) (Mgt. Faculty) EXAMINATION, 2018

302-ST : SOFTWARE QUALITY ASSURANCE

(Specialization-I)

(2012 PATTERN)

Time : *Three* Hours

Maximum Marks : 70

*N.B.* :— (i) Solve any 7 questions.

(ii) *All* questions carry equal marks.

1. Explain Software Project Life Cycle in detail. [10]
2. Explain Mccall's Quality Model. [10]
3. Discuss Inspections and Walkthrough. [10]
4. Explain Software Configuration Management with all its components.[10]
5. Explain in detail important features of SEI-CMM. [10]
6. Explain Risk Management in detail. [10]
7. Differentiate between Software Quality Assurance and Software Quality Control. 10

P.T.O.

8. Write short notes on (any *two*) :

[10]

(a) Documentation control

(b) ISO 9001 and ISO 9000-3

(c) Impact of Case Tools.

Total No. of Questions—6]

[Total No. of Printed Pages—2

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[5367]-36

**MCM (Semester-III) EXAMINATION, 2018**  
**303 ST : SOFTWARE TESTING PROCESSES**  
**AND DOCUMENTATION**  
**(Software Testing Specialization-II)**  
**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question Nos. 1 and 6 are compulsory.  
(ii) Solve any *three* from the remaining.

1. (a) Explain Software Testing Process in detail with neat diagram. [7]  
(b) Write test cases for performing Online ticket booking of movie at Multiplex theatre which accepts customer name, movie name, date of movie, number of tickets, address, Mobile no., email-id, date of birth fields. None of the fields can be NULL. [7]
2. (a) Differentiate White Box Vs Black Box Testing. [7]  
(b) Define Defect. Discuss how to reduce the frequency of defects in software development. [7]
3. Discuss COTS Software Test Process in detail. [14]
4. Explain Tester's workbench. Explain various test tools required during complete test work process. [14]

P.T.O.

5. Discuss Internal controls of Software Testing. Explain Internal Control Models. [14]
6. Write short notes on (any *two*) : [2×7=14]
- (g) Static and Dynamic Testing
  - (h) Testing E-Commerce Application
  - (i) Penetration Point Matrix.

Total No. of Questions—8]

[Total No. of Printed Pages—1

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[5367]-37

M.C.M. (III Sem.) EXAMINATION, 2018

304-ST : SOFTWARE TEST PLANNING AND DOCUMENTATION

(Specialization-III)

(2012 PATTERN)

Time : 3 Hours

Maximum Marks : 70

*N.B.* :— (i) Solve any 7 questions.

(ii) All questions carry equal marks.

1. Explain use cases. Write down use cases for android based student admission system. [10]
2. Discuss in details various risk associated with software development. [10]
3. Explain Erroneous test cases and stress test cases. [10]
4. Discuss Test plan standards. [10]
5. Explain Defect Management. [10]
6. Explain acceptance test plan and execution. [10]
7. Discuss various tools used to prepare test report. [10]
8. Write short notes on (any *two*) : [10]
  - (a) Risk Analysis
  - (b) System Testing
  - (c) Test Matrix.

[5367]-37

Total No. of Questions—8]

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[5367]-38

**M.C.M. (Semester-III) (MGT. FACULTY) EXAMINATION, 2018**

**302-SD : PROGRAM AND DESIGN WITH ASP.NET**

**(Specialization-I)**

**(2012 PATTERN)**

**Time : *Three* Hours**

**Maximum Marks : 70**

***N.B.* :— (i) Question No. 8 is compulsory.**

**(ii) Solve any *four* questions from Q. No. 1 to Q. No. 7.**

1. Explain server side state management techniques in ASP.Net.[15]
2. Explain any *three* validator controls with suitable example. [15]
3. Draw and explain ADO.Net architecture in detail. [15]
4. Explain the concept of classes, objects, class members, interfaces with example. [15]
5. Explain the following standard controls : [15]
  - (a) Text boxes
  - (b) Labels
  - (c) Place holders.

P.T.O.

6. Draw and explain .Net framework architecture in detail. [15]
7. Write short notes on the following (any *three*) : [3×5=15]
- (a) Web Services
  - (b) Ajax Server controls
  - (c) Exception Handling
  - (d) Ling
8. Explain List Box and Check Box control in detail. [10]

Total No. of Questions—8]

[Total No. of Printed Pages—2

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[5367]-39

**M.C.M. (Third Semester) EXAMINATION, 2018**  
**303-SD : MOBILE PROGRAMMING USING ANDROID**  
**(Software Development Specialization-II)**  
**(2012 Pattern)**

**Time : 3 Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question No. 8 is compulsory.

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

1. Explain service life cycle and compare between bound and unbound services. [10]
2. Explain with example different layouts in android. [10]
3. Explain with example content providers. [10]
4. Explain building blocks of Android. [10]
5. Explain Android-An Open Platform for Mobile Development and Android SDK features. [10]
6. Explain use of theme in Android application. [10]
7. Explain architecture of android with diagram. [10]

P.T.O.

8. Write short notes on (any *four*) :

[20]

- (a) Views in android
- (b) Android life cycle
- (c) Cursors in android
- (d) Types of preferences in android
- (e) Method overloading.

Total No. of Questions—7]

[Total No. of Printed Pages—2

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[5367]-4

M.C.M. (II Sem.) EXAMINATION, 2018

203 : CORE RUBBY

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 70

*N.B.* :— Q. No. 1 and Q. No. 7 are compulsory. Solve any *four* from the rest.

Q.1. Find the output of the following. (Any 5)

15

- a. 

```
puts 5 **2
puts 7 / 3
puts 7 % 3
puts 365 % 7
```
- b. 

```
puts (1..10).select {|x| x % 2 == 0}
puts (1..10).reject {|x| x % 2 == 0}
```
- c. 

```
def foo(*my_string)
 my_string.each do |words|
 puts words
 end
end

foo('hello','world')
```
- d. 

```
var = 0
while var < 10
 puts var.to_s + '1'
 var += 1
end
```
- e. 

```
flavour = 'mango'
var4 = [80.5, flavour, [true, false]]
puts var4[2]
```

P.T.O.

```
f. def sequence
 i = 0
 while (i < n)
 yield m * i + c
 i += 1
 end
end

sequence (3, 5, 1) {|y| puts y}

g. "hello".each_byte {|x| print x}
```

Q.2. Write a program that accepts 10 numbers in an array and sorts the array in descending order. 10

Q.3. Write a Ruby program to print following pattern 10

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

Q.4. Write a Ruby program that accepts a string of characters and prints number of vowels in the string. 10

Q.5. Write a class Book having instance variables Bookno, Bookname, Author and Price and a method 'Display' that displays the details of the book. 10

Q.6. Write a program that swap the contents of the two text file. 10

Q.7. Write short notes on the following ( Any 3) 15

- a. File Handling
- b. Ruby Blocks
- c. Exception handling
- d. OOPs in Ruby
- e. Arrays and Iterators

Total No. of Questions—7]

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[5367]-40

**M.C.M. (Semester III) EXAMINATION, 2018**

**ADVANCED JAVA**

**(Specialization-III)**

**(2012 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question Nos. 1 and 7 are compulsory.

(ii) Solve any *four* questions from remaining.

1. Solve the following : [15]

(a) To register out parameter with data type string.

(b) To retrieve information from cookies in Servlet.

(c) Write all possible ways to create Sockets in Java.

(d) Difference between <JSP : include> and <JSP : forward>.

(e) Methods of statement object.

2. Write a socket program that runs on server and echoes back all strings sent by client. If the client sends QUIT, server should be terminated. [10]

3. Design a HTML page to accept student details and store them in a database using Servlets. Assume suitable table name and fields. [10]

P.T.O.

4. Write a HTML page which will accept Doctor's name Display list of patients who are being treated by that doctor using JSP. Assume suitable tables. [10]
5. Write a JDBC code to display list of students who have not paid their balance fees. [10]
6. Write a servlet code to accept information of pass out students for Registration in 'Alumni meet 2017'. [10]
7. Write short notes on (any *three*) : [15]
  - (a) JNDI
  - (b) Interfaces in JDBC
  - (c) RMI Architecture
  - (d) Java Beans
  - (e) JSP Directives.

Total No. of Questions—7]

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[5367]-41

**M.C.M. (Semester IV) EXAMINATION, 2018**

**401 : CURRENT TRENDS IN IT**

**(2012 Pattern)**

**Time : 2½ Hrs**

**Maximum Marks : 70**

*NB.:*—(i) Question No. 1 and 7 are compulsory.

(ii) Attempt any 3 from the remaining

(iii) Support your answers with relevant examples and Diagram.

(iv) Figures to the right indicate full marks.

1. An autonomous IT management institute has started distance learning CCNP programme for working professional. Institute is interested in conducting online admission process, virtual teaching, online training and exam. As a IT consultant suggest various models of e-learning and justify your suggestion. [15]
2. Explain E-Learning in brief. [15]
3. “Electronic payment are possible due to payment gateways”. Explain with their transactional flow in E-banking process. [15]
4. What is cloud Architecture ? Explain in brief [15]
5. “Social Networking sites are the open platform to all”. Explain with various security issues of social networking sites. [15]

P.T.O.

6. Explain various applications of m-Commerce. [15]
7. Write a Short Note : (Any *Two*) [10]
- (i) CcAvenue
  - (ii) Content Management
  - (iii) Chat Messenger
  - (iv) m-wallet

Total No. of Questions—7]

[Total No. of Printed Pages—2

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[5367]-5

**M.C.M. (Semester II) EXAMINATION, 2018**

**206 : OBJECT ORIENTED DESIGNING**

**(2008 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Question No. 1 is compulsory.

(ii) Answer any *five* from the remaining questions.

(iii) Mention assumptions made for solving case study.

1. (a) Draw class and use case diagram for the following : [15]

University has organized an International Research conference with various subject tracks. A website is developed by the University where all the conference details are uploaded. The participant has to register online under category-student, faculty, research scholar and corporate. He has to upload an abstract of his paper. If it gets selected, he has to upload final paper along with the registration fee. The registration fee varies according to the category of the registrant. The payment can be done with online modes or through DD. The paper presentation schedule is put up on the website under the defined tracks.

After the conference the participant can give his feedback online.

(b) Explain Incapsulation and Polymorphism with suitable example. [5]

P.T.O.

2. Compare and contrast Booch and Rumbaugh methodology. [10]
3. (a) Draw a sequence diagram for booking an movie ticket for you and your friend. [5]  
(b) Draw activity diagram for doing registration to attend financial workshop at ABC Finance. [5]
4. Compare between SSAD and OOAD. [10]
5. Explain Rational Unified Process in detail. [10]
6. Explain use case driven approach for identifying classes in detail. [10]
7. Write short notes on (any *two*) : [10]
  - (a) Designing system interfaces, control and security
  - (b) Object persistence
  - (c) Introduction to testing strategies
  - (d) Benefits of patterns.

Total No. of Questions—6]

[Total No. of Printed Pages—2

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[5367]-6

**M.C.M. (Semester III) EXAMINATION, 2018**

**301 – LINUX PROGRAMMING**

**(2008 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

**N.B. :—** (i) Q. Nos. 1 and 6 are compulsory.

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

1. (a) Write PHP script which accept username and password and validate and display appropriate message. [10]  
(b) Write a detailed note on Apache Server ? [10]
  
2. Write MySQL Commands for the following : [5×2=10]
  - (a) List and display the records in ascending order
  - (b) Creating stud table with appropriate constraints
  - (c) Updating Data in Table
  - (d) Creating user and granting permission
  - (e) Inserting the records.
  
3. Explain the following Linux Commands with example : [5×2=10]
  - (a) Grep
  - (b) file permission
  - (c) Who
  - (d) find
  - (e) Mount
  - (f) head and tail

P.T.O.

4. Explain different types of arrays in PHP with example. [10]
5. Explain GET and POST method with the help of example. [10]
6. Write short notes on [any *four*] : [4×5=20]
- (a) Constructors in PHP
  - (b) Web server
  - (c) PHP data types
  - (d) Linux file system
  - (e) Wall and write command

Total No. of Questions—6]

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[5367]-7

M.C.M. (III Sem.) EXAMINATION, 2018

304 : ADVANCED RUBY

(2008 PATTERN)

Time : 3 Hours

Maximum Marks : 70

*N.B.* :— (i) Question Nos. 1 and 6 are compulsory.

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

1. (a) Explain Restful Architecture in Rails. [10]  
(b) Write a SOAP server which defines a method that accepts two strings from client and returns the concatenated string. Write SOAP client application also. [10]
2. Write migration for creating table 'Book' in database having book\_no Name, author, publisher, price as columns. [10]
3. Explain MessageBox function with all options. Write a Ruby Application which displays a message 'clicked' when a button Is clicked. [10]
4. Explain different types of relationships in Rails. [10]
5. Write a Ruby Script to generate a ComboBox. When a button is clicked, the caption/text of button is changed to item selected in the ComboBox. [10]

P.T.O.

6. Write short notes (any *four*) :

[4×5=20]

- (a) Logger Class
- (b) Menu Widget
- (c) Session and Cookies
- (d) Plugins
- (e) Threading.

Total No. of Questions—8]

[Total No. of Printed Pages—2

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[5367]-8

**M.C.M. (Management Faculty)**

**(Third Semester) EXAMINATION, 2018**

**305 : VB.NET**

**(2008 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 70**

*N.B.* :— (i) Q. No. 1 and Q. No. 8 are compulsory.

(ii) Solve any *four* questions from Q. No. 2 to Q. No. 7.

(iii) Figures to the right indicate full marks.

1. Draw and explain .Net Framework architecture in detail. [15]
2. What do you mean by event driven programming ? Explain any *four* events with example. [10]
3. Describe the use of Form Designer Window, Code Editor Window, Solution Explorer window, Properties Window, Server Explorer Window available in visual studio. [10]
4. What do you mean by inheritance ? What are its uses ? Explain the concept of inheritance with example. [10]

P.T.O.

5. Explain the following controls : [10]
- (a) Text Box Control
  - (b) List Box Control
  - (c) Image List Control
  - (d) Status Bar Control.
6. Design a form and write ado.net code to perform insert, Update, Delete, First Next, Previous and Last operations on Item Table (ItemId, ItemName, Price, Uom, Category).
- Server Name : SPPU
- Password : MCM2008. [10]
7. What is file ? What are different modes in which file can be opened ? Write a program to write some data into a file. [10]
8. Write short notes on the following (any *three*) : [15]
- (a) Crystal Reports
  - (b) ADO.Net architecture
  - (c) Data Grid view control
  - (d) Constructors and destructors.

Total No. of Questions—7]

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[5367]-9

**M.C.M. (Semester III) EXAMINATION, 2018**  
**306 : SOFTWARE PROJECT MANAGEMENT**  
**(2008 Pattern)**

**Time : 3 Hours**

**Maximum Marks : 70**

*NB.:*—(i) Q. 1 and Q. 7 are compulsory.

(ii) Solve any *four* questions from the remaining.

1. Explain project planning in detail. [15]
2. Describe different risks associated with any software development project. How are these risks managed ? [10]
3. Explain human resource acquisition process adopted in IT organization. [10]
4. Explain different techniques used in software testing. [10]
5. Explain how performance of hardware and software is evaluated. [10]
6. Explain in detail COCOMO. [10]

P.T.O.

7. Write short notes on any *three* :

[15]

- (a) Version control
- (b) Chief programmer team
- (c) Gantt chart
- (d) Software quality assurance plan.