

Assignment for BCA 1st Semester (SODL)

Dear learner,

Assignments of the courses of BCA 1st semester for the learners registered for July 2019 session are given below.

1. Introduction to 'C' Programming (BCAD101)
2. Mathematical Foundation of Computer Science (BCAD103)
3. Media and Information Literacy Communication (BCAD105)
4. Communication Skills (BCAD104)
5. Computer System Architecture (BCAD102)

You are advised to submit handwritten / typed responses / answers to the assignment questions in hard copy at the School of Open and Distance Learning by 27th January, 2020 for incorporating their marks in the mark sheet of the examination held in December, 2019. Every page of the assignment response should be signed by you for authentication.

Please note the assignments will have 25% weight age. The theory exam will have 75% weight age, whereas, assignments shall have 25% weight age. It is essential to qualify in the assignments and the theory / practical examination for qualifying a course / subject.

For further clarifications, if any, write to Dr Safdar Tanweer, Programme Coordinator, BCA Programme at safdartanweer@yahoo.com / safdartanveer.sch@jamiahamdard.ac.in.

Best wishes!

Yours sincerely,

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Subject: Introduction to 'C' Programming (BCAD101)

- Q.1 Define loop? Explain all loops with suitable example.
- Q.2 Write a short note on break and continue statement.
- Q.3 Define an array. Explain one dimensional array with suitable example.
- Q.4 Differentiate between structure and union.
- Q.5 What is pointer? Explain the difference between malloc() and calloc() library function with example.

Subject: Mathematical Foundation of Computer Science (BCAD103)

- Q.1 Find the determinant of

$$A = \begin{bmatrix} 1 & 3 & 4 \\ 2 & -1 & 3 \\ 2 & 1 & 2 \end{bmatrix}$$

- Q.2

$$\text{Given } A = \begin{bmatrix} 1 & 2 & -3 \\ 5 & 0 & 2 \\ 1 & -1 & 1 \end{bmatrix} \text{ and } B = \begin{bmatrix} 3 & -1 & 2 \\ 4 & 2 & 5 \\ 2 & 0 & 3 \end{bmatrix}$$

Find the value of following:

- i) $A+B$
- ii) A^2
- iii) AB

Q.3 Given that $A = \begin{bmatrix} 1 & -2 & -1 \\ 2 & 3 & 1 \\ 0 & 5 & -2 \end{bmatrix}$, compute

- i) $\det A$ ii) A^{-1}

- Q.4 Verify Cayley-Hamilton theorem

For $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$

Q.5 Solve the system of linear equations

$$x + y + z = 1$$

$$x + 2y + z = 2$$

$$x + y + 2z = 3$$

Subject: Media and Information Literacy Communication (BCAD105)

Q.1 What is information literacy? Explain its relevance in the present times.

Q.2 Explain different types of computers. Give suitable examples.

Q.3 Write short notes on:

a) Inoculation Model

b) Demystification Model

c) Creative Participation

Q.4 Define media. Explain the role of social media in 21st century.

Q.5 Explain Digital Divides in details.

Subject: Communication Skills (BCAD104)

Write in details about the following topics –

1. Barriers to effective communication.
2. Non-verbal communication.
3. Active listening involves receiving.
4. Emotional intelligence in communication.
5. Importance of verbal communication.

Subject: Computer System Architecture (BCAD102)

Q.1 State and explain why NAND and NOR gates are called universal gates?

Q.2 Simplify $f = AB + AB' + AC$ by K map.

Q.3 Draw the circuit design for full adder.

Q.4 Explain the characteristics of Flip-Flop operations.

Q.5 Draw the logic symbol and diagram of half-subtractor.