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[5467]-1001

MCM (I Sem.) EXAMINATION, 2018

101 : FUNDAMENTALS OF INFORMATION TECHNOLOGY

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

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

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

(iii) Figures to the right indicate full marks.

1. (a) Define Computer and discuss various characteristics of computer. [5]
- (b) Discuss various scanning input devices of computer in brief. [5]

2. (a) Define Software and explain the types of software with examples. [5]
- (b) Discuss the use of graphics co-processor. [5]

3. (a) Give difference between Primary and Secondary memory. [5]
- (b) Explain File Management Function of Operating System. [5]

P.T.O.

4. (a) Convert the following numbers (any *two*) : [5]
- (i) $(CB)_{16} = (?)_2$
 - (ii) $(101110)_2 = (?)_{10}$
 - (iii) $(88)_{10} = (?)_2$
- (b) Give difference between Interpreter and Compiler. [5]
5. Explain OSI Seven Layer model in detail. [10]
6. Write short notes on (any *two*) : [10]
- (a) Coding systems
 - (b) Communication media
 - (c) Dot matrix printer.

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[5467]-1002

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

102 : 'C' PROGRAMMING AND DATA STRUCTURE

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Q. No. 1 is compulsory.

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

(iii) Figures to the right indicate full marks.

1. (A) Find the explain output of the following programs. Assume suitable header files : [6]

```
(a) void main( )  
{  
    int a[5]={5, 1, 15, 20, 25};  
    int i, j, m;  
    i=++a[1];  
    j=a[1]++;  
    m=a[i++];  
    printf("%d, %d, %d", i, j, m);  
}
```

P.T.O.

(b) What will be the content of 'file.C' after executing the following program :

```
void main( )  
{  
    FILE *fp1, *fp2;  
    fp1=fopen("file.C", "w");  
    fp2=fopen("file.C", "w");  
    fputc('A', fp1);  
    fputc('B', fp2);  
    fclose(fp1); fclose(fp2);  
}
```

(B) Explain the following (any *two*) : [4]

- (a) Queue
- (b) Recursive function
- (c) Dynamic memory allocation.

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

```
A  B  C  D  E  F  
   B  C  D  E  F  G  
    C  D  E  F  G  H
```

3. Write a program to accept multiline text from the user ended by character '9' and the program should display no. of tab spaces, no. of blank spaces, no. of lines and no. of alphabets in a given text. [10]

4. Write a recursive function which receives a number and return the factorial value of that number. [10]

5. Write a program to accept itcode, desc, rate and qty of 30 items. Display all records in tabular form. [10]

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

7. Write a program to accept 10 numbers and display the lowest, highest and average value from these numbers. [10]

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[5467]-1003

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

103 : SOFTWARE ENGINEERING WITH UML

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

- N.B. :—** (i) Question Nos. 1 and 5 are compulsory.
(ii) Answer any 2 from the remaining.
(iii) Mention assumptions made for solving case study.
(iv) Net diagrams carry marks

1. ABC Bank offers various schemes of term deposits with attractive interest rates. Customer can make application for a T.D. A/c by filling a form mentioning the amount and period. On verification of the form and payment of amount, account is opened and a Term Deposit Receipt (TDR) is issued to the customer. The interest is calculated half-yearly and credited to customer's TD A/c. If required, customer can request for premature withdrawal. On completion of TD period the maturity amount is paid to customer. You are required to do the following :

- (a) Draw Context [7]
(a) First Level DFD. [7]

P.T.O.

2. (a) Explain the Phases of Software Development Life-Cycle in detail. [6]
- (b) Explain GUI Component for Design of Output. Give suitable example. [6]
3. (a) Draw an activity diagram for Liquid Boiler System. Liquid boiler consists a heater and thermometer. Thermometer senses the current temperature, if temperature goes below 200 degree, then start the heater. If temperature goes above 800 degree, then stop the heater. [6]
- (b) Explain Requirements and its types in detail. [6]
4. (a) Draw Decision Table for the following : [6]
- On the orders books on or before 31-03-2018, offer a discount of 10% on the items displayed in the advertisements. Addition 2% discount is offered to appointed dealers. If customer is within Maharashtra State, then no sales tax is charged, otherwise 8% sales tax is charged on the sale value. Customer from outside Maharashtra State also has to pay 4% Central Sales Tax. For charging excise duty there are two categories. For category A 10% and category B 5% Excise Duty has been charged.
- (b) Describe the skill required for System Analyst. [6]

5. Write short notes (any *three*) :

[12]

(i) RUP

(ii) RAD

(iii) Pseudo Code and Structure English

(iv) SSAD and OOAD.

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[5467]-1004

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

104 : DATABASE MANAGEMENT SYSTEM (DBMS)

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Q. Nos. 1 and 5 are compulsory.

(ii) Solve any *two* from Q. 2 to Q. 4 from the remaining.

1. Indian Venue Management Company is going to develop their new on-line booking system for entertainment events such as social gathering and concerts. The process of the system involves events based on customer enquiry for the name of the event, type of event, venue and the date of the event. The event details providing information about the availability of the tickets and price according to the category. Booking of the tickets for the event can be done online or offline. The administrator provides the venue list, rates and availability of venue to the customer for the event registration. Administrator can add a new venue. Customer can cancel the venue, based on cancellation of the venue, the charges will be deducted.

Draw the E-R diagram for the above case and normalize upto 3NF.

P.T.O.

[15]

2. What is meant by deadlock ? Explain different methods used to prevent deadlock. [10]
3. Explain 3-tier architecture of database. [10]
4. Explain any 10 Codd's rules. [10]
5. Write short notes on (any *three*) : [15]
 - (1) Generalization
 - (2) ACID properties
 - (3) Data mining
 - (4) Data independence
 - (5) Encryption.

Total No. of Questions—5]

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[5467]-2001

MCM (II Semester) EXAMINATION, 2018

201 : BUSINESS APPLICATION AND ERP TOOL

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) *All* questions are compulsory.

(ii) Figures to the right indicate full marks.

1. (A) What is MRP ? How does it affect directly on production ? [10]

Or

(B) Explain FIFO and LIFO methods with examples. [10]

2. (A) Define Market Segments. Specify different Market Segments.
Explain how different market segment boost sales. [10]

Or

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

3. (A) Draw the normalized employee database for HRM for
Multinational organization. [10]

Or

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

P.T.O.

4. (A) What is Payroll ? Draw the layout of Pay Slip. Explain all Income and Deduction heads. [10]

Or

- (B) Explain recruitment process with the help of DFD. [10]

5. (A) What is ERP ? What are the different phases of ERP implementation life-cycle ? [10]

Or

- (B) What is the role of ERP implementation team ? [10]

Total No. of Questions—5]

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[5467]-2002

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

**202 : PRINCIPLES AND PRACTICES OF MANAGEMENT AND
ORGANIZATIONAL BEHAVIOR**

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

- N.B. :—** (i) Question Nos. 1 and 5 are compulsory.
(ii) Draw neat diagrams wherever applicable.
(iii) Attempt any *two* questions from the remaining.

1. Explain in detail the administrative management thought of Henry Fayol ? [15]
2. Define Motivation ? Explain the Maslow's need hierarchy theory.[10]
3. Define Team. Explain formal and informal teams. [10]
4. What do you mean by Organizational Behaviour ? Explain the need and importance of OB ? [10]
5. Write short notes on (any *three*) : 3×5=15
 - (a) Ego States
 - (b) Authority and Delegation
 - (c) Types of Leader
 - (d) Process of Group Formation.
 - (e) Theory X and Theory Y.

Total No. of Questions—5]

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[5467]-2003

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

203 : ADVANCED RDBMS USING ORACLE

(2013 PATTERN)

Time : Two Hours

Maximum Marks : 50

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

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

(iii) Figures to the right indicate full marks.

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

Customer (C_ID, Cname, city)

Item (Item_ID, Item_Name, Price, Brand)

Order (O_ID, Odate, Quantity, C_ID, Item_ID).

1. Solve any *ten* queries given below : [20]

(i) Display the customers who belongs to “Pune”.

(ii) Display the name of customers who ordered item “ABC”.

(iii) Display the orders placed in the year 2016.

(iv) Display the customers who have not purchased any item yet.

(v) Display the list of items ordered by customer “PQR”.

(vi) Display the costly item of each brand.

(vii) Display the number of customers from each city.

P.T.O.

- (viii) Add one column pincode in customer table.
- (ix) Display all customers whose name starts from 'A'.
- (x) Display all customers except "Pune".
- (xi) Display the name of the customers who have ordered all the items.
- 2.** Write a PL/SQL block to give discount to the customers on the following conditions : [10]
- (a) 20% discount if the order total cost is above ₹ 2,000.
- (b) 10% discount if the order total cost is in the range of ₹ 1,000 and ₹ 1,999.
- (c) No discount if order total cost is less than ₹ 1,000.
- 3.** Write a function Get_Total_Amt() of order placed by a customer by Accepting the C_ID of the customer. [10]
- 4.** Write a trigger program for not allowing customers to place orders on 26th January 2016. [10]
- 5.** Write short notes on any *two* : [10]
- (a) Composite Data Types
- (b) Logical operators in Oracle
- (c) Database Backup.

Total No. of Questions—6]

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[5467]-2004

MCM (Second Semester) EXAMINATION, 2018

204 : JAVA PROGRAMMING

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

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

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

(iii) Figures to the right indicate full marks.

1. Solve the following : [10]
 - (1) What is thread priority ?
 - (2) What are attributes of <applet> tag ?
 - (3) List any *two* methods of WindowListener.
 - (4) What is garbage collection ?
 - (5) What is use of super keyword in java ?

2. Write applet application to accept user name and password in text fields from user. Compare it with predefined name and password. If it matches show welcome message otherwise display error message. [10]

3. Write program to create the following threads : [10]
 - (1) To print progressive sum of first 50 natural numbers
(e.g. 1 3 6 10 15)
 - (2) To print first 25 terms of Fibonacci series.

P.T.O.

4. Write application to accept date - dd mm yy from user on command line. If user enters wrong day or month fire user define exception “Invalid date”. If user enters correct date, greet user with “Good Day”. [10]

5. Write application to accept 10 friend’s information like name, address, Date of birth, cell-phone number in array of object. Display accepted details. [10]

6. Write notes on (Any *two*) : [10]
 - (1) Access specifiers
 - (2) Applet life-cycle
 - (3) java.io.File class
 - (4) java.util.Vector class.

Total No. of Questions—5]

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[5467]-3001

MCM (III Sem.) EXAMINATION, 2018

301 : INFORMATION SECURITY AND AUDIT

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— All questions are compulsory.

1. Explain different kinds of Biometric Security available for securing a Server Room. [10]

Or

Ethical issues and Intellectual Property concerns for Information Security professionals.

2. Discuss SSE-CMM model in detail. [10]

Or

What is Firewall ? Explain its types in detail.

3. Explain the security of virtual private networks. [10]

Or

Explain the security of wireless networks.

P.T.O.

4. Describe the role of Database Administrator in Audits and Asset Management. [10]

Or

How does Encryption and Decryption help to maintain Security ?

5. What are the Security Threats in the E-commerce Environment ? [10]

Or

Explain Disaster Recovery Planning.

Total No. of Questions—6]

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[5467]-3002

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

302-NT : BASICS OF NETWORK TECHNOLOGIES

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Solve any *five* questions.

(ii) *All* questions carry equal marks.

1. Explain steps for installation of Linux Server.
2. Explain Bus, Star and Ring Topologies.
3. Explain Windows Rights Management Service and Group Policy in Windows Server 2003.
4. Explain various partitions and purposes in Linux.
5. What is Internet Service Provider ? What is Windows Internet Naming Service (WINS) ?
6. Write short notes on :
 - (a) Storage Management
 - (b) Microsoft .NET Framework.

Total No. of Questions—6]

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[5467]-3003

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

B : 302-ST : SOFTWARE QUALITY ASSURANCE

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Solve any *five* questions.

(ii) Figures to the right indicate full marks.

1. Explain Software Project Life Cycle in detail. [10]
2. What is Review ? Explain different types of Review. [10]
3. (a) Explain different types of testing. [5]
(b) Explain ISO/IEC 12207 Standard. [5]
4. What do you understand by SQA ? Describe major activities necessary for effective SQA. [10]
5. Discuss Inspection and Walkthrough. [10]
6. Write short notes on (any *two*) : [10]
(a) Verification and Validation
(b) Software maintenance
(c) Release and version control.

Total No. of Questions—7]

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[5467]-3004

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

302-SD : PROGRAM AND DESIGN WITH ASP.NET

(Software and Development Specialization)

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Q. No. 1 is compulsory.

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

1. Draw and explain .Net framework architecture in detail. [10]

2. Design a form and write code to : [10]
 - (a) Add new record
 - (b) Edit record
 - (c) Delete recordName of table : Employee(eid, ename, esalary, eDOB).

3. Explain any *two* validator controls in detail. [10]

4. Explain navigation controls in detail. [10]

5. Explain the concept of exception handling with suitable example. [10]

P.T.O.

- 6.** Explain the following controls (any *two*) : [10]
- (a) Ad rotator control
 - (b) Image Map control
 - (c) Button control.
- 7.** Write short notes on the following (any *two*) : [10]
- (a) Web service
 - (b) OOP concepts
 - (c) AJAX.

Total No. of Questions—6]

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[5467]-3005

M.C.M. (Third Semester) Examination, 2018

303-NT : SERVER AND DESKTOP TECHNOLOGIES

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :—Solve any *five* questions.

1. Explain different partition types in windows 7. Discuss the process of network installation in windows 7. [10]
2. What is interrupt ? What are the different types of interrupts ? Explain. [10]
3. Explain the process of installing auto updates and service packs in windows XP. [10]
4. Explain with block diagram the 80286 bits microprocessor Architecture. [10]
5. Explain the working of Laser printer with schematic diagram. [10]
6. Explain CPU Registers and USB in detail. [10]

[5467]-3005

Total No. of Questions—10]

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[5467]-3006

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

303 : SOFTWARE TESTING PROCESSES AND

DOCUMENTATION

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :- (i) All questions are compulsory.

(ii) Each question carries **10** marks.

1. How to reduce the frequency of defects in software development ?

Or

2. Discuss Life-cycle testing.

3. Differentiate Verification and Validation, Functional and Structural testing Static and dynamic testing.

Or

4. Explain in brief White box and Black box testing.

5. How to build testing environment for software testing ?

Or

6. Explain Test work processes and Test Tools.

P.T.O.

7. Explain COTS Software Test Process.

Or

8. How to test internal controls of software testing ?

9. Explain Creation of security awareness policy, strategy.

Or

10. Explain Testing Wireless Technologies.

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[5467]-3007

**M.C.M. (Third Semester) EXAMINATION, 2018
303-S2-MOBILE PROGRAMMING USING ANDROID
(2013 PATTERN)**

Time : 2½ Hours

Maximum Marks : 50

N.B. :—Answer any *five* questions.

1. Explain the use of Android development tool. [10]
2. Explain the use of Theme in Android application. [10]
3. Explain the difference between bound and unbound services. [10]
4. Explain building block of Android. [10]
5. Explain method to store raw audio file. [10]
6. Explain any *three* common preferences in Android. [10]

Total No. of Questions—6]

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[5467]-3008

MCM (III Semester) EXAMINATION, 2018

304-NT : SYSTEM ADMINISTRATION AND SERVER INTEGRATION

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

N.B. :— (i) Question No. 6 is compulsory.

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

(iii) Figures to the right side indicate full marks.

(iv) Draw neat diagram wherever necessary.

1. Explain services in Linux. How are services selected for start up in Linux ? [10]
2. Explain the steps in Installing Windows 2003 Server. Also explain Post-Installation configuration. [10]
3. What are the features of Window Server 2008 ? Explain. [10]
4. Explain group management and user management command in Linux. [10]
5. Explain default directories structure in Linux. [20]

P.T.O.

6. Write short notes on (any *four*) : [20]

(a) Type of distributed operating system

(b) DHCP Server

(c) Package in Linux

(d) Windows Firewall

(e) Windows 2003 Server Role.

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[5467]-3009**MCM (III Semester) EXAMINATION, 2018****304-ST : SOFTWARE TEST PLANNING AND DOCUMENTATION****(2013 PATTERN)****Time : 2½ Hours****Maximum Marks : 50****N.B. :—** (i) Solve any *five* questions.(ii) *All* questions carry equal marks.

1. Explain use cases. Write down the cases for android based online product purchasing. [10]
2. Explain in detail User's role and tester's role in the software testing process. [10]
3. Explain Defect Management. [10]
4. Discuss in detail various risks associated with software development. [10]
5. Explain Acceptance test plan and execution. [10]
6. Write short notes on (any *two*) : [10]
 - (a) Benchmarking
 - (b) System Testing
 - (c) Test Matrix.

Total No. of Questions—6]

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[5467]-3010

MCM (III Semester) EXAMINATION, 2018

301 : ADVANCED JAVA

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

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

(ii) Solve any *four* questions from Q. No. 2 to Q. No. 6.

1. Answer the following (any 5) : [10]
 - (a) What is an IPaddress ?
 - (b) Methods of statement object
 - (c) JSP implicit objects
 - (d) Code to call stored procedure
 - (e) Service method in servlet
 - (f) How are cookies created ?

2. Write a JDBC code to accept employee number and will return his job and his manager's name. [10]

3. Write servlet code to accept item code from user and display details of the item to client. Assume suitable table structure. [10]

P.T.O.

4. Write JSP page to accept user name and password to store information in bank account table. [10]

5. Write a client server code to accept string at client and point reverse of it at the server. [10]

6. Write short notes on (any *two*) : [10]
 - (a) JSP custom tags
 - (b) Types of JDBC Drivers
 - (c) Session tracking in servlet.

Total No. of Questions—6]

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[5467]-4001

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

401 : CURRENT TRENDS IN IT

(2013 PATTERN)

Time : 2½ Hours

Maximum Marks : 50

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

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

(iii) Support your answer with relevant examples and diagram.

(iv) Figures to the right indicate full marks.

1. An autonomous management institute has started distance learning Executive MBA programme for working professional. Institute is interested in conducting online admission process placement portal, virtual teaching and exam. As an IT consultant suggest various models of e-learning and justify your suggestion. [10]

2. Explain different e-Learning Tools and Technologies. [10]

3. Explain various electronic payment gateway. Explain Citrus. [10]

4. Explain cloud storage with their issues of storage security with example. [10]

P.T.O.

5. Explain m-Commerce with the various applications of m-Commerce.[10]
6. Write short notes on (any *three*) :
- (i) Ethical Hacking
 - (ii) Virtual School Systems
 - (iii) Point Of Sales System (POS)
 - (iv) CCAvenue.