

Total No. of Questions :5]

SEAT No. :

PE1904

[Total No. of Pages : 2

[6553]-1

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

101 Core : C PROGRAMMING & DATA STRUCTURE

(Revised 2020 Pattern) (Semester-I)

Time : 2 ½Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Solve Any Five.

[5×2=10]

- a) Define Data structures.
- b) What is union in c?
- c) What are storage classes in c?
- d) What is the purpose of goto statement?
- e) What are data types in c?
- f) What is stack data structure?
- g) What are preprocessor directives?
- h) Write syntax and example of getch ().

Q2) Answer the following questions (Any two)

[2×5=10]

- a) Explain the purpose of using Flow diagram in system Analysis.
- b) Explain the concept of bitwise operators.
- c) Explain the concept of Link List data structure.

Q3) Answer the following questions (Any one)

[1×10=10]

- a) Write a c program to delete element from an Array.
- b) Write a c program to find Factorial of a number.

P.T.O.

Q4) Solve Any one

[1×10=10]

- a) Write a c program to Accept 10 Employee records with an array of structure with fields (empNo, Name, salary) and display name who get highest salary.
- b) Write a program in c to count a number of words in a file.

Q5) Solve Any one

[1×10=10]

- a) Write a program in c to swap two numbers using pointers.
- b) Write a c program to delete a specific line from a text file and display the modified content.



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SEAT No. :

PE-1905

[Total No. of Pages : 2

[6553]-2
M.B.A. (IT)
102 : SOFTWARE ENGINEERING WITH UML
(Rev. 2020) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Solve any five (Each 2 marks) :

[5 × 2 = 10]

- a) Explain Rational unified process.
- b) Define SSAD.
- c) Write any four roles of users in SDLC.
- d) Distinguish RAD and waterfall model.
- e) Write the basic characteristics of software system.
- f) Explain basic system Development life cycle.
- g) Explain nature of software.
- h) Define software Engineering,

Q2) Write short note on (any 2) :

[2 × 5 = 10]

- a) OOAD Methods and Message
- b) OOAD Aggregation and composition
- c) OOAD Inheritance and Polymorphism

Q3) Prepare Software Requirement Specification (SRS) document for petrochemical industries daily sales and stock of oil management system.[10]

OR

Explain decision tables and decision tree. Draw decision table for the following-To design of startup Registration system. This system having below functionalities as. **[10]**

- a) Incorporate your business having minimum five members.
- b) Register with startup only for Indian Nationality.
- c) DPIIT Recognition number must required.

P.T.O.

Q4) Demonstrate use case driven object oriented analysis for BHIM UPI transaction. **[10]**

OR

Draw class diagram and Activity diagram for providing student feedback on teaching faculty and Infrastructure facilities of the Institute. **[10]**

Q5) Design uses interface for plagiarism checking software system. **[10]**

OR

Explain features of modern GUI with suitable example. **[10]**



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PE1906

[6553]-3

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

103 CORE : DATABASE MANAGEMENT SYSTEM

(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 any five:

[10]

- a) Define DBMS and its advantages.
- b) Explain Data Abstraction levels.
- c) What is a Relationship set?
- d) Define Weak Entity and Strong Entity.
- e) Explain Commit and Rollback commands.
- f) Define Functional Dependency.
- g) What is Data Granularity in storage management?

Q2) Solve any two.

[10]

- a) Discuss the advantages and disadvantages of a relational data model.
- b) Explain various Concurrency Control mechanisms.
- c) Describe Relational Algebra operations with examples.

P.T.O.

Q3) a) A hospital needs to maintain patient records, doctor schedules, and appointment details. Draw a suitable ER Diagram for the same. [10]

OR

b) Demonstrate Conflict Serializability with a schedule involving three transactions.

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

OR

b) Write SQL queries for the following:

Tables:

Customer (CustID, CustName, City)

Order(OrderID, CustID, Amount, OrderDate)

- i) Add a new column Email to Customer.
- ii) Find all customers from “Delhi”.
- iii) Display all orders placed after 01-Jan-2024.
- iv) List customers who have placed orders above ₹10,000?
- v) Create a view showing customer details with their total order amount.

Q5) Explain 2NF and 3NF with an example. [10]

OR

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



Total No. of Questions : 6]

SEAT No. :

[Total No. of Pages : 1

PE1907

[6553]-4

First Year M.B.A. - (IT)

**104 Core: PRINCIPLES OF MANAGEMENT AND
ORGANIZATIONAL BEHAVIOR
(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 controlling.
- b) Leadership styles.
- c) Define stress management.
- d) Theory X.
- e) Ego state

Q2) Explain in detail decision making and decision types/models.

[10]

Q3) Define team building and types of teams with example.

[10]

Q4) Explain in detail Theory X and Y, Theory Z.

[10]

Q5) Define conflict management and its types with example.

[10]

Q6) Write short note on (Any 2).

[2×5=10]

- a) Managerial levels
- b) Group dynamics
- c) Johari window



Total No. of Questions : 5]

SEAT No. :

PE1908

[Total No. of Pages : 2

[6553]-5

First Year M.B.A. (IT)

105 Core : FUNDAMENTALS OF INFORMATION TECHNOLOGY

(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 marks for questions/sub questions.*

Q1) Answer the following (Any 5) :

[5×2=10]

- a) Define operating system.
- b) Explain batch processing.
- c) What is the function of compiler?
- d) Explain characteristics of computer.
- e) Write the different type of number system.
- f) What is microprocessor?
- g) Write the types of networks?
- h) Define software.

Q2) Write short note on : (Any 2)

[2×5=10]

- a) Communication media
- b) Language converter
- c) Storage devices

P.T.O.

Q3) Convert the following :

[1×10=10]

a) $(A2B)_{16} = (?)_2$ **[5]**

b) $(536)_8 = (?)_{16}$ **[5]**

OR

a) $(10010110)_2 = (?)_8$ **[5]**

b) $(4.BF85)_{16} = (?)_8$ **[5]**

Q4) Solve any one :

[1×10=10]

- a) Explain difference between high level language low level language and object oriented language.

OR

- b) Draw digital block diagram of computer and write function of memory.

Q5) Solve any one :

[1×10=10]

- a) Explain in brief the types of networks.

OR

- b) Explain specialty processor.



Total No. of Questions :5]

SEAT No. :

PE1909

[Total No. of Pages : 2

[6553]-6

First Year M.B.A. (IT)

106 CORE : DIGITAL MARKETING

(Revised 2020 Pattern) (Semester-I)

Time : 2 ½Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Solve the following. (Any five)

[10]

- a) Define Digitalisation.
- b) What do you mean by sale?
- c) What is market Segment?
- d) What is advertisement?
- e) What is digital marketing?
- f) What is SEO?
- g) What is email marketing?
- h) State any two disadvantages of digital marketing.

Q2) Answer the following. (Any two)

[10]

- a) Explain in details Marketing and its type.
- b) What is social Media Marketing in detail?
- c) Explain the elements of M-commerce.

Q3) Answer the following. (Any One)

[10]

- a) What is SEO and explain in detail the concept of SEO?
- b) Explain the characteristics of M-commerce in detail.

P.T.O.

Q4) Answer the following. (Any One)

[10]

- a) Explain online marketing and display Marketing in details.
- b) Difference between digital marketing and traditional marketing.

Q5) Answer the following. (Any One)

[10]

- a) Discuss the role of social media in digital marketing.
- b) Explain the Social Media platform.



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PE1910

[6553]-7

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) What is Ecommerce?
- b) Define EBusiness Model?
- c) What is service management?
- d) What is Internet?
- e) Explain shopping cart?
- f) C2C application?
- g) Define Internet Protocol?
- h) State some benefits of Electronic Fund Transfer?

Q2) Solve any two of the following.

[2×5=10]

- a) Explain features of Ecommerce and explain various goals of ecommerce.
- b) Explain the role of ISPS in E-commerce.
- c) Explain National Electronic Fund Transfer with example.

P.T.O.

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

- a) Explain any 2 Business models of Ecommerce.
- b) Explain the importance of Uniform Resource Locator (URL) and Cookies with example in Ecommerce scenario.

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

- a) Explain the Role of Payment Gateways in E-commerce.
- b) Discuss with a neat diagram the major E-commerce activities & mechanism. Describe the online purchasing process.

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

- a) Describe various activities of Ecommerce
- b) Network Categories
- c) Characteristics of Internet



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SEAT No. :

PE1911

[6553]-8

[Total No. of Pages : 2

First Year M.B.A. (IT)

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) Figures to the right indicate full marks.*

Q1) Solve any 5

[10]

- a) What is HTML?
- b) Define DOM in JavaScript.
- c) What are physical and logical HTML tags?
- d) What are control structures in VBScript?
- e) Define URL and its components.
- f) Write any two JavaScript predefined functions.
- g) What is CSS?

Q2) Solve any 2

[10]

- a) Describe the purpose and phases of web publishing.
- b) Explain different types of operators in JavaScript.
- c) Describe arrays in VBScript with example.

Q3) Solve any 2

[10]

- a) Explain different types of links in HTML with examples.
- b) Describe JavaScript form validation with code.
- c) Write a program in VBScript to demonstrate string manipulation.

P.T.O.

Q4) Solve any 2

[10]

- a) Write a Java Script Code to Store the information about the employee (e_id, e_name, department, salary), write HTML Code to display data in tabular format using DOM object.
- b) Discuss functions in JavaScript.
- c) Explain how to use images and image mapping in HTML.

Q5) Solve any 2

[10]

- a) Write an HTML code using tables, lists and forms to design a feedback page.
- b) Explain VBScript control structures with syntax and example.
- c) Describe JavaScript event handling with example.



Total No. of Questions : 5]

SEAT No. :

PE1912

[Total No. of Pages : 2

[6553]-9
F.Y.M.B.A. (IT)
109 UL : CYBER SECURITY
(2020 Pattern) (Semester - I) (Revised)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Answer any 5.

[10]

- a) What is Cyber crime?
- b) What are the main components of a communication system?
- c) What are transmission media?
- d) What is topology in networking?
- e) What does TCP/IP stand for?
- f) What are wireless networks?
- g) What are the main goals of information security?
- h) What is e-commerce security?

Q2) Answer any two from the following.

[10]

- a) What are Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS)?
- b) What is Risk Management in Information Security?
- c) Explain Computer Forensics and its importance.

Q3) Answer any one from the following.

[10]

- a) Discuss Information Security Models in details.
- b) Explain Security in Multimedia Networks and various Computing Platforms.

P.T.O.

Q4) Answer any one of the following.

[10]

- a) Explain different types of attacks in information security with examples.
- b) Explain the concept of Digital Signatures and their role in security.

Q5) Answer any one of the following.

[10]

- a) Explain the concept of Cryptography. Describe its types, function, and real-life applications.
- b) Explain Information Classification and its process.

* * *

Total No. of Questions :5]

SEAT No. :

PE1913

[Total No. of Pages : 2

[6553]-11

First Year M.B.A. (IT)

201 NT Core : BASICS OF NETWORKING

(Revised 2020 Pattern) (Semester-II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions carry equal marks.*
- 2) Figure to the right indicate full marks.*

Q1) Answer the following Questions (any Five)

[5×2=10]

- a) Name one application protocol and one mail protocol.
- b) Explain the role of switches in a network.
- c) Define the term “network topology”.
- d) Identify two types of modems used for internet connectivity.
- e) Define the term “Active Directory”.
- f) Name one server role of Microsoft Windows Server 2012.
- g) Identify one type of connector commonly used in connectivity components.
- h) Describe the functionality of the Domain Name System (DNS) in networking.

Q2) Answer any two

[2×5=10]

- a) Explain the difference between a peer-to-peer network and a client/server network.
- b) Explain the purpose of frame formats and standards in networking. Give examples of commonly used standards.
- c) Explain application protocol TELNET in detail.

P.T.O.

- Q3) a)** Analyze the advantages and disadvantages of wireless network technologies compared to wired networks. **[1×10=10]**

OR

- b) Evaluate the role of switches and routers in network connectivity, highlighting their differences and similarities.

- Q4) a)** Develop a step-by-step guide for installing and configuring a Windows Server 2012 domain controller, including DNS and DHCP services.

[1×10=10]

OR

- b) Compare and contrast TCP/IP and SPX/IPX protocols in terms of their features and functionalities.

- Q5) a)** Evaluate the effectiveness of Active Directory in managing user accounts and group policies in a large organization.. **[1×10=10]**

OR

- b) Elaborate the concept and functionality of Directory Domain Services. Provide a Step-by-step guide on configuring the Domain Name System (DNS) within a network environment.



Total No. of Questions :5]

SEAT No. :

PE1914

[Total No. of Pages : 2

[6553]-12

First Year M.B.A. (IT)

201 SD Core : 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) Define the terms (any Five)

- a) Primitive data type
- b) Single Inheritance
- c) Interface
- d) Event
- e) File
- f) This keyword
- g) Object
- h) Constructor

Q2) Answer any Two

- a) What is an exception? Explain exception handling mechanism.
- b) What are the various primitive data types in Java? Explain them in details.
- c) What is string? Explain any 4 methods of String class.

Q3) a) Create class books with attributes bookid, title, author, no_of_copies, price. Accept details of 10 books in an array of objects and display the accepted details.

OR

- b) Write a java program to create a class distance with variable feet and inches, method get_Val(), show_Dist(). Use constructor. Create two objects and display their distance.

P.T.O.

- Q4)** a) Write a java program to accept string from user, if its length is less than 8, then throw user defined exception “Invalid String “otherwise display the string in upper case.

OR

- b) Write a java program to read the content of xyz. txt. Display the content of file in encoded format.

- Q5)** a) Write an awt application which will have a button with caption ‘OK’ when user will try to click on the button the button should change caption to ‘KO’.

OR

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



Total No. of Questions :5]

SEAT No. :

PE1915

[Total No. of Pages : 2

[6553]-13

**First Year M.B.A. (IT)
SOFTWARE TESTING**

**201ST Core : 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 Question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five)

- a) Software Defect
- b) Validation
- c) Failure in software Testing
- d) Internal Control
- e) Distributed Application
- f) White Box Testing
- g) Defect Repository
- h) Test Closure

Q2) Answer any two of the following.

- a) Describe phases of STLC.
- b) What is a Bug Report?
- c) What is equivalent class partitioning?

Q3) Answer any one of the following.

- a) Explain Basic Path Testing with suitable example.
- b) Explain API? What is APT Testing Explain with suitable example?

P.T.O.

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. :

PE-1916

[Total No. of Pages : 2

[6553]-14

M. B. A. (IT)

202 NT : SERVER AND DESKTOP TECHNOLOGIES

(Rev. 2020) (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 five) :

[5 × 2 = 10]

- a) Define Antivirus software.
- b) Explain the hardware Interrupts.
- c) Explain the term trouble shooting.
- d) Define the term Datapath.
- e) Role of BIOS
- f) Explain Profile Management.
- g) Computer Security.

Q2) Solve any two :

[2 × 5 = 10]

- a) Explain types of printers used for various applications.
- b) System bus and its working.
- c) Explain various DDR RAMs.

P.T.O.

Q3) Solve any one of the following :

[10]

- a) Explain Mother board with their important components.
- b) Explain at least 5 different booting problems with solutions.

Q4) Solve any one of the following :

[10]

- a) Explain with block diagram the 64 bits microprocessor Architecture.
- b) Explain the various steps to installing Windows 10.

Q5) Write descriptive short note on any two:

[2 × 5 = 10]

- a) Explain 3D printers with applications
- b) Differentiate between Bluetooth and Wi-Fi.
- c) Recovery console for windows 8 patrician.



Total No. of Questions : 5]

SEAT No. :

PE-1917

[Total No. of Pages : 2

[6553]-15

M.B.A. (IT)

202SD: MOBILE PROGRAMMING USING ANDROID

(Rev.2020) (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) Solve any FIVE of the following :

[5 × 2 = 10]

- a) What role does Linux Kernel plays in Android devices?
- b) What is mean by Layout in Android?
- c) List important files and folders in Android List components of Android application.
- d) What is use of adapter in Android?
- e) What are attributes of Command Button?
- f) Explain attributes “Wrap_content” and “match_parent” with respect to view group.
- g) What is mean by menu? Enlist its types.
- h) Give the attributes of Absolute Layout of Android.

P.T.O.

Q2) Write short notes on (ANY TWO) :

[2 × 5 = 10]

- a) Manifest.xml File
- b) R.Java file
- c) Emulator

Q3) Solve any ONE of the following :

[1 × 10 = 10]

- a) What is Intent? Explain the types of Intents.
- b) Explain Android SDK versions and their features.

Q4) Solve any ONE of the following :

[1 × 10 = 10]

- a) What are the advantages of Android open-source platform for Mobile application developer?
- b) State and explain the steps for publishing Android App to Google market.

Q5) Solve any ONE of the following :

[1 × 10 = 10]

- a) Write a XML Code to create Login form using horizontal and vertical orientation property of LINEAR LAYOUT.
- b) Select all records of table “Student”, using database connectivity in Android. [Assume fields for “student” table]



Total No. of Questions : 5]

SEAT No. :

PE-1918

[Total No. of Pages : 2

[6553]-16

M.B.A. (IT)

202 ST CORE : SOFTWARE QUALITY ASSURANCE

(Revised 2020) (Semseter - II)

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

- a) Define Expert opinion
- b) Explain use of checklist
- c) Explain software inspection
- d) Define Faults
- e) Explain quality plan
- f) Define document templates.
- g) Explain Preventive actions.

Q2) Solve any two (each of 5 Marks)

[2 × 5 = 10]

- a) Explain Testing tools.
- b) Elaborate various software maintenance components.
- c) Explain SQA objectives.

Q3) Solve any one of the following-

[10]

- a) Design inspection session finding report layout.
- b) Explain importance of contract review.

P.T.O.

Q4) Solve any one of the following-

[10]

- a) Explain McCall's Quality Model?
- b) Distinguish between SQA Vs SQC.

Q5) Write descriptive note on any two:

[2 × 5 =10]

- a) Software developer methodologies
- b) ISO 9001 guiding principles.
- c) Software configuration.



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PE1919

[6553]-17

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

203 CORE : BUSINESS PROCESS DOMAIN

(Revised 2020 Pattern) (Semester-II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Solve the Following. (Any five)

[10]

- a) What is EOQ?
- b) What is MPS?
- c) What is EBQ?
- d) What is Unit?
- e) What is Labour efficiency?
- f) What is Payroll?
- g) What is Loan?
- h) What is Income Tax?

Q2) Answer the following. (Any two)

[10]

- a) What is the dispatch and acknowledgement of product in Details?
- b) State the invoicing Pending Customer orders?
- c) Explain the Sales Analysis Network?

P.T.O.

Q3) Answer the following. (Any One)

[10]

- a) What is Recruitment in HR?
- b) State PF and gratuity in HR?

Q4) Answer the following. (Any One)

[10]

- a) What are the subsidiary books and Ledger?
- b) Explain in Details Balance sheet of a Proprietary Firm?

Q5) Answer the following. (Any One)

[10]

- a) What is a CRM and explain with example in detail?
- b) Explain the Planning during forecasting with example?



Total No. of Questions : 5]

SEAT No. :

PE1920

[Total No. of Pages : 2

[6553]-18

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

204 : ORACLE

(Revised 2020 Pattern) (Semester-II)

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 marks for individual questions.*

Q1) Consider the following table to solve ANY FIVE the following SQL queries:
[5×2=10]

Candidate (seat_no, candidate_name, age, post_graduation, admin_date, subject_code)

Subject (Subject_code, sub_name, specialization)

- a) Create tables with appropriate constraints.
- b) Add column prn_number and stream column into candidate table.
- c) Display number of students per subjects.
- d) Display all candidates who have not completed post-graduation.
- e) Display the list of subjects for which no candidates are currently enrolled.
- f) Display candidates who are enrolled in a specific specialization (e.g., Cloud Computing).
- g) Display length of candidate names in candidate table. Don't show the name of candidate.
- h) Display the Count the number of candidates for each subject.

P.T.O.

Q2) Short note any two.

[2×5=10]

- a) Nested Query.
- b) Grant & Revoke
- c) Sequence

Q3) Solve the following:

[10]

- a) What is mean by Cursor? Explain different types of Cursor in Oracle.

OR

- b) Explain different SQL functions available in oracle.

Q4) Solve the following:

[10]

- a) Write a cursor to display first five records of candidate table.

OR

- b) Explain different Group functions available in oracle.

Q5) Solve the following:

[10]

- a) Write a Function Fact() to test whether the input number is ODD or EVEN.

OR

- b) Write a query to execute the Update_Candidate_Subject procedure to change the subject of the candidate with seat number 103 to subject code 3. Assume that subject code 3 exists in the Subject table.



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PE1921

[6553]-19

First Year M.B.A. (IT)

205 Core : 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 question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Define the following terms (any five) :

- a) Cloud Data Migration
- b) Data Center
- c) Virtualization
- d) Utility Computing
- e) SaaS
- f) QoS (Quality of Service)
- g) Virtual Provisioning
- h) Data Leakage

Q2) Answer any two of the following.

- a) What really is Cloud Computing?
- b) What is Load Balancing in Cloud Computing?
- c) How does Hypervisor work in Virtualization?

P.T.O.

Q3) Answer any one of the following.

- a) How does Virtualization work in Cloud Computing?
- b) Explain Intelligent Storage System?

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. :

PE1922

[Total No. of Pages : 2

[6553]-20

First Year M.B.A. (IT)

206 Core : 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 assessment in project planning?
- c) What are different types of risks in software project?
- d) What are different 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) COCOMO Model
- b) Extreme programming
- c) WBS

Q3) Solve any ONE of the following

- a) Explain different types of contracts in software project management.
- b) Explain the process of Cost benefit analysis.

P.T.O.

Q4) Solve any ONE of the following

- a) What is software configuration management? Explain in detail the various stages of configuration management.
- b) Describe the significance of PERT/CPM with example.

Q5) Solve any ONE of the following

- a) What is risk management? Explain different stages involved in risk management.
- b) Describe the factors that influence the quality of software product.



Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2

PE1923

[6553]-21

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) Each question carries 10 marks.*

Q1) Answer any five out of eight (2 Marks each).

[10]

- a) Define Social Media Marketing analytics.
- b) Explain the highly rated social media platforms.
- c) Explain cloud tools?
- d) Explain Electronic Document Management.
- e) Explain the different E-payment applications.
- f) Explain the Team and Google meet.
- g) Explain Digital Signature.
- h) Explain NEFT.

Q2) Answer any two out of three (5 Marks each).

[10]

- a) Explain the security measures for to handle the Hacking Issues.
- b) Explain online teaching & learning system.
- c) Explain the E-content concept with examples.

P.T.O.

Q3) a) “M-Commerce is the preferred way for this generation.” Explain it. [10]

OR

b) How E-business is reaching to the maximum customers. [10]

Q4) a) “Third Party Payment Services are best option for Banks”. Explain it. [10]

OR

b) Explain new trends in Virtual School Management System. [10]

Q5) a) Explain E-learning model in brief with examples. [10]

OR

b) “E-Payment system is required two or three stage authentication security”. Explain it. [10]



Total No. of Questions : 5]

SEAT No. :

PE1924

[Total No. of Pages : 2

[6553]-22

First Year M.B.A. (IT)

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 are the key responsibilities of a data analyst?
- b) Write two differences between data, information and knowledge.
- c) What are the Types of Digital Data?
- d) Define Analytics.
- e) What is Infosphere Big Insights?
- f) Write two importances of Sales Analytics.
- g) Write the skills required for good business analyst.
- h) What do you mean by Business Intelligence?

Q2) Answer the question (Any 2)

[2×5=10]

- a) Differentiate between Business analytics and Business Analysis.
- b) Write short note on Hadoop Ecosystem.
- c) Define Big Data and explain its significance in modern computing.

Q3) Answer the question (Any 1)

[1×10=10]

- a) How would you apply marketing analytics techniques to analyze customer behavior and preferences?
- b) Explain analytical decision-making process and its significance in business contexts.

P.T.O.

Q4) Answer the question (Any 1)

[1×10=10]

- a) Describe the progression of an organization through different stages of data maturity.
- b) Explain various analytics tools in terms of their strengths and weaknesses.

Q5) Answer the question (Any 1)

[1×10=10]

- a) Analyze the impact of healthcare analytics on reducing hospital readmission rates and improving patient satisfaction.
- b) Explain the different types of analytics and its contribution to strategic decision-making in organizations.



Total No. of Questions : 5]

SEAT No. :

PE1925

[Total No. of Pages : 2

[6553]-23

First Year M.B.A. (IT)

209 UL : INFORMATION SYSTEM AUDIT

(Revised 2020 Pattern) (Semester - II)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

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

Q1) Answer any five.

[10]

- a) What is the main advantage of GIS for organizations?
- b) What is the difference between data and information?
- c) Name one method organizations use to manage information security.
- d) Name one common threat to information system security.
- e) What is the purpose of access control in InfoSec.
- f) What is the purpose of security audits?
- g) What does CIA stand for in InfoSec?
- h) Mention one security risk for mobile users.

Q2) Answer any two from the following.

[10]

- a) List and explain two major threats to information systems.
- b) Explain the CIA triad and its significance.
- c) What are key security considerations for a mobile workforce?

Q3) Answer any one from the following.

[10]

- a) What are IDS and firewalls and how do they protect information systems?
- b) Discuss common security models and best practices in organizations.

P.T.O.

Q4) Answer any one from the following.

[10]

- a) Give two examples of business practices that improve data privacy.
- b) Distinguish between disaster recovery planning and business continuity planning.

Q5) Answer any one from the following.

[10]

- a) Explain SSE-CMM and its significance.
- b) Explain the role of ISM. Security policies, standards, guidelines and procedures.

* * *

Total No. of Questions : 5]

SEAT No. :

PE1926

[Total No. of Pages : 2

[6553]-31

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

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 question having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) State the functions of the following protocol (any 5).

[10]

- a) QOS
- b) TELNET
- c) RTSP
- d) SMTP
- e) RSVP
- f) WAP
- g) SIP
- h) P2P

Q2) Solve (any 2).

[10]

- a) Discuss LAN emulation & state the functions of LAN.
- b) Using hybrid form of network explain network application architectures.
- c) Explain briefly switching and types of switching fabrics.

Q3) Answer the following (any 1).

[10]

- a) Describe the congestion control.
- b) Discuss the importance of mobility management in wireless LAN.

P.T.O.

Q4) Solve (any 1).

[10]

- a) Illustrate the challenges to remove jitter and packet loss during continuous playback of streamed video data.
- b) Explain content distribution network.

Q5) Solve (any 1).

[10]

- a) Enlist the authentication protocols and their characteristics.
- b) Compare client server, P2P & Hybrid networking.



Total No. of Questions : 5]

SEAT No. :

PE1927

[Total No. of Pages : 2

[6553]-32

Second Year M.B.A. (IT)

301 SD Core : 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) *Draw neat, labelled diagram whenever necessary.*
- 3) *Figures to the right indicate full Marks.*
- 4) *Assume suitable data if necessary.*

Q1) Solve the Following. (Any Five)

[10]

- a) What is constant?
- b) What is Flowchart?
- c) What is Datatype integer?
- d) What is Error?
- e) What are Systems?
- f) What is Public keyword?
- g) What is class & instance?
- h) What is properties?

Q2) Answer the following. (Any Two)

[10]

- a) What are the different Type of websites with Example?
- b) State the Events in asp.net?
- c) Explain the types of class and objects?

P.T.O.

Q3) Answer the following. (Any One)

[10]

- a) State the Validation in detail?
- b) Explain control in Validation?

Q4) Answer the following. (Any One)

[10]

- a) Design a Form of and write code to
 - i) Emp_name & EMP_ID
 - ii) display in list
 - iii) Add a record and Update record
- b) Explain in details of ADO. Net Connections?

Q5) Answer the following. (Any One)

[10]

- a) What is a Single Master page? Explain with example?
- b) What is Simple Object Protocol? Explain with example?



Total No. of Questions : 5]

SEAT No. :

PE1928

[Total No. of Pages : 2

[6553]-33

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

**301 ST : SOFTWARE TEST PLANNING AND DOCUMENTATION
(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.*

Q1) Answer any 5 questions.

[10]

- a) Mention one document necessary before starting test planning.
- b) Name three key components of a test plan.
- c) What is a test case?
- d) What is the purpose of defect tracking tools?
- e) Why is traceability important in test case design?
- f) What is meant by test execution?
- g) What is the difference between actual result and expected result?
- h) Name two stages of defect life cycle.

Q2) Answer any two of the following :

[10]

- a) Why is risk analysis important before creating a test plan?
- b) Explain the difference between a test plan and a test strategy.
- c) Discuss boundary value analysis and equivalence partitioning with examples.

P.T.O.

Q3) Answer any one from the following : [10]

- a) Differentiate between severity and priority of defects.
- b) Describe the components of a detailed test plan and their significance.

Q4) Answer any one from the following : [10]

- a) How does traceability improve the quality of test cases?
- b) Explain the defect life cycle with stages and examples.

Q5) Answer any one from the following : [10]

- a) Explain how automated tools improve test reporting and decision-making.
- b) What is test matrix? Explain the test standards.

x x x

Total No. of Questions : 5]

SEAT No. :

PE1929

[Total No. of Pages : 2

[6553]-34

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 Bit level parallelism?
- e) What is SIMD?
- f) Define Shared Memory.
- g) Explain high performance computing.

Q2) Solve any two

[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 advantages of data parallelism?
- b) Which are the important parameters that affect's the performance of interconnected networks?

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

- a) Explain differentiate between Implicit Parallelism and Explicit Parallelism?
- b) What is the difference between array and vector processing?

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

- a) Elaborate the pipeline processing and its classification.
- b) Explain array processing in PC architecture?
- c) List applications of parallel processing.

x x x

Total No. of Questions : 5]

SEAT No. :

PE1930

[Total No. of Pages : 2

[6553]-35

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

302 SD Core : ADVANCED JAVA

(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.*

Q1) Define the terms (any FIVE)

- a) JDBC Driver
- b) Connection
- c) JNDI
- d) ResultSet
- e) Bean
- f) Port
- g) IP
- h) Servlet

Q2) Answer any TWO of the following

- a) Explain various interfaces used in JDBC.
- b) Explain Life Cycle Methods of Servlet.
- c) What is URL? List any four methods.

P.T.O.

Q3) a) Write a java program to implement multithreaded Chat Application.

OR

b) Write a java socket program that runs on a server and echo's back all the strings after reversing sent by a clients. If the client sends a string 'Exit' the server program should terminate. Use port number 5555.

Q4) a) The database is stored on oracle server. The database has one table named "Employee" with following fields

Attribute	Datatype	Size
empid	varchar2	05
empname	varchar2	30
edept	varchar2	10
total_sal	number	8.2

Write a servlet program to print the list of Employee with total salary. The list will appear on the clients browser in a table format.

OR

b) Write a servlet which accept itemno from user and display the details of that item to client (item table has itemno, itemname and stock as fields)

Q5) a) Write a JSP application to accept city name from HTML page and display List of students from that city. Assume suitable Table structure.

OR

b) Write JDBC code to display list of colleges having MBA(IT) course Assume suitable Table structure.

x x x

Total No. of Questions : 5]

SEAT No. :

PE1931

[Total No. of Pages : 2

[6553]-36

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

302 ST Core : 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 Question having 10 marks.*
- 3) Figures to the right indicate full marks.*

Q1) Define the following terms (Any Five)

- a) Storytelling
- b) Scrum Master
- c) Sprints
- d) Check List
- e) DSDM (Dynamic Software Development Method)
- f) Project Constraints
- g) ASD (Adaptive Software Development)
- h) Agile Metrics

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) Describe the Agile process flow in detail?
- b) Explain detailed SCRUM Agile Processes approach?

Q4) Answer any one of the following.

- a) Why create and maintain documentation in Knowledge Management? Give your opinion?
- b) Explain in brief what is Agile Testing, Methodology, and process life cycle?

Q5) Answer any one of the following.

- a) How to assume the Quality attribute approach for Agile product?
- b) How to build a good QA plan for your Agile set-up?

x x x

Total No. of Questions : 5]

SEAT No. :

PE1932

[Total No. of Pages : 2

[6553]-37

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

303 : MANAGEMENT INFORMATION SYSTEM

(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 System design?
- b) What is R DBMS?
- c) What is Mesh Topology?
- d) What is Data binding?
- e) What is Digital Analytics?
- f) What is Information system?
- g) What is detail information in MIS?
- h) What is data analytics category?

Q2) Answer the following. (Any two)

[10]

- a) Explain the role of in MIS with example?
- b) Explain DSS in details?
- c) Describe the Spiral model in detail?

P.T.O.

Q3) Answer the following. (Any One)

[10]

- a) Explain CASE Tool in detail?
- b) Explain GIS in detail?

Q4) Answer the following. (Any One)

[10]

- a) What is AI? Explain the need of AI in MIS in detail?
- b) Explain in Feasibility study in detail?

Q5) Answer the following. (Any One)

[10]

- a) What is Audit and Operation? Explain with example?
- b) What are Operation information system in detail?

x x x

Total No. of Questions :5]

SEAT No. :

[Total No. of Pages : 2

PE1933

[6553]-38

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

304 : DATA MINING

(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) DBMS | [2] |
| b) Data Mining | [2] |
| c) Data Query | [2] |
| d) Sample Size | [2] |
| e) Population | [2] |
| f) BI | [2] |
| g) OLTP | [2] |
| h) OLAP | [2] |

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

- | | |
|--|-----|
| a) What are the applications of data mining? | [5] |
| b) What do you mean by data cleaning? | [5] |
| c) List data mining tools | [5] |

Q3) Answer the following questions (any one)

- | | |
|---|------|
| a) Write short note on Neural Network | [10] |
| b) Differentiate between Database Management system and data mining | [10] |

P.T.O.

Q4) Answer the following questions (any one)

- a) What is web mining? Explain in brief web structure mining [10]
- b) What do you mean by risk management? Explain how to manage it using data mining tool. [10]

Q5) Answer the following questions (any one)

- 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 preparing customer profiles [10]



Total No. of Questions : 5]

SEAT No. :

PE1934

[Total No. of Pages : 2

[6553]-39

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

**306 Core : INTRODUCTION TO ANIMATION
(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 E cards?
- b) What is Graphics?
- c) What is Character?
- d) What is E-learning?
- e) What are Digital world?
- f) What are CAD?
- g) What is Adobe software?
- h) What is Corel draw?

Q2) Answer the following. (Any two)

[10]

- a) What are the Elements of design Art?
- b) State the application of Design art in brief?
- c) Explain the elements of Color wheels?

P.T.O.

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

- a) State the Characteristics of Design Art?
- b) Explain hierarchy of design?

Q4) Answer the following. (Any one) [10]

- a) What are the basic components of computer Graphics?
- b) Explain in Details Raster and random scan?

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

- a) What is a story board? Explain with example.
- b) Explain the concepts of Animation with example?



Total No. of Questions : 5]

SEAT No. :

PE1935

[Total No. of Pages : 2

[6553]-40

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

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.*

Q1) Solve any FIVE of the following :

- a) What is mean by metadata?
- b) What is mean by OLAP?
- c) What is mean by Fact Table?
- d) What is mean by ETL?
- e) What is mean by Dimension Table?
- f) What is data warehousing?
- g) What is mean by Data Mart?
- h) What are different schemas available in Data warehouse?

Q2) Solve any TWO of the following :

- a) ETL Tools
- b) Tools for metadata management.
- c) Roll Up and Drill-down operations.

P.T.O.

Q3) Solve any ONE of the following :

- a) Explain Kimball's life cycle of Data warehouse in detail.
- b) Explain important responsibilities of team members while designing data warehouse.

Q4) Solve any ONE of the following

- 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

- a) Explain the advantages and disadvantages of data warehouse.
- b) Explain different types of data warehouse.

x x x

Total No. of Questions : 5]

SEAT No. :

PE1936

[Total No. of Pages : 2

[6553]-41

M.B.A. - II (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) *Each Question having 10 marks.*
- 3) *Figures to the right indicate full marks.*

Q1) Solve. (any 5)

[10]

- a) What is namespace conflict? How is it handled in C++?
- b) What is a generic program? How it is implemented in C++?
- c) What is a container? Explain the types of containers.
- d) What is a destructor? Give an example.
- e) Explain a prototyping function? How it can be implemented?
- f) What is the friend function?
- g) What is Run Time Type Identification?
- h) What is function overloading?

Q2) Solve. (any 2)

[10]

- a) Explain static member function and static data member.
- b) What is the need for virtual base classes? Give an example to illustrate the need for a virtual base class.
- c) Explain with example, conversion from class type to built-in type?

P.T.O.

Q3) Answer the following. (any 1) [10]

- a) Write a program to create a template class circular queue to implement insertion & deletion operations.
- b) Write a program to overload [] and != operators.

Q4) Solve. (any 1) [10]

- a) Write a program to read the records from “Bank.txt” file & delete records of customers whose balance is less than 1000.
- b) A class contain following information as PRN, Student-name, PER-marks
Write a program to perform following operation in the file.
 - i) Add record
 - ii) Display all record
 - iii) Modify record

Q5) Solve. (any 1) [10]

- a) A company has following details of their employees in the file ‘emp.dat’.
 - i) Emp ID
 - ii) Emp Name
 - iii) Emp Address
 - iv) Emp Dept (Admin/Sales/Production/IT)
 - v) Emp phone
 - vi) Emp Age

Write a program to read the above file. Create new files such as Adm.dat, Sal.dat, Pro.dat, IT.dat respectively, to store the employee details according to their department. Email security.

- b) Write a program to display the size of a file by accepting a filename as a command line argument.

x x x

Total No. of Questions :5]

SEAT No. :

PE1937

[Total No. of Pages : 2

[6553]-42

M.B.A.-II (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) Explain smart villages
- b) What is a Big-data?
- c) What mean by e-waste management?
- d) Mobile Wallet
- e) Define SMAC technology.
- f) Explain Green IT
- g) Define pervasive computing.

Q2) Solve any two (5 marks each).

[2×5=10]

- a) Differentiate between e-government and e-Governance?
- b) Explain open government data standards?
- c) Benefits of telemedicine to citizens.

Q3) Solve any one of the following.

[10]

- a) How e-Governance resolve the problem digital divide in Indian contest?
- b) Elaborate your views on Individual privacy v/s National security?

P.T.O.

Q4) Solve any one of the following.

[10]

- a) Explain Maturity model of e-Governance?
- b) Explain how e-commerce helpful to move nation towards caseless India?

Q5) Write descriptive note on any two.

[2×5=10]

- a) What are the objectives of e-Governance?
- b) Explain Government Process Reengineering?
- c) Explain Open Web Application security (OWAP) project.



Total No. of Questions : 5]

SEAT No. :

PE1938

[Total No. of Pages : 2

[6553]-51

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

401 : ENTERPRISE RESOURCE PLANNING

(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 (any 5):

[10]

- a) Business Process Reengineering
- b) Logical vs Physical Integration
- c) Client-Server Architecture
- d) CRM Analysis Processes
- e) Integrated SAP Model
- f) SCOR Model
- g) Vanilla ERP

Q2) Solve (any 2) :

[10]

- a) Discuss the role of ERP in logical and physical system integration with real-world examples.
- b) Explain the MRP system. How does it form the foundation for ERP?
- c) Describe the key drivers of SCM and how ERP addresses them.

P.T.O.

Q3) Answer the following (any 1):

[10]

- a) Explain the Request for Proposal (RFP) and Proof-of-Concept (POC) approaches in ERP selection.
- b) Discuss the Project Implementation Team Structure and its role in ERP success.

Q4) Solve (any 1):

[10]

- a) Compare and contrast SAP and Oracle Fusion in terms of architecture, modules, and market approach.
- b) Explain the SAP three-tier architecture with a diagram and suitable business use cases.

Q5) Solve (any 1):

[10]

- a) A multinational company is facing challenges in coordinating with multiple suppliers and customers. Propose an ERP-based SCM solution to overcome this.
- b) Explain CRM delivery, support, and analysis processes with examples of integration into an ERP platform.

x x x

Total No. of Questions : 5]

SEAT No. :

PE1939

[Total No. of Pages : 2

[6553]-52

S.Y. M.B.A. (Information Technology)
402 Core : 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. :

PE1940

[Total No. of Pages : 2

[6553]-53

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

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) Solve any 5 in short

[10]

- a) Define M2M.
- b) Mention two components of IoT.
- c) What are the M2M to IoT design principles.
- d) State the vision of IoT.
- e) Give any two IOT applications.
- f) Explain features of IOT.
- g) List any two IoT privacy issues.
- h) State two demerits of IOT.

Q2) Solve any two

[10]

- a) Illustrate data storage, data processing steps in M2M data management.
- b) Explain operational view of IOT.
- c) Write a detail about IOT value chains.

P.T.O.

Q3) Answer the following.

[10]

- a) Explain in detail about future factory.
- b) Explain industrial architecture for IoT.

Q4) Solve the following.

[10]

Illustrate and explain in detail IoT reference model.

Q5) Write short notes on any 2

[10]

- a) Explain IOT in smart cities/smart villages.
- b) What are the important four aspects in a business to master IOT.
- c) Explain the governance in IOT.
- d) How is big data related to IOT?
- e) What is the industrial structure for IOT?

x x x

Total No. of Questions :5]

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PE1941

[6553]-54

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

**405UL: DEBUGGING OF APPLICATION PROGRAMMING
(IOT)**

(Revised 2020 Pattern) (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 any Five

- a) Explain brief history of IoT [2]
- b) Define Societal Benefits of IoT? [2]
- c) What is Privacy, and Security in Iot? [2]
- d) What is Local Machine? [2]
- e) Define IoT Devices ? [2]
- f) What is IoT Platform? [2]
- g) What is open source? [2]
- h) What is IoT Architecture? [2]

Q2) Solve any two :

- a) Explain the open source IoT Platform? [5]
- b) What is uses of IoT Platform? [5]
- c) Explain the setup of Amazon Iot platform? [5]

Q3) Solve any One :

- a) What is programming? and Explain in Detail operators, Array, Functions With examples in detail? [10]
- b) Write Short Notes on [10]
 - i) Structure
 - ii) Files

P.T.O.

Q4) Solve any One :

- a) What is cloud Computing ? Explain using platform specific dashboard? [10]
- b) What is API ? explain in detail REST API [10]

Q5) Solve any One:

- a) What is Cryptography? Derive the relation of Cryptography in IoT?[10]
- b) What is privacy? State the various security consideration in IoT? [10]

