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VI—24—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

BCA-304A

(Business Application and ERP)

(Tuesday, 3-12-2024)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Figure to the right indicate full marks.

(iii) Assume suitable data, if necessary.

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

15

(a) What is Data Mining ?

(b) Enlist advantages of EIS.

(c) Define ERP.

(d) Enlist the benefits of an ERP System.

(e) Explain the concept Supply Chain Management in short.

(f) What are the characteristics of information ?

(g) Explain types of information.

P.T.O.

2. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain business modeling.
 - (b) Discuss ERP implementation life cycle.
 - (c) Discuss Business Process Re-engineering.
 - (d) Discuss various factors for the success of an ERP implementation.
 - (e) Discuss ERP Selection Methods.
3. Attempt any *three* of the following (5 marks each) : 15
- (a) Discuss ERP software.
 - (b) Discuss the concept Management Information System.
 - (c) Discuss the criteria for ERP selection.
 - (d) Explain Product Life Cycle Management.
 - (e) Discuss Business Processes.
4. Attempt any *three* of the following (5 marks each) : 15
- (a) What is Data Warehousing ? Explain.
 - (b) Discuss about ERP Selection Process.
 - (c) Explain reasons for the Growth of ERP Market.
 - (d) Discuss the pros and cons of ERP implementation.
 - (e) Explain components of an information system.

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

- (a) Integrated data model.
- (b) Need for an ERP System.
- (c) Reasons for the failure of ERP Implementation.
- (d) ERP Security.
- (e) DSS.

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VI—16—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper-BCA-303

(Database Management System)

(Saturday, 30-11-2024)

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) Instances.

(c) Tuple.

(d) 2NF.

(e) Data Abstraction.

P.T.O.

- (f) Constraints.
- (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 Dependencies in database.
- (d) Explain the types of Data models.
- (e) Explain the types of File organization.
3. Attempt any *three* of the following (5 marks each) : 15
- (a) Define Data models in detail.
- (b) Explain instances and schemes.
- (c) What are the types of attributes ? Explain in brief.
- (d) Explain Database languages in detail.
- (e) Differentiate Foreign key and Primary key.
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 Union.

- (d) Explain the extended features of ER-Model.
- (e) Write a difference between file processing system and DBMS.
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 intersection, select and difference in relational algebra.
- (c) Explain normalization.
- (d) What is index ? Explain its types.
- (e) Explain BCNF in detail.

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VI—25—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper-BCA-304B

(Introduction to Multimedia)

(Tuesday, 3-12-2024)

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) Define Multimedia Elements.

(b) CD-ROM.

(c) MIDI.

(d) Digital Audio.

(e) WORM.

(f) Retrieval Technologies.

(g) TIFF.

P.T.O.

2. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain Global structure of Multimedia.
 - (b) Explain the vector drawing images.
 - (c) Define Data Compression with basic Compression techniques.
 - (d) Explain JPEG and MPEG.
 - (e) Explain image formats in brief.
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 DVD-ROM in detail.
 - (d) Explain Multimedia applications in various sectors.
 - (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 audio file format.
 - (c) Explain Conventional systems in multimedia.
 - (d) Explain the retrieval technologies of any *one* optical disk.
 - (e) Explain the broadcast video standards in detail.

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

- (a) Explain Bitmap.
- (b) Explain Graphics Format.
- (c) Define High Definition System.
- (d) Explain basic concept of multimedia.
- (e) Explain Huffman Technique.

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VI—09—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper-BCA-302

(Operating System Concepts)

(Thursday, 28-11-2024)

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 necessary.

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

15

(a) Virtual devices.

(b) SJF.

(c) Basic file system.

(d) Importance of Operating system.

(e) Hierarchical view of OS.

P.T.O.

- (f) I/O Schedulers.
- (g) Context switch.
2. Attempt any *three* of the following (5 marks each) : 15
- (a) What is operating system ? Explain user view.
- (b) Explain operating system extended machine view.
- (c) Explain operating system as resource manager.
- (d) Explain operating system services.
- (e) Explain multiprocessor systems.
3. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain demand-paged memory.
- (b) Explain partitioned allocation.
- (c) What is segmented memory ?
- (d) Explain single contiguous allocation.
- (e) Explain multiprogramming.
4. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain FCFS scheduling in detail.
- (b) Explain process states in detail.

- (c) Explain process synchronization in detail.
 - (d) Explain priority scheduling concept in detail.
 - (e) Explain Round-Robin scheduling in detail.
5. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain I/O channels.
 - (b) Describe symbolic file system.
 - (c) Explain techniques for device management.
 - (d) Explain basic file system.
 - (e) Explain I/O traffic controller.

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VI—03—2024

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

BCA-301

(Programming in C++)

(Tuesday, 26-11-2024)

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 necessary.

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

15

(a) Explain the Jumping statements.

(b) Explain the Arrays in C++.

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

(d) Rules for operator overloading.

(e) Explain the C++ Steams classes.

P.T.O.

- (f) Explain the file modes in C++.
- (g) Explain the references in C++.
2. Attempt any *three* of the following (5 marks each) : 15
- (a) Explain in detail Inline function with example.
- (b) Explain in detail function overloading with example.
- (c) Explain in detail structure of a C++ program.
- (d) Explain in detail default arguments with example.
- (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 Manipulators in C++.
- (b) Explain in detail opening and closing file in C++.
- (c) Explain in detail unformatted I/O operations.
- (d) WAP in C++ to create a text file with the name nanded.txt.
- (e) WAP in C++ to demonstrate binary operator (+).
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 looping statement 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.