

Total No. of Questions : 5]

SEAT No. :

PC-3169

[Total No. of Pages : 2

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F.Y. M.B.A. (I.T.)

101 (Core) : C PROGRAMMING & DATA STRUCTURE
(Revised 2020 Pattern) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Attempt any Five :

[5 × 2 = 10]

- a) Scant & gets
- b) Switch statement
- c) Static keyword
- d) Union in C
- e) Call by value
- f) Pointers in C
- g) Stack
- h) Bitwise operator

Q2) Attempt any Two :

[2 × 5 = 10]

- a) Explain Loop in C Programming.
- b) How Dynamic Memory Used in C.
- c) Explain Nested if giving suitable example.

Q3) Attempt any One :

[1 × 10 = 10]

- a) Write a program to find the largest and smallest element in an Array of Integer.
- b) Write recursive program to print Fibonacci series for N terms.

P.T.O.

Q4) Attempt any One :

[1 × 10 = 10]

- a) Write a C program store Information of 10 students and display it using structure.
- b) Write a C program that reads data from a file and displays it on the console using fscanf ().

Q5) Attempt any One :

[1 × 10 = 10]

- a) Write a C program to copy the content from one file to another file.
- b) Write a C program to count a number of words and characters in a file.



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SEAT No. :

PC-3170

[Total No. of Pages : 2

[6382]-12

M.B.A. (I.T.)

102 : SOFTWARE ENGINEERING WITH UML

(Rev.2020) (Semester - I)(Core)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Draw neat labelled diagram wherever necessary.
- 3) All questions carry equal marks.

Q1) Solve any Five (each 2 marks) :

[5 × 2 = 10]

- a) Write any four advantages of RAD model.
- b) Explain nature of software.
- c) Write any four roles of users in SDLC.
- d) Distinguish waterfall model and prototyping model.
- e) Explain in short software development approach with SSAD.
- f) What is RUP? Write any four phases of RUP.
- g) What is SDLC? List any four types of SDLC model.
- h) Define the basic components of software system.

Q2) Write short note on (any 2) :

[2 × 5 = 10]

- a) Object and classes from OOAD.
- b) OOAD methods and Messages.
- c) OOAD Association and links.

P.T.O.

Q3) Prepare Software Requirement Specification (SRS) document for online voting system. **[10]**

OR

Explain Decision tables and decision tree. Draw decision table for the following- Admission of MBA (BA) course follows below given procedural rules:

- Student must have minimum 50% marks at graduation level.
- CET score should be minimum 50%.
- Nationality should be Indian.
- All relevant documents should be successfully verified by competent Authority.

Q4) Demonstrate use-case driven object oriented analysis for e-CRM web Application. **[10]**

OR

Draw class diagram and Activity diagram for PayTM Application.

Q5) Design uses interface for proposed online grocery shop Application. **[10]**

OR

Explain various features of modern GUI with suitable example.



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SEAT No. :

PC3171

[6382]-13

[Total No. of Pages :2

First Year M.B.A. (Information Technology)

103 Core : DATA BASE MANAGEMENT SYSTEM (DBMS)

(Revised 2020 Pattern) (Semester- I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Answer of any five:

[10]

- a) Explain Data Independence
- b) Define primary key and foreign key.
- c) What is crash recovery in DBMS?
- d) Discuss Database security issues.
- e) Explain Data definition in SQL
- f) Define Cardinality
- g) Define non volatile storage

Q2) Solve any two:

[10]

- a) List the various data models and advantages of each data model.
- b) Discuss Concurrency control and various Concurrency control schemes.
- c) Explain object based data model. Discuss concept of transaction.

Q3) An online bookstore wants to design a database to manage their inventory, orders, and customers. Draw an Entity-Relationship Diagram (ERD).

[Take suitable assumption if necessary]

[10]

OR

Consider the following schedule of transactions T1, T2, and T3:

T1 : R (A), W (A)

T2 : W (A), R (B)

T3 : W (B), R (A)

Determine whether the given schedule is serializable or not.

P.T.O.

Q4) How does SQL implement entity integrity constraints of the relational data model? **[10]**

OR

Write SQL statements for following tables:

Student(Enrno, name, courseId, emailId, cellno)

Course(courseId, course_nm, duration)

- a) Add a column city in student table.
- b) Find out list of students who have enrolled in “computer” course.
- c) List name of all courses with their duration.
- d) List name of all students start with “a”.

Q5) Consider a relation scheme $R = (A, B, C, D, E, H)$ on which the following functional dependencies hold: $\{A \rightarrow B, BC \rightarrow D, E \rightarrow C, D \rightarrow A\}$. Write the candidate keys of R? **[10]**

OR

Demonstrate the concept of log-based recovery in database systems giving suitable example.



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SEAT No. :

[Total No. of Pages : 1

PC3172

[6382]-14

First Year M.B.A. (I.T.)

**104 Core : PRINCIPLES OF MANAGEMENT AND
ORGANIZATIONAL BEHAVIOUR
(Revised 2020 Pattern) (Semester - I)**

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *Q.1 and Q.6 are compulsory.*
- 2) *Solve any 3 questions from Q.2 to Q.5.*

Q1) Solve All

[5×2=10]

- a) Define group dynamics
- b) Define contingency Approach
- c) Define controlling
- d) Define open and closed system
- e) Explain qualities of Leader

Q2) Discuss how Information Technology and Decision making are interrelated.

[10]

Q3) Explain in detail about Maslow's Need Hierarchy Theory.

[10]

Q4) "Controlling is most important Function of Management". Discuss with an example.

[10]

Q5) Define leadership and its various styles in detail.

[10]

Q6) Write short notes on: (Any two)

[2×5=10]

- a) Conflict management
- b) MIS
- c) Team Building



Total No. of Questions : 5]

SEAT No. :

PC-3173

[Total No. of Pages : 2

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F.Y.M.B.A. (I.T)
105 Core : Fundamentals of Information Techonology
(Revised 2020) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

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

Q1) Answer the following (Any 5)

[5×2=10]

- a) Write the name of four secondary storage devices?
- b) Define computer?
- c) What is ASCII?
- d) Write any four functions of operating system?
- e) What are the various type of processors used in computer?
- f) What is batch processing?
- g) What are the types of language convertor?
- h) What are the benifits of computer networking?

Q2) Write short note on (Any 2)

[2 × 5 = 10]

- a) Communication media.
- b) Computer languages.
- c) Microprocessor.

P.T.O.

Q3) Answer any one of the following

[1 × 10 = 10]

- a) i) $(169)_{10} = (?)_8$
- ii) $(1C29)_{16} = (?)_2$

OR

- b) i) $(1101.101)_2 = (?)_{10}$
- ii) $(321)_8 = (?)_2$

Q4) Answer any one of the following :

[1 × 10 = 10]

- a) What is OSI model? List seven layer & describe the function of each layer.
- b) Explain multi processing & multiprogramming in software system.

Q5) Answer any one of the following :

[1 × 10 = 10]

- a) Write type and characteristics of computer also explain computer generation with example.
- b) Explain memory management & file management.



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SEAT No. :

PC3174

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[Total No. of Pages :2

First Year M.B.A. (Information Technology)

106-CORE:DIGITAL MARKETING

(Revised 2020 Pattern) (Semester- I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) Assume Suitable Data if neccessary .*
- 2) Draw neat, labelled diagram whenever necessary.*
- 3) Figures to the right indicate full marks.*
- 4) All questons are compulsory.*

Q1) Solve the following(Any five)

[10]

- a) Write the key advantages of Facebook to popularize your business.
- b) Difine concept CRM & e-CRM.
- c) Major function & application of LinkedIn's .
- d) What is Google AdWords?
- e) Define buzz monitoring .
- f) Benefits of Social Collaboration 2.0.
- g) What does navigation mean in a website?
- h) What does RSS stand for in SEO?

Q2) Answer the following (Any two)

[10]

- a) How do I make my You Tube channel effective?
- b) Discuss the features and inference of search engine optimization.
- c) State characteristics of Digital marketing?

P.T.O.

Q3) Answer the following .(Any One) [10]

- a) Which form of digital marketing platform is better; SEO or PPC Illustrate with appropriate Example.
- b) What is Web Analytics? How it contributes and benefits Digital Marketing?

Q4) Answer the following (Any One) [10]

- a) Explain the trends in banking industry from brick and mortar to mobile banking .
- b) “Digital Marketing has shifted the landscape of traditional marketing” Discuss.

Q5) Answer the following (Any one) [10]

- a) Illustrate in details functions and role in F-Commerce (Facebook), Linked In and M commerce (Mobile) Play in online advertising.
- b) Do you find anything wrong with the Digital Marketing tactics that we are adhering to right now ? If yes, how would you like to change it?



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SEAT No. :

PC3175

[6382]-17

[Total No. of Pages : 2

First Year M.B.A. (Information Technology)

107 UL: E-COMMERCE

(Revised 2020 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Each question having 10 marks.*
- 3) Figures to the right indicate marks for individual questions.*

Q1) Give the answers in short (Solve any 5)

[5×2=10]

- a) Define E-commerce.
- b) Explain any 2 benefits of E-commerce.
- c) What is a shopping cart?
- d) What is a Cookie?
- e) B2C Application model.
- f) Explain 2 modes of operations associated with E-commerce.
- g) What is URL Internet Protocol?
- h) What is the use of National Electronic Fund transfer?

Q2) Solve any two of the following.

[2×5=10]

- a) Explain Functions of E-commerce.
- b) Explain different characteristics of Internet.
- c) Explain various types of Electronic Fund Transfer.

P.T.O.

Q3) Solve any one of the following. **[10]**

- a) Explain B2B and C2C E-commerce business model.
- b) Explain the importance of internet in E-commerce with example.

Q4) Solve any one of the following. **[10]**

- a) Explain the prerequisite for E-commerce and explain the components of E-commerce for establishment.
- b) Explain the use of EBAY and PayPal in E-commerce.

Q5) Write descriptive note on any one. **[10]**

- a) E-Business
- b) E-commerce Technologies for effective use of E-commerce
- c) SCM



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SEAT No. :

PC3176

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First Year M.B.A. (Information Technology)

108-UL: WEB DESIGNING

(Revised 2020 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Each question having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Explain the Tags (any 5)

[10]

- a) `<body> ... </body>`
- b) `<area>`.
- c) `<caption align = "value"></caption>`
- d) `<div>...</div>`
- e) `<form> ... </form>`
- f) `<label> ... </label>`
- g) `<legend>... </legend>`
- h) `<marquee>... </marquee>`

Q2) Solve any 2

[10]

- a) Explain Control Structures in VB Script with suitable examples.
- b) Explain error handling in Jscript with an example.
- c) Write an HTML Code to draw a table.

Name :	<input type="text"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>
City	<input type="text" value="Select City"/>
Gender	<input type="radio"/> Male <input type="radio"/> Female
Gmail	<input type="text"/>
<input type="button" value="Submit"/>	

P.T.O.

Q3) Answer the following (any 1)

- a) Demonstrate Bitwise operate in JScript. [10]
- b) Explain Logical operators in VB Script with an Example. [10]

Q4) Solve (any 1) [10]

- a) Explain Functions in VB script? With an example?
- b) Create a simple multiplication table asking the user the number of rows and columns he wants.

Q5) Solve (any one) [10]

- a) Explain various types of Style Sheets in HTML. At least 3. five types are required.
- b) Create a code in Jscript where with in click event message is displayed with the particular name.

Click on the button after inputting your name into the text box:

ram	Click Here
-----	------------



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PC3177

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First Year M.B.A. (Information Technology)

109-UL : CYBER SECURITY

(Revised 2020 Pattern) (Semester-I)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Each question carries 10 marks.*

Q1) Answer in short any 5 questions

[10]

- a) Define topology.
- b) Define VPN.
- c) Define IPR.
- d) What is shoulder surfing?
- e) What is databased protection.
- f) What is domain name system attack.
- g) Two factor authentication
- h) Network sniffing

Q2) Answer any two.

[10]

- a) What is risk management?
- b) What are the types of security, threats & vulnerabilities.
- c) Explain the steps of firewall.

P.T.O.

Q3) Answer any one.

[10]

- a) Explain the international standards in security management.
- b) Explain security in wireless networks.

Q4) Answer any one.

[10]

- a) Explain security in mobile applications.
- b) How cryptography is done in security.

Q5) Solve any one.

[10]

- a) Explain different threats and vulnerabilities.
- b) What is security audit in SSE-CMM



Total No. of Questions : 5]

SEAT No. :

PC-3178

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F.Y.M.B.A. (I.T)
201 SD : Java Programming
(Revised 2020 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) *All questions are compulsory.*
- 2) *Each question carries 10 marks.*

Q1) Answer any 5

[10]

- a) What is an Exception?
- b) What is an Applet?
- c) What is inheritance?
- d) What is abstract keyword?
- e) Explain JDK.
- f) What is static modifier?
- g) Explain OOP
- h) Give features of Java.

Q2) Answer any two

[10]

- a) Explain Applet life cycle.
- b) Explain polymerphism with example.
- c) Explain interface with example.

P.T.O.

Q3) Answer any one

[10]

- a) Write a java program to accept 10 students marks and calculate their percentage (use Arrays).
- b) Explain exception with example.

Q4) Answer any one

[10]

- a) Write a Java program to count the number of characters form a file.
- b) Write a Java program to count the number of rewels from an entered string.

Q5) Answer any one

[10]

- a) Write an applet to change the background color as entered by user.
- b) Write a java program to print a fibonacci series.



Total No. of Questions : 5]

SEAT No. :

PC-3179

[Total No. of Pages : 2

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F.Y. M.B.A. (IT)

**201NT : CORE BASIC OF NETWORKING
(2020 Pattern) (Semester II)**

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *All questions carry equal marks.*

Q1) Define the following terms (Any FIVE) :

- a) Topology
- b) Computer network
- c) Internet
- d) Intranet
- e) firewall
- f) SMTP
- g) IPv4 and IPv6
- h) IP

Q2) Answer any TWO :

- a) What is Networking? Explain the different types of network.No. 01.
- b) Differentiate between Host terminal network and Client Server network
- c) Explain network protocol TCP/IP in detail

Q3) a) Explain different types of Network components.

OR

- b) What is Role of DHCP ? Explain steps for configuring the DHCP Server for windows Server-20012

P.T.O.

Q4) a) Write the installation steps for Windows Server-2008 operating System.

OR

b) What is Active Directory? Explain steps for configuring the Active Directory and Domain Controller in windows Server-2012.

Q5) a) Explain user management and Group management in windows Server 20012.

OR

b) Explain Features of various types of Windows server-2008.



Total No. of Questions : 5]

SEAT No. :

PC-3180

[Total No. of Pages : 2

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M.B.A. (I.T.)

SOFTWARE TESTING

**ST-201 : Introduction to Software Testing Life Cycle
(Revised 2020 Pattern) (Semester - II)**

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) *All questions are compulsory.*
- 2) *Each questions having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five) :

- a) Defect
- b) Verification
- c) Static Testing
- d) Internal Control
- e) Distributed Application
- f) White Box Testing
- g) When to start Testing
- h) Test Closure

Q2) Answer any two of the following :

- a) Describe phases of STLC?
- b) What is Validation in Software Testing?
- c) What is equivalent class partitioning?

P.T.O.

Q3) Answer any one of the following :

- a) Explain Basic Path Testing with suitable example?
- b) Explain Software Testing Techniques in short?

Q4) Answer any one of the following :

- a) Explain COTS based Application Testing?
- b) Describe Contract Provisions from the User's Perspective?

Q5) Answer any one of the following :

- a) Explain COSO model and its component as Internal Testing Software Control?
- b) How to build steps to better Application Security Strategies?



Total No. of Questions : 5]

SEAT No. :

PC-3181

[Total No. of Pages : 2

[6382]-24

M.B.A. (I.T.)

**202SD (Core) : MOBILE PROGRAMMING USING
ANDROID**

(Revised 2020 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) All Questions are compulsory.*
- 2) Each Questions having 10 marks*
- 3) Figures to the right indicate full marks.*

Q1) Solve any FIVE of the following :

- a) Define the term AVD in Android?
- b) What is mean by Layout in Android?
- c) List important files and folders in Android List components of Android application.
- d) What is ADT?
- e) What are attributes of Edit Text?
- f) Explain attributes “Wrap_content” and “match_parent” with respect to view group.
- g) What are different properties of OOP's?
- h) What role does Linux Kernel plays in Android devices?

Q2) Write short notes on (ANY TWO) :

- a) Activity
- b) Manifest.xml file
- c) SDK

P.T.O.

Q3) Solve any ONE of the following :

- a) Define Intents? Explain different types of Intents with example.
- b) Discuss the features and need of SQLite database in Android.

Q4) Solve any ONE of the following :

- a) Explain the Android architecture in detail.
- b) Explain different features of Android operating system.

Q5) Solve any ONE of the following :

- a) Design a Android App to create database is “Employee” having attributes are Empid & Empname and insert & delete the records in the database. [Assume fields for “Employee” table]
- b) Select all records of table “Student”, using database connectivity in Android. [Assume fields for “Student” table]



Total No. of Questions : 5]

SEAT No. :

PC-3182

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First Year M.B.A. (IT)

**202NT Core : SERVER AND DESKTOP TECHNOLOGIES
(Revised 2020 Pattern) (Semester II)**

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All Questions are compulsory.*
- 2) Each Questions having 10 marks*
- 3) Figures to the right indicate marks for individual questions.*

Q1) Give the answers in short (Solve any 5) :

[5 × 2 = 10]

- a) Communication Ports.
- b) Explain the SD-RAM.
- c) List five Network components.
- d) What is a computer virus?
- e) Define the term bridge.
- f) Cache Memory.
- g) Network Connectivity

Q2) Solve any two of the following :

[2 × 5 = 10]

- a) Explain Master Boot Record.
- b) Explain the different units of 8-bit processor architecture.
- c) draw and explain CPU building blocks.

Q3) Solve any of the following :

[10]

- a) Explain the types of hardware interrupts.
- b) How to rectify booting problems? With examples.

P.T.O.

Q4) Solve any of the following :

[10]

- a) Explain Superscalar architecture.
- b) Explain Windows security policies

Q5) Write descriptive note on any two :

[2 × 5 = 10]

- a) Disk Management techniques
- b) Explain steps to install printers.
- c) Software diagnostic tool.



Total No. of Questions : 5]

SEAT No. :

PC-3183

[Total No. of Pages : 2

[6382]-26

First Year M.B.A. (IT)

202ST Core : SOFTWARE QUALITY ASSURANCE
(Revised 2020 Pattern) (Semester II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All Questions are compulsory.*
- 2) Each Questions having 10 marks*
- 3) Figures to the right indicate marks for individual questions.*

Q1) Give the answers in short (Solve any 5 each having 2 Marks) : **[5 × 2 = 10]**

- a) Define Software Quality Assurance.
- b) Explain types of review
- c) Explain inspection
- d) Define Validation
- e) Define Software audit.
- f) List models of software development process.
- g) List quality management standards.

Q2) Solve any two (each of 5 Marks) :

[2 × 5 = 10]

- a) Explain software testing.
- b) Explain the objectives of SQA Activities (Process Vs Product).
- c) Explain Software faults.

Q3) Solve any one of the following :

[10]

- a) Explain six classes of components of SQA architecture.
- b) Explain importance of contract review.

P.T.O.

Q4) Solve any one of the following :

[10]

- a) Explain how Capability Maturity Models (CMM/CMMI) helps quality management standards?
- b) Distinguish between SQA Vs SQC.

Q5) Write descriptive note on any two :

[2 × 5 = 10]

- a) CASE tools
- b) ISO 9001 guiding principles.
- c) Software configuration



Total No. of Questions : 5]

SEAT No. :

PC3184

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[Total No. of Pages : 2

First Year M.B.A. (Information Technology)
203-Core : BUSINESS PROCESS DOMAIN
(Revised 2020 Pattern) (Semester-II)

Time : 2 ½Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) Assume Suitable Data if necessary.*
- 2) Draw neat, labelled diagram whenever necessary.*
- 3) Figures to the right indicate full Marks.*
- 4) All questions are compulsory.*

Q1) Solve the following (Any five)

[10]

- a) What is Productions?
- b) What is Manpower?
- c) What is Shop Floor?
- d) What is OSCM?
- e) What are Vendor?
- f) What is Bill?
- g) What is Outlet?
- h) What is invoice?

Q2) Answer the following. (Any two)

[10]

- a) What is the stages of Product life cycle?
- b) Explain in detail the MRP- I.
- c) Explain the sales analysis network.

P.T.O.

Q3) Answer the following. (Any One)

[10]

- a) State the performance Management in HR.
- b) Explain Super- Annuation in HR.

Q4) Answer the following. (Any One)

[10]

- a) What are the Journal Entries and state its rule?
- b) Explain in Details Ratio Analysis with Example.

Q5) Answer the following. (Any One)

[10]

- a) Explain in detail scope and advantages of SCM.
- b) What is forecasting explain with example?



Total No. of Questions : 5]

SEAT No. :

PC3185

[Total No. of Pages : 2

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Firsy Year M.B.A. (I.T.)

204 : ORACLE

(Revised 2020 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions carry equal marks.*
- 2) *Each question having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Consider the following table to solve any five the following SQL queries:

STUDENT(s_id, sname, city)

COURSE(c_id, cname, cfee)

REGISTRATION(s_id,c_id, data_of _registration)

- a) Add one column 'adv_fee_paid' in the table Registration.
- b) Update 'adv_fee_paid' with 5000 for all the students.
- c) Display students from city 'PUNE'.
- d) Display the course name having minimum fee.
- e) Delete the student record whose name starts with 'C'.
- f) Display the name of students who have registered for more than two courses.
- g) Update course fee of student with 10% of existing fee.
- h) Display list of courses whose fee between 30,000 and 40,000.

Q2) Write short notes on (Any Two)

- a) Sequences
- b) BLOB data type
- c) Triggers

P.T.O.

Q3) Solve any ONE of the following.

- a) What is mean by Cursor? Explain different types of Cursor available in Oracle.
- b) Explain different SQL functions available in oracle.

Q4) Solve any ONE of the following.

- a) Explain different types of Join operations with example
- b) What is meant by Constraints? Explain different types of constraints available in Oracle.

Q5) Solve an ONE of the following

- a) Write a Cursor to display first five records of student table.
- b) Write a Function ODD_EVEN() to test whether the input number is ODD or EVEN.



Total No. of Questions : 5]

SEAT No. :

PC-3186

[Total No. of Pages : 2

[6382]-29

M.B.A. (IT)

205 : CLOUD INFRASTRUCTURE & SERVICES
(Revised 2020 Pattern) (Semester II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All Questions are compulsory.*
- 2) Each Questions having 10 marks*
- 3) Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five) :

- a) PaaS
- b) VLAN and VSAN
- c) Concept behind Hypervisor
- d) Cloud Migration
- e) Advantages of Cloud Storage
- f) VM Vulnerabilities
- g) Cloud Resource Monitoring
- h) Cloud Auto-Scaling

Q2) Answer any two of the following.

- a) What are different levels of RAID?
- b) Why Data Security is important to Business?
- c) How does Hypervisor work in Virtualization?

Q3) Answer any one of the following.

- a) Explain Block Level Storage and File Level Storage in SAN?
- b) Explain Intelligent Storage System?

P.T.O.

Q4) Answer any one of the following.

- a) Explain Cloud Infrastructure Management and Service Creation Tools?
- b) How would you secure data for transport in Cloud?

Q5) Answer any one of the following.

- a) How to assume the basic terminology of Information Security?
- b) How do you quote the Security Concerns to Cloud Security to protect the Threats?



Total No. of Questions : 5]

SEAT No. :

PC3187

[6382]-30

[Total No. of Pages :2

First Year M.B.A. (Information Technology)

SOFTWARE PROJECT MANAGEMENT

(Revised 2020 Pattern) (Semester- II)

Time : 2 ½Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions carry equal marks.*
- 2) Each question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Solve any FIVE of the following.

- a) What are different key attributes of quality software?
- b) What is strategic and technical assesement in project planning?
- c) What are different types of risks in software project ?
- d) What are defferent estimation techniques in software effort estimation?
- e) What is mean by software configuration management ?
- f) What is role of Team Members in project management ?
- g) What is mean by dynamic system development ?
- h) What are different techniques for software quality assurance?

Q2) Write short notes on (Any Two)

- a) Prototyping
- b) Extreme programming
- c) Defect Management

Q3) Solve any One of the following .

- a) Explain software project management in detail.
- b) Explain the process of cost benefit analysis.

P.T.O.

Q4) Solve any One of the following .

- a) Explain COCOMO model with an example .
- b) Describe the significance of PERT/CPM with example.

Q5) Solve any One of the following .

- a) Describe the factors that influence the quality of software product .
- b) Explain the importance of using a project management software.



Total No. of Questions : 5]

SEAT No. :

PC3188

[Total No. of Pages : 2

[6382]-31

First Year M.B.A. (Information Technology)

207 UL : CURRENT TRENDS IN IT

(Revised 2020 Pattern) (Semester - II)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Draw neat diagrams whenever necessary.*
- 3) *Every question carries 10 marks.*

Q1) Answer any Five out of Eight (2 Marks Each)

[10]

- a) Explain the use of LinkedIn.
- b) Explain the most popular social media platforms.
- c) What is IT Service management process?
- d) Explain Amazon Pay.
- e) Explain the different types of E-learning.
- f) Explain the popular chat and instant messaging tools.
- g) Explain Point of Sales.
- h) Explain Mobile ATM.

Q2) Answer any Two out of Three (5 Marks each)

[10]

- a) Explain the limitations for to access Social Networking sites.
- b) What are the different challenges in IT infrastructure management?
- c) Explain the Enterprise Content Management with examples.

P.T.O.

Q3) a) “E-commerce is better than m-Commerce”. Explain in brief. **[10]**

OR

b) Explain the different models of E-Commerce. **[10]**

Q4) a) “IOT and AI are upcoming trend in this digital world”. Explain the Statement. **[10]**

OR

b) Why Virtual School system adopted by today’s era? Explain in brief. **[10]**

Q5) a) Explain e-Learning Models: WBT, CBT in brief. **[10]**

OR

b) Compare the Electronic payment system PayPal and Paytm. **[10]**



Total No. of Questions : 5]

SEAT No. :

PC3189

[Total No. of Pages : 2

[6382]-32

First Year M.B.A. (Information Technology)
208UL: BASICS OF BUSINESS ANALYTICS
(Revised 2020 Pattern) (Semester - II)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Each question has an internal option.*
- 3) *Each question carries 10 marks.*

Q1) Answer the question (Any 5)

[5×2=10]

- a) What is the definition of analytics.
- b) List the stages of an organization in terms of data maturity.
- c) Write the options for organizations in the absence of good quality data.
- d) List the Skills of a good business analyst.
- e) Write any two importance of analytics in Healthcare Industry.
- f) What is Big Data.
- g) Write the need of analytics in business.
- h) What are the types of digital data.

Q2) Answer the question (Any 2)

[2×5=10]

- a) Differentiate between Data Analyst and Business Analyst.
- b) Explain the types of analytics.
- c) Explain the role of supply chain analytics model to optimize inventory management and reduce costs.

Q3) Answer the question (Any 1)

[1×10=10]

- a) Explain the evolution of analytics and its impact on business decision making.
- b) How do Unix tools contribute to the analysis of digital data?

P.T.O.

Q4) Answer the question (Any 1)

[1×10=10]

- a) Explain the application of Hadoop Streaming in processing real-time data streams effectively?
- b) Explain the process of Analytical Decision making.

Q5) Answer the question (Any 1)

[1×10=10]

- a) Critically assess the challenges faced by organizations in managing and utilizing data effectively.
- b) Explain the role HR analytics to enhance employee engagement and retention?



Total No. of Questions : 5]

SEAT No. :

PC3190

[6382]-33

[Total No. of Pages : 2

First Year M.B.A. (Information Technology)
209-UL : INFORMATION SECURITY AUDIT
(Revised 2020 Pattern) (Semester-II)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Each question carries 10 marks.*

Q1) Answer any 5 questions

[10]

- a) What is audit?
- b) What is www?
- c) What is cipher text?
- d) What are types of IPR?
- e) Define IDS
- f) What is ISM?
- g) What are 3 pillars of security?
- h) What is privacy?

Q2) Answer the following (any two)

[10]

- a) What is information system? explain the evolution of global information system
- b) Explain PDCA model
- c) Explain SAS 70

P.T.O.

Q3) Answer the following (any two) [10]

- a) Explain risk management
- b) Explain building blocks of information security

Q4) Answer the following (any two) [10]

- a) What is COBIT?
- b) What are the best practices in IS?

Q5) Answer the following (any two) [10]

- a) What is the need of security audit?
- b) What are the ethical issues in audit?



Total No. of Questions : 5]

SEAT No. :

PC3191

[Total No. of Pages : 2

[6382]-41

S.Y.M.B.A. (IT)

301 SD : PROGRAM AND DESIGN WITH ASP.NET

(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full Marks.*
- 3) *Draw neat, labelled diagram whenever necessary.*
- 4) *Assume Suitable Data if necessary.*

Q1) Solve the Following (Any five)

[10]

- a) What is Error handling?
- b) What is Flow?
- c) What is Character?
- d) What is Methods in asp.net?
- e) What are Members function?
- f) What are type of access modifier?
- g) What is classes?
- h) What is data type?

Q2) Answer the following. (Any two)

[10]

- a) What is Files handling and explain its details?
- b) Explain Web form in details.
- c) Explain the Event handling in detail.

P.T.O.

Q3) Answer the following. (Any One)

[10]

- a) State the Methods & interface in detail?
- b) Explain Type Comparison in detail.

Q4) Answer the following. (Any One)

[10]

- a) Design a Form of and write code to
 - i) College_name & College_id
 - ii) Display in Bulleted list
 - iii) Add a record & image Buttons
- b) Explain in comparison Validator in detail.

Q5) Answer the following. (Any One)

[10]

- a) What is a Web Page? Create a Dynamic web page for NGO using VS code?
- b) What is Login control in web page?



Total No. of Questions : 5]

SEAT No. :

PC3192

[Total No. of Pages : 2

[6382]-42

S.Y.M.B.A. (IT)

301 NT : ADVANCED COMPUTER NETWORKS

(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Each questions having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Solve (any 5)

[10]

- a) Name two protocols used for email communication.
- b) Describe the role of DNS in network communication.
- c) The network layer is comprised of what part of data?
- d) Is PGP symmetric or asymmetric? Explain.
- e) How does latency affect multimedia applications?
- f) What is the concept of nodes in networking?

Q2) Answer (any 2)

[10]

- a) Explain the difference between TCP and UDP.
- b) How does Quality of Service (QoS) impact network performance?
- c) How would you configure a router to implement LAN emulation in an ATM network?

P.T.O.

Q3) Answer (any 1)

[10]

- a) Explain the purpose of mobility management protocols in wireless networks.
- b) Explain the differences between connection-oriented and connectionless communication protocols.

Q4) Answer (any 1)

[10]

- a) Examine the challenges of network scalability and propose solutions for addressing them.
- b) Analyze the factors affecting network latency and their effects on application performance.

Q5) Solve (any 1)

[10]

- a) Evaluate the role of content delivery networks (CDNs) in improving multimedia content delivery efficiency.
- b) Develop a comprehensive network security policy that addresses potential threats and vulnerabilities.



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PC3193

[6382]-43

Second Year M.B.A. (IT)

301-ST : Software Test Planning & Documentation

(Revised 2020 Pattern) (Semester-III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Each question carries 10 marks.*

Q1) Answer any five.

[10]

- a) What is Latency defect?
- b) What is database test case?
- c) Mention characteristics of software being developed.
- d) What are the parameters in manual testing?
- e) Define risk.
- f) What are test objectives?
- g) What is test administration?
- h) What is test plan?

Q2) Answer any two.

[10]

- a) Explain test plan standards.
- b) What are functional test cases?
- c) What are test scripts?

Q3) Answer any one.

[10]

- a) Explain the risk associated with testing.
- b) What are the tools used in testing?

P.T.O.

Q4) Answer any one.

[10]

- a) How to obtain test result, reporting current status?
- b) What is defect management?

Q5) Answer any one.

[10]

- a) Explain the tools to prepare test report.
- b) Explain user's role, tester's role in user acceptance testing.



Total No. of Questions : 5]

SEAT No. :

PC3194

[6382]-44

[Total No. of Pages : 2

S.Y. M.B.A. (Information Technology)

302-SD : ADVANCED JAVA

(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Each question carries 10 marks.*

Q1) Attempt any 5

[10]

- a) Socket
- b) ODBC
- c) Statement
- d) What is GET & POST method?
- e) Java bean
- f) What is Result Set Meta Data?
- g) What is URL.
- h) What is servlet?

Q2) Attempt any 2.

[10]

- a) JDBC drivers.
- b) Roll
- c) English servlet life cycle.

P.T.O.

Q3) Answer any one.

[10]

- a) Write a socket program to print the string on the server which is entered by client.
- b) Write a java program for chat applications.

Q4) Answer any one.

[10]

- a) Write a JDBC code to display the count of students who scored more than 80? (Assume suitable table)
- b) Write a JSP code to accept department name of a faculty. Display the complete details of a faculty from that department. (Assume suitable table)

Q5) Answer any one.

[10]

- a) Write a java code to accept items for an order placed and insert a record in 'Order table'.
- b) Write a JSP application to accept the patient id and display the history of that patient (Assume suitable Table)

x x x

Total No. of Questions : 5]

SEAT No. :

PC3195

[6382]-45

[Total No. of Pages : 2

S.Y. M.B.A. (Information Technology)

302-NT : PARALLEL COMPUTING

(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All Questions are compulsory.*
- 2) *Each Question is of 10 marks.*
- 3) *Figures to the right indicate marks for individual questions.*

Q1) Give the answers in short (Solve any Five)

[5×2=10]

- a) Define scalar processing
- b) Explain Shared Memory
- c) Define Node degrees
- d) What is MISD?
- e) What is SISD?
- f) Explain Shared Memory
- g) Define high performance computing

Q2) Solve any two (each of 5 Marks)

[2×5=10]

- a) List recent parallel programming models.
- b) Explain Hyper Threading Technology (HTT)
- c) What are intrinsic functions? Name any two of them.

P.T.O.

Q3) Solve any one of the following :

[10]

- a) What are disadvantages of data parallelism?
- b) Which are the important parameters to check the performance of interconnected networks?

Q4) Solve any one of the following :

[10]

- a) Explain different properties associated with interconnection networks?
- b) What is the difference between scalar and vector processing?

Q5) Write descriptive note on any two :

[2×5=10]

- a) Give the classification of pipeline processor.
- b) Elaborate array processing in PC architecture.
- c) List applications of parallel processing.

x x x

Total No. of Questions : 5]

SEAT No. :

PC3196

[6382]-46

[Total No. of Pages : 2

M.B.A. (Information Technology)

SOFTWARE TESTING

302-ST : Agile Model & Methodology

(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All Questions are compulsory.*
- 2) *Each Questions having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five)

- a) Lean Production
- b) User Stories
- c) FDD (Feature-Driven Development)
- d) SCRUM Master
- e) Adaptive Software Development
- f) Agile Knowledge Management
- g) Project Constraints
- h) Crystal Agile Process

Q2) Answer any two of the following.

- a) How Risks are managed in Agile Projects?
- b) Describe the role of Scrum team in Agile Scrum Methodology?
- c) What are the main objectives of Agile Methodology?

P.T.O.

Q3) Answer any one of the following.

- a) Explain Extreme Programming (XP) in Agile Process?
- b) Describe the Agile process flow in detail?

Q4) Answer any one of the following.

- a) Explain Acceptance Criteria Assumptions in Agility Management?
- b) Describe Test Plan Standards criteria in Agile project?

Q5) Answer any one of the following.

- a) How to assume the Quality attribute approach in Agile software development?
- b) Why create and maintain documentation in Knowledge Management? Give your opinion?

x x x

Total No. of Questions : 5]

SEAT No. :

PC-3197

[Total No. of Pages : 2

[6382] - 47

M.B.A - IT

303 Core: MANAGEMENT INFORMATION SYSTEM
(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) Assume Suitable Data if necessary.*
- 2) Draw neat, labelled diagram whenever necessary.*
- 3) Figures to the right indicate full Marks.*
- 4) All questions are compulsory.*

Q1) Solve the Following (Any five) :

[10]

- a) What is System?
- b) What is IS?
- c) What is network?
- d) What is Data?
- e) What is AI?
- f) What is Analyst?
- g) What is record?
- h) What is database?

P.T.O.

Q2) Answer the following. (Any two) **[10]**

- a) What is RDBMS with example?
- b) Explain Cloud Technology in details?
- c) Explain information and its application in detail?

Q3) Answer the following. (Any One) **[10]**

- a) Explain SDLC Phases in detail?
- b) Explain DBMS architecture in detail?

Q4) Answer the following. (Any One) **[10]**

- a) Describe Data ware Housing and its applications in detail?
- b) Explain in IS and EIS in detail?

Q5) Answer the following. (Any One) **[10]**

- a) What is a OOPS? Explain with example?
- b) What is Marketing in MIS?



Total No. of Questions : 5]

SEAT No. :

PC-3198

[Total No. of Pages : 2

[6382] - 48
M.B.A (IT)
304 DATA MINNING
(Revised 2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) All questions carry equal marks.*
- 3) Figures to the right indicate full Marks.*
- 4) Draw diagram wherever necessary.*

Q1) Define the following terms (Any five) :

[10]

- | | |
|----------------------|-----|
| a) Sample | [2] |
| b) Data Mining | [2] |
| c) Noise | [2] |
| d) Population | [2] |
| e) HITS | [2] |
| f) Qualitative Data | [2] |
| g) Quantitative Data | [2] |
| h) Data Cleaning | [2] |

P.T.O.

Q2) Answer the following questions (Any two) : [10]

- a) What are the applications of data mining? [5]
- b) List and explain data mining issues [5]
- c) Explain features of tableau in brief. [5]

Q3) Answer the following questions (Any One) : [10]

- a) Differentiate between Classification and Clustering. [10]
- b) Differentiate between Database Management System and Data Mining [10]

Q4) Answer the following questions (Any One) : [10]

- a) What is web mining? Explain in brief the various techniques used for web mining. [10]
- b) What do you mean by risk management? Explain how to reduce it using data mining tool. [10]

Q5) Answer the following questions (Any One) : [10]

- a) What do you mean by market basket analysis? State and explain the data mining technique used for market basket analysis. [10]
- b) List and explain the phases of data collection and processing for consumer behaviour. [10]



Total No. of Questions : 5]

SEAT No. :

PC-3199

[Total No. of Pages : 2

[6382] - 49

M.B.A (I.T.)

306 Core: Introduction to Animation

(Rev.2020 Pattern) (Semester - III)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *Assume Suitable Data if necessary.*
- 2) *Draw neat, labelled diagrams whenever necessary.*
- 3) *Figures to the right indicate full Marks.*
- 4) *All questions are compulsory.*

Q1) Solve the Following (Any five) :

[10]

- a) What is hardware?
- b) What is Types of Operating System?
- c) What is cam scanner?
- d) What is Render?
- e) What is Local Storage?
- f) What is AutoCAD?
- g) What is Autodesk?
- h) Name any one software use in animation with examples?

P.T.O.

Q2) Answer the following. (Any two) : **[10]**

- a) What are the Elements of design Art?
- b) Define Form and basic types of form?
- c) Explain the elements of Design in Shape & Texture in 3D objects?

Q3) Answer the following. (Any One) **[10]**

- a) State the Rules for Design Art with example?
- b) Explain in detail contrast movement in animation?

Q4) Answer the following. (Any One) **[10]**

- a) What are the basic hardware and Software of computer Graphics?
- b) Explain in various types of Operating system used in Design?

Q5) Answer the following. (Any One) **[10]**

- a) What is a Storyboard explain in detail?
- b) Explain the Fundamental Principles of Animation?



Total No. of Questions : 5]

SEAT No. :

PC-3200

[Total No. of Pages : 2

[6382]-50

M.B.A. (IT)

**307-UL : Data Warehousing
(Revised 2020 Pattern) (Semester - III)**

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions carry equal marks.*
- 2) Each question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Solve any Five of the following.

[10]

- a) What is data warehousing?
- b) What is mean by Fact Table?
- c) What is mean by Dimension Table?
- d) What are the 5 key components of Data warehouse?
- e) What is mean by Data Mart?
- f) What are different characteristics of Datawarehouse?
- g) What is key difference between star schema & snowflake schema?
- h) What is mean by OLAP?

Q2) Write short notes on (ANY TWO) :

[10]

- a) ROLAP
- b) Data transformation techniques in ETL process.
- c) Slice & Dice operations

P.T.O.

Q3) Solve any ONE of the following : [10]

- a) Explain data warehouse architecture in detail.
- b) What is metadata? Explain different categories of Metadata in data warehouse.

Q4) Solve any ONE of the following : [10]

- a) Explain ETL process in detail.
- b) What is schema? Explain different types of schemas in data warehouse.

Q5) Solve any ONE of the following : [10]

- a) Explain data loading techniques in ETL process of data warehouse.
- b) How is a data warehouse different from a database?



Total No. of Questions : 5]

SEAT No. :

PC3201

[Total No. of Pages : 2

[6382]-51

S.Y.M.B.A. (Information Technology)

308 UL : OOPS WITH CPP

(Revised 2020 Pattern) (Semester - III)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Explain the following terms with an example (any 5)

[10]

- a) Operator Overloading.
- b) Abstraction
- c) Inline function
- d) Array.
- e) Constructors
- f) Pointers
- g) Variables
- h) Constants

Q2) Solve any two.

[10]

- a) Why do we need the object-oriented programming paradigm?
- b) What is an implicit conversion, explain with an example.
- c) Explain the static member function.

P.T.O.

Q3) Solve any one.

[10]

- a) Write a program to overload the '+' operator to concatenate two strings.
- b) Explain types of inheritance? Write a program to pass parameters to the base class constructor in multilevel inheritance.

Q4) Solve any one.

[10]

- a) Write a program that reads a text file & creates another file that is identical except that every sequence of consecutive blank spaces is replaced by a single space & Also count the number of characters in the file.
- b) What is virtual base class? Explain with a suitable example.

Q5) Solve any one.

[10]

- a) Write a program to demonstrate default arguments and constant arguments for a function.
- b) Design a class employee (name, dept, salary) Write a C++ program that throw an exception when salary is less than or equal to 0.

* * *

Total No. of Questions : 5]

SEAT No. :

PC-3202

[Total No. of Pages : 2

[6382]-52

M.B.A. (IT)

**309-UL Core : e-Governance and Framework of ICT
(Revised 2020 Pattern) (Semester - III)**

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Each question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Give the answers in short (Solve any 5) :

[5 × 2= 10]

- a) Define pervasive computing.
- b) Smart villages
- c) Define Big-data
- d) What mean by e-waste management?
- e) Benefits of smart cities.
- f) Define SMAC technology
- g) Risk management related to e-Governance project

Q2) Solve any two (each of 5 marks) :

[2 × 5 = 10]

- a) What is telemedicine to the citizens?
- b) Explain open government data standards?
- c) What is JAM?

P.T.O.

Q3) Solve any ONE of the following : [10]

- a) How e-Governance resolve the problem digital divide in Indian contest?
- b) Elaborate, Is it possible in near future caseless India?

Q4) Solve any ONE of the following : [10]

- a) Explain Maturity model?
- b) Individual privacy v/s National security

Q5) Write descriptive note on any two : [2 × 5 = 10]

- a) Objectives of e-Governance
- b) Explain working method of digital library.
- c) Satellite Pollutions



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PC3203

[6382]-61

S.Y.M.B.A. (IT)

401 : ENTERPRISE RESOURCE PLANNING

(Revised 2020 Pattern) (Semester-IV)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All question are compulsory.*
- 2) Each question carries 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Answer the following questions (any 5)

[10]

- a) Define ERP package.
- b) What are oracle apps?
- c) Advantages of SCM.
- d) What are the ERP evaluation standards.
- e) What is SCOR?
- f) What is supply chain management according to the Stevens model?
- g) Define web based architecture.

Q2) Solve (any 2)

[10]

- a) Differentiate between MRP & ERP.
- b) Discuss BPR tools and its advantages.
- c) What are components of ERP.

Q3) Answer the following (any 1)

[10]

- a) Write ERP evaluation criteria.
- b) Explain brierfly Vanilla ERP.

P.T.O.

Q4) Solve (any 1)

[10]

- a) What is the function of the SAP model?
- b) Explain the Oracle AIM Methodology in brief.

Q5) Solve (any 1)

[10]

- a) Illustrate the drives of supply chain management.
- b) How did Nokia implemented sales force to help manage the size and diversity of its client base. What efforts Nokia took to customize its products range and marketing to suit geo-specific locations. What solution would you suggest to the team?



Total No. of Questions : 5]

SEAT No. :

PC3204

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[Total No. of Pages : 2

S.Y. M.B.A. (I.T.)

402 : MULTIMEDIA AND ANIMATION

(Revised 2020 Pattern) (Semester - IV)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All Questions are compulsory.*
- 2) *Each Question having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five)

- a) Multimedia
- b) MIDI Audio
- c) Animation
- d) Multimedia Authoring
- e) Data Redundancy
- f) Quantization
- g) ADPCM
- h) Blender

Q2) Answer any two of the following :

- a) What are different component of Multimedia?
- b) Describe Lossless Compression?
- c) What is Digital Image Processing?

P.T.O.

Q3) Answer any one of the following :

- a) Describe Image Compression in Multimedia?
- b) Explain Huffman Algorithm in Text Compression with suitable example?

Q4) Answer any one of the following :

- a) Describe LZW Coding in Text Compression with suitable example?
- b) Explain the Principles of Animation?

Q5) Answer any one of the following :

- a) Explain different Animation techniques such as Key frame, Kinematics, Rendered, Morphing etc.
- b) Describe Modelling and Animation Tools?

x x x

Total No. of Questions : 5]

SEAT No. :

PC-3205

[Total No. of Pages : 2

[6382]-63

M.B.A. (I.T.)

404 - UL : OPEN SOURCE IOT PLATFORM

(Revised 2020 Pattern) (Semester - IV)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Each question carries 10 marks.*

Q1) Answer the following in short (any 5) :

[10]

- a) Define Governance.
- b) Give 2 applications of IoT
- c) What is M2M.
- d) What is IoT?
- e) Internet future technology
- f) What are two parts of ARM consisting of?
- g) Define web technology
- h) Name components of IoT.

Q2) Solve any two :

[10]

- a) What are the types of data that can be communicated between IoT devices?
- b) Explain data storage, data processing steps in M2M data management.
- c) Explain working of IoT.

P.T.O.

Q3) Solve any one :

[10]

- a) Elaborate on IoT governance.
- b) What are the different types of communication models in IoT?

Q4) Solve any one :

[10]

- a) Write some common applications of IoT?
- b) Write some communication models in IoT?

Q5) Solve any one :

[10]

- a) Explain IoT reference model.
- b) Explain security Vs privacy in IoT.



Total No. of Questions : 5]

SEAT No. :

PC-3206

[Total No. of Pages : 2

[6382]-64

M.B.A. - I.T.

**405UL : DEBUGGING OF APPLICATION
PROGRAMMING (IoT)
(Revised 2020) (Semester - IV)**

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *Assume suitable data if necessary.*
- 2) *Draw neat, labelled diagram whenever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *All questions are compulsory.*

Q1) Solve the following (Any five):

[10]

- a) Explain brief history of IoT
- b) Define Societal Benefits of IoT?
- c) What is Privacy, and Security in IoT?
- d) What is Local Machine?
- e) Define IoT Devices?
- f) What is IoT Platform?
- g) What is Open source?
- h) What is IoT Architecture?

Q2) Answer the following (Any Two):

[10]

- a) Explain the Open source IoT Platform?
- b) What are uses of IoT Platform?
- c) Explain the Setup of Amazon IoT platform?

Q3) Answer the following (Any One):

[10]

- a) What is Programming? and explain in Detail operators, Array, Functions with Examples in Detail?
- b) Write Short Notes on
 - i) Structure
 - ii) Files

P.T.O.

Q4) Answer the following (Any One): [10]

- a) What is cloud Computing? Explain using platform specific dashboard?
- b) What is API? Explain in Detail REST API.

Q5) Answer the following (Any One): [10]

- a) What is Cryptography? Derive the relation of Cryptography in IoT?
- b) What is Privacy? State the various security considerations in IoT?

