This question paper contains **3** printed pages]

PI—24—2024

FACULTY OF SCIENCE & TECHNOLOGY

B.C.A. (Second Year) (Third Semester) EXAMINATION

MARCH/APRIL, 2024

(Revised/CBCS Pattern)

COMPUTER APPLICATION

(Business Application and ERP)

(Wednesday, 10-04-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (1) *All* questions are compulsory.

(2) Figures to the right indicate full marks.

(3) Assume suitable data, if required.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Discuss Business Functions.

(*b*) Discuss types of information.

(*c*) Discuss the need for an ERP System.

(*d*) Define ERP.

(*e*) Enlist disadvantages of EIS.

(*f*) Define Data Mining.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) What is Decision Support System ? Explain in detail.

(*b*) Discuss pros and cons of ERP implementation.

(*c*) Explain Supply Chain Management.

(*d*) Discuss the reasons for the failure of ERP implementation.

(*e*) Discuss different types of information systems.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain characteristics of information.

(*b*) Discuss the benefits of an ERP System.

(*c*) Explain Business Process Re-engineering.

(*d*) Discuss ERP Selection Process.

(*e*) Explain On-Line Analytical Processing.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Discuss advantages of EIS.

(*b*) Discuss reasons for the growth of ERP market.

(*c*) Explain ERP implementation Life-cycle.

(*d*) What is Data Warehousing ? Explain.

(*e*) Explain ERP selection methods.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) ERP tools

(*b*) ERP selection criteria

(*c*) Integrated data model

(*d*) ERP Vendor Selection

(*e*) Management Information Systems.

This question paper contains **3** printed pages]

PI—16—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.C.A. (Second Year) (Third Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper-BCA-303

(Database Management System)

(Saturday, 06-04-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Characteristics of DBMS

(*b*) Entity Set

(*c*) Tuple

(*d*) BCNF

(*e*) Data Abstraction

P.T.O.

(*f*) Normalization

(*g*) Relationship Set.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain Users of DBMS.

(*b*) Explain the structure of DBMS.

(*c*) Explain Database languages in detail.

(*d*) What is Index ? Explain its types.

(*e*) Explain the types of file organization.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Define Data models with their types.

(*b*) Explain Instances and Schemes.

(*c*) What are the types of attributes ? Explain in brief.

(*d*) Explain Constraints.

(*e*) Write the difference between file processing system and DBMS.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) What is ER-Model ? Explain in detail.

(*b*) Explain the relational data model in detail.

(*c*) Explain Cartesians product and natural joins.

(*d*) Explain the extended features of ER-Model.

(*e*) Differentiate foreign key and primary key.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) What are cardinality, degree and domain in relational model ?

(*b*) Define Project, Select and Union in relational algebra.

(*c*) Explain anomalies.

(*d*) Explain dependencies in database.

(*e*) Explain 2NF in detail.

This question paper contains **3** printed pages]

PI—25—2024

FACULTY OF SCIENCE & TECHNOLOGY

B.C.A. (Second Year) (Third Semester) EXAMINATION

MARCH/APRIL, 2024

(Revised/CBCS Pattern)

COMPUTER APPLICATION

(Introduction to Multimedia)

(Wednesday, 10-04-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (1) *All* questions are compulsory.

(2) Figures to the right indicate full marks.

(3) Assume suitable data, if required.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Define Multimedia Elements.

(*b*) DVD-ROM

(*c*) MIDI

(*d*) Digital Audio

(*e*) WORM

(*f*) Retrieval Technologies

(*g*) High Definition System.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain Multimedia applications.

(*b*) Explain the Global structure of Multimedia.

(*c*) Define Data Compression with basic Compression techniques.

(*d*) Explain JPEG and MPEG.

(*e*) Explain audio file format.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain Run length Compression techniques.

(*b*) Explain the basic concept of sound.

(*c*) Explain CD-ROM in detail.

(*d*) Explain the vector drawing images.

(*e*) Explain computer based animation.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain musical instrument digital interface in detail.

(*b*) Explain image formats in brief.

(*c*) Explain conventional systems in multimedia.

(*d*) Explain the retrieval technologies of any *one* optical disk.

(*e*) Explain the basic concept of multimedia.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Explain Bitmap.

(*b*) Explain Graphics Format.

(*c*) Define TIFF.

(*d*) Explain broadcast video standards in detail.

(*e*) Explain Huffman Technique.

This question paper contains **3** printed pages]

PI—09—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

MARCH/APRIL, 2024

(Revised/CBCS Pattern)

COMPUTER APPLICATION

BCA-302

(Operating System Concepts)

(Thursday, 4-4-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data if required.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) FCFS.

(*b*) Virtual devices.

(*c*) Operating system services.

(*d*) Device characteristics.

(*e*) I/O Device handlers.

(*f*) General model of a file system.

(*g*) Job scheduling.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain multiprocessor systems.

(*b*) Explain operating system extended machine view.

(*c*) Explain basic concepts and terminology.

(*d*) Explain operating system as resource manager.

(*e*) What is operating system ? Explain user view.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain multiprogramming.

(*b*) Describe segmented memory in detail.

(*c*) Explain single contiguous allocation.

(*d*) Explain partitioned allocation.

(*e*) Explain demand paged memory.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain process states in detail.

(*b*) How does process synchronization work in operating system ?

(*c*) Explain priority scheduling concept in detail.

(*d*) Explain Round-Robin scheduling in detail.

(*e*) Explain context switch.

5. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Describe symbolic file system.

(*b*) Explain techniques for device management.

(*c*) Explain basic file system.

(*d*) Explain I/O traffic controller.

(*e*) Explain control units.

This question paper contains **3** printed pages]

PI—03—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper BCA-301

(Programming in C++)

(Tuesday, 2-4-2024) **Time : 2.00 p.m. to 5.00 p.m.**

Time—Three Hours *Maximum Marks*—75

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain the Scope Resolution Operator.

(*b*) Explain the Basic Input/Output Statements.

(*c*) Explain the visibility modes in C++.

(*d*) Rules for operator Overloading.

(*e*) Explain the C++ Streams classes.

(*f*) Explain the file modes in C++.

(*g*) Explain the Defining Class and Members in C++.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain in detail Call by reference with example.

(*b*) Explain in detail Function Overloading with example.

(*c*) Explain in detail Structure of a C++ program.

(*d*) Explain in detail Object Oriented Programming.

(*e*) WAP in C++ to demonstrate on scope resolution operator.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain in detail Formatted I/O operations.

(*b*) Explain in detail Virtual functions with example.

(*c*) Explain in detail Opening and Closing file.

(*d*) WAP in C++ to copy a file from nanded.txt into latur.txt.

(*e*) WAP in C++ to demonstrate on multiple inheritance.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain in detail static members with example.

(*b*) What is Constructor ? Explain in detail any *two* constructors.

(*c*) Explain in detail Friend Function with example.

(*d*) WAP in C++ to demonstrate on destructor.

(*e*) WAP in C++ to demonstrate on Pointer to objects.

5. Attempt any *three* of the following (**5** marks each) : 15

(*a*) What is Inheritance ? Explain multilevel Inheritance with example.

(*b*) Explain in detail Polymorphism with example.

(*c*) Explain in detail Pure Virtual functions with example.

(*d*) WAP in C++ to demonstrate on unary operator ++.

(*e*) WAP in C++ to demonstrate Virtual Base Classes.