

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.
CA-101-T: Problem Solving and Programming in C
(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any four)

[4x2=8 M]

- a) What is flowchart?
- b) What is Variable?
- c) Enlist types of operators?
- d) Syntax for if statement?
- e) What is function?
- f) What is Array?

Q.2) Answer the following: (Any two)

[2x4=8 M]

- a) Basic Structure of C programming
- b) Explain types of arrays
- c) Explain the flowchart symbols in details

Q.3) Answer the following: (Any two)

[2x4=8 M]

- a) write a c program to find average of three subject of student
- b) write a c program to calculate area of circle
- c) Write a c program find out the factorial number

[P.T.O]

Q.4) Answer the following: (Any two)

[2x4=8 M]

- a) Explain Arithmetic operators in c

- b) Write a c program find out even or odd number

- c) Write a program to print following pattern

```
*  
*  *  
*  *  *  
*  *  *  *
```

Q.5) Write a short note: (Any one)

[1x3=3 M]

- a) Define Call by value with example

- b) Explain looping statements

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.
CA-103-T: Computer Organization and Architecture
(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any four) [4x2=8 M]

- a) What is decimal number System?
- b) What is NOT Gate Explain with the help of truth table.
- c) What is meant by Combinational Logical Circuit?
- d) What is Asynchronous Sequential Circuit?
- e) What is RAM? Enlist the Types of RAM.
- f) What is Multiplexer?

Q.2) Answer the following: (Any two) [2x4=8 M]

- a) Explain the function of CPU
- b) Explain Binary and Octal number System With the Help of Example.
- c) Describe DeMorgan's theorem in detail

Q.3) Answer the following: (Any two) [2x4=8 M]

- a) Implement the $Y = \overline{A \cdot B}$ Boolean equation using NAND gate only.
- b) Explain Half Adder with the help of Diagram
- c) Explain S-R Flip Flop in detail.

[P.T.O]

Q.4) Answer the following: (Any two)

[2x4=8 M]

a) Describe Gray Code with the help of example.

b) Explain Encoder in Detail.

c) State the Difference between Synchronous Sequential Circuit and Asynchronous Sequential Circuit.

Q.5) Write a short note: (Any one)

[1x3=3 M]

a) Write Short note on Subtractor

b) Write Short note on K-Map (Karnaugh Map)

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.

CA – 105 – T: DISCRETE MATHEMATICS AND STATISTICS

(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any Four)

[4x2=8 M]

- a) “Collection of good basketball players is a Set” – (True/False)
- b) Suppose P is a set of the first five prime numbers given by $P = \{2, 3, 5, 7, 11\}$, then what is the cardinality of set P?
- c) A set that does not contain any element is called..... set.
- d) What is equivalent set? Give example.
- e) Define Hasse Diagram?
- f) What is Pigeonhole Principle?

Q.2) Answer the following: (Any Two)

[2x4=8 M]

- a) Construct the truth table for (i) $\sim P \vee \sim Q$ (ii) $\sim(P \wedge Q)$.
- b) Explain the Warshall’s Algorithm with real life example.
- c) Explain the measures of central tendency with an examples.

Q.3) Answer the following: (Any Two)

[2x4=8 M]

- a) Explain the concept of sampling. Give an example of stratified sampling.
- b) Elaborate the concept of correlation with an example.
- c) Illustrate the countable and uncountable sets with an examples.

Q.4) Answer the following: (Any Two)

[2x4=8 M]

- a) Two players, Sangeet and Rashmi, play a tennis match. The probability of Sangeet winning the match is 0.62. What is the probability that Rashmi will win the match?
- b) In a batch of 400 students, the height of students is given in the following table. Represent it through a frequency curve.

Height (in cm)	Number of Students
140-150	74
150-160	163
160-170	135
170-180	28
Total	400

- c) Explain the applications of Propositional Logic.

Q.5) Write a short note: (Any one)

[1x3=3 M]

- a) Histogram
- b) Standard Deviation

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.
OE-101-CA: Introduction to Data Science
(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any four)

[4x2=8 M]

- a) What is Data Science?
- b) What is Attributes?
- c) What is Classification?
- d) What is Data Pre-processing?
- e) What is EDA?
- f) What is Dataset?

Q.2) Answer the following: (Any two)

[2x4=8 M]

- a) Define Data. Explain the types of data in detail.
- b) Define Predictive. Explain the types of it.
- c) Explain the applications of Data Visualization.

Q.3) Answer the following: (Any two)

[2x4=8 M]

- a) Explain the role of statistics in data science in detail.
- b) Explain any 3 applications of Data Science?
- c) Define Data Source. Discuss any two Data Sources in detail.

[P.T.O]

Q.4) Answer the following: (Any two)

[2x4=8 M]

a) Explain the Future Trends in Structured Data?

b) Define Noise. Explain the types of Noise?

c) What is Discretization? Explain strategies of discretization?

Q.5) Write a short note: (Any one)

[1x3=3 M]

a) Social Media Data

b) Data Cleaning

[Total No. of Questions: 5]

SEAT No. :

**First Year B.C.A.
CA-101-T: Environmental Awareness
(2024 Pattern) (Semester -I)**

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any four)

[4x2=8 M]

- a) Types of Environmental Pollution.
- b) What is disaster management
- c) What is NDMA?
- d) What is water pollution?
- e) What is Environmental Studies?
- f) What is Earthquake?

Q.2) Answer the following: (Any two)

[2x4=8 M]

- a) Discribe causes of water pollution?
- b) Discribe disaster management?
- c) Define Environmental Studies& it's important?

Q.3) Answer the following: (Any two)

[2x4=8 M]

- a) Write down effect of noise pollution?
- b) Write down effect of water pollution?
- c) What is sources of solid waste management?

[P.T.O]

Q.4) Answer the following: (Any two)

[2x4=8 M]

- a) Write preventive measure of air pollution?
- b) Government initiatives to control pollution
- c) Effect of urban & industrial waste?

Q.5) Write a short note: (Any one)

[1x3=3 M]

- a) Disaster management
- b) Floods & Earthquake

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.
IKS-100-T: Indian Knowledge System (Generic)
(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

1) All questions are compulsory. .

[35x1=35 M]

Q.1) _____ is the study of objects seen in the sky.

a. Astrology b. Ayurveda

c. Astronomy d. Mythology

Q.2) India is _____ Centric Civilization.

a. Knowledge b. Material

c. Science d. None of the above

Q.3) WKS stands for.

a. West Knowledge System b. Western Knowledge System

c. World Knowledge System d. Whole Knowledge System

Q.3 full form of IKS is

a. India Knowledge System b. Iran Knowledge System

c. Indic Knowledge System d. Intensive Knowledge System

Q.4) Which classical dance form of India is known for its expressive hand gestures and facial expressions?

a. Bharatanatyam b. Kathakali

c. Odissi d. Kuchipudi

Q.5) Which ancient Indian concept emphasizes the pursuit of righteousness and duty?

a. Dharma b. Karma

c. Moksha d. Bhakti

Q.6) What is the term used for the traditional system of education in ancient India where students lived with their teacher and received holistic education?

a. Gurukul b. Vidyalaya

c. Pathshala d. Vishvavidyalay

Q.7) Texts that primarily focus on the principles of art, aesthetics, and performance are classified as:

a. Artha Shashtras b. Kama Shashtras

c. Natya Shashtras d. Dharma Shashtras

Q.26) Which Indic knowledge system emphasizes the practice of breath control and meditation?

- a. Jyotish Shashtra b. Tantra
c. Yoga d. Naturopathy

Q.27) Which ancient Indian texts are considered the foundation of Indic knowledge system?

- a. Bhagavad Gita b. Mahabharata
c. Vedas d. Ramayana

Q.28) Which Indian festival celebrates the victory of light over darkness and is known for its colorful decorations and lamps?

- a. Holi b. Diwali
c. Navratri d. Eid

Q.29) Which classical dance form of India is known for its expressive hand gestures and facial expressions?

- a. Bharatanatyam b. Kathakali
c. Odissi d. Kuchipudi

Q.30) Panjari prasad is taken in which festival?

- a. Janmashtami b. Nag Panchami
c. Diwali d. Paryushan

Q.31) _____ is the root of all knowledge. It is considered as mother of all sciences.

- a. Science b. Philosophy
c. Mathematics d. Astronomy

Q.32) The "Sushruta Samhita" is an ancient Indian text that primarily deals with:

- a. Astronomy b. Mathematics
c. Medicine and surgery d. Architecture

Q.33) World's largest collection of ancient Manuscripts is in _____

- a. India b. USA
c. Germany d. England

Q.34) Ancient Indian Knowledge is preserved in/by

- a. Guru Shishya Parampara b. Inscriptions on Temples
c. Manuscripts d. All of the above

Q.35) There are _____ kala

- a. 55 b. 64
c. 33 d. 20

[Total No. of Questions: 5]

SEAT No. :

First Year B.C.A.
AEC-101-: Professional Communication Skills
(2024 Pattern) (Semester -I)

[Time: 2 Hours]

[Max. Marks: 35]

Instructions to the candidates:

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

Q.1) Answer the following: (Any four)

[4x2=8 M]

- a) Define communication?
- b) Give any 2 example of Kinesics?
- c) Define 'Stereotyping'?
- d) Explain the term Encoding.
- e) Explain any four principles of effective communication
- f) List down any five key principles of business letter writing

Q.2) Answer the following: (Any two)

[2x4=8 M]

- a) Describe the limitations of hierarchy of needs theory.
- b) What are the unique features of debate?
- c) What are all the different types of non-verbal communication forms Available?

Q.3) Answer the following: (Any two)

[2x4=8 M]

- a) Mention levels of communication
- b) Poor Listening Habits results into Poor communication – Discuss.
- c) Do you agree that listening is more important than speaking? Why?

[P.T.O]

Q.4) Answer the following: (Any two)

[2x4=8 M]

- a) We have two ears and one mouth so that we can listen twice as much as we speak.”- Elaborate the statement in the context of the importance of listening skills in personal as well as professional life
- b) The amount of money allotted for the Sports Events in a college was utilised for various purposes as shown below. Design a pie chart for representing the data. Purchase of sports material --- 40% Prizes----- 24% Refreshments-----18% Miscellaneous ----- 18%
- c) Define skimming with suitable examples

Q.5) Write a short note: (Any one)

[1x3=3 M]

- a) Define process of reading.
- b) Describe reasons for poor comprehension skills