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BCA –NEP-4 Years 4th Semester NEP Scheme

Examination, May-2026

Computer System Architecture

Paper : 24BCA404DS01

Time allowed : 3 Hours]

[Maximum marks : 70

Note : Attempt any *five* question in all, selecting *one* question from each unit. **Question No. 1 is compulsory.**

1. Write short note on following : 14
- (i) Register
 - (ii) Operation Code
 - (iii) Polling
 - (iv) CISC
 - (v) Effective Address
 - (vi) Magnetic Tape
 - (vii) Interface

Unit-I

2. Describe the block diagram of a Digital Computer in detail. 14
3. Explain the following : 14
- (i) Arithmetic Micro Operations
 - (ii) Shift Micro Operations

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[P.T.O.]

Unit-II

4. Define Computer Instruction. Also explain about Basic Computer Instruction formats. 14
5. Explain the following : 14
- (i) Daisy chaining priority interrupt
 - (ii) Interrupt cycle

Unit-III

6. What do you understand by General Register Organization? 14
7. Give a complete description about Addressing Modes. 14

Unit-IV

8. Define Cache Memory. Also explain about mapping. 14
9. Explain the following : 14
- (i) Handshaking
 - (ii) DMA

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BCA –NEP-4 Years 4th Semester NEP Scheme

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Data Communication & Computer Networks

Paper : 24BCA404DS02

Time allowed : 3 Hours]

[Maximum marks : 70

Note : Attempt any five questions in all, selecting one question from each unit. Question No. 1 is compulsory.

1. Write short note on following : 14

- (i) Protocol
- (ii) Wireless Transmission
- (iii) ALONA
- (iv) Internetworking
- (v) HTTPS
- (vi) Email
- (vii) Congestion

Unit-I

2. Explain the following : 14

- (i) Modulation
- (ii) Fiber optics
- (iii) LAN

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[P.T.O.]

3. Give a complete description about ISO-OSI reference model. 14

Unit-II

4. Give a complete description about Sliding Window Protocols. 14
5. Explain in detail about IEEE 802.3 Standard. 14

Unit-III

6. Explain the following Routing algorithms : 14
- (i) Flooding
 - (ii) Broad Cast Routing
7. Explain the following : 14
- (i) Leaky Bucket Algorithm
 - (ii) ARP, RARP

Unit-IV

8. Define Transport Layer. What are the different services provided by Transport Layer. 14
9. Explain the following : 14
- (i) DNS
 - (ii) TELNET.

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BCA - NEP 4 Year 4th Semester

Examination, May-2026

COMPUTER GRAPHICS

Paper : 24BCA404DS04

Time allowed : 3 Hours]

[Maximum marks : 50

Note : Question 1 is compulsory having five parts and each part is of 2 marks total of 10 marks and the remaining questions are of 10 marks. And attempt one question from each section.

1. Write a short note on the following : $5 \times 2 = 10$
- (a) Define pixel.
 - (b) List the steps in scan conversion.
 - (c) What is the use of transformation matrices?
 - (d) What is a clipping window?
 - (e) Define spline and its importance.

Unit-I

2. Discuss interactive and non-interactive graphics with applications. 10
3. Explain video display devices and input devices in graphics systems. 10

[P.T.O.]

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Unit-II

4. Implement Bresenham's line algorithm for a line form (2, 3) to (10, 8). 10
5. Describe mid-point circle drawing algorithm. 10

Unit-III

6. Prove that two successive rotations are additive in 2D transformation. 10
7. Explain 2D reflection and shearing with example matrices. 10

Unit-IV

8. Write a short note on Polygon clipping. 10
9. Differentiate between viewport and window. Explain mapping between them. 10

BCA
MBA 5 YEAR (NEP) 4th Semester

29015

Examination, May-2026

Database Management System

Paper : 24IMS504MV01/25IMS404MV01

Time allowed : 3 Hours]

[Maximum marks : 50

Note: Question paper is divided into two sections, A or B. Section A is compulsory to compose five questions; each question carries two marks. Section B consists of eight questions. The students shall be required to attempt four questions from section B selecting one question from each unit. All questions carry ten marks.

Section-A

1. Short Questions

- (a) What is schema
- (b) Define Pitfall in RDBMS
- (c) Explain database security.
- (d) Remote backup system
- (e) Define attributes.

[P.T.O.]

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Section-B**Unit-I**

2. What is a Database Management System? Explain the limitations
3. What are the features and functions of a DBMS? Explain the Responsibility of the database administrator.

Unit-II

4. Do you think that SQL is the base language of any database? Share your views.
5. What is database modelling? Explain the database modelling life cycle.

Unit-III

6. What is the network model? Explain in detail.
7. Write a note on data modelling architecture.

Unit-IV

8. What is a distributed system in DBMS? Explain with examples.
9. What are the database recovery procedures in the database management system?

BCA –NEP-4 Years 4th Semester NEP Scheme**Examination, May-2026****Java Programming****Paper : 24BCA404DS03***Time allowed : 3 Hours]**[Maximum marks : 35*

Note : Attempt any five questions in all by selecting one question from each unit. Question No. 1 is compulsory.

1. Write short note on following : 7
- (i) Class
 - (ii) JDK
 - (iii) Package
 - (iv) Thread
 - (v) GUI
 - (vi) Array
 - (vii) Applet

Unit-I

2. Describe the following : 7
- (i) JVM
 - (ii) JDK
3. Explain the following : 7
- (i) Interfaces
 - (ii) Methods and method declaration

Unit-II

4. Describe the following : 7
- (i) String and string operations
 - (ii) Vector class
5. What do you understand by Java API Packages? 7

Unit-III

6. Describe the life cycle of a thread in detail. 7
7. What do you mean by Input and Output streams in Java? 7

Unit-IV

8. Define Applet. Also explain about Applet life cycle. 7
9. Give a complete description about GUI programming. 7