Central University of Rajasthan

Center for Distance and Online Education (CDOE)

Dear Learner,

Greetings from the CDOE!

As you are aware, every student enrolled in the ODL Programme is required to write and submit assignments for each course. These assignments form an important component of the continuous assessment and carry **30% weightage** of the overall grade for each course.

Please carefully note the following instructions:

General Instructions

1. Please remember to attach the designated cover page on every assignment you submit. The format of cover page is attached for your reference.
2. All sections of the assignment are compulsory in nature. All questions are to be attempted, except for those where options are provided.
3. Please write the answer mentioning the correct corresponding question number given in the assignment.
4. Please write on continuous pages and number each page.
5. All assignments should be handwritten. Typed or printed assignment will not be accepted.
6. it is strongly recommended to keep a copy (photocopy or scanned) of the assignment sent by you for your record.
7. **The last date for submitting assignments is 10.06.2026.** Submission of assignments is required to appear in the End Semester Examination.
8. Assignments can be deposited at CDOE, Curaj or sent through post to **Director, Centre for Distance and Online Education (CDOE), Room 102, Administration Building, Central University of Rajasthan, Bandarsindari, District: Ajmer – 305817, Rajasthan**.

Director

Centre for Distance and Online Education (ODL & OP)

राजस्थान केन्द्रीय विश्वविद्यालय
Central University of Rajasthan

Assignment

Open and Distance Learning Programme

Learner's Name : .....

Enrollment Number : .....

Academic year and Session : .....

Programme Name and Code : .....

Course Code : .....

Course Title : .....

.....

Learner's Signature

Centre for Distance and Online Education (CDOE)

Room 102, Administration Building, Central University of Rajasthan

N.H. 8, Bandarsindari, District: Ajmer – 305817, Rajasthan

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Central University of Rajasthan

Centre for Distance and Online Education

Open and Distance Learning Programme

Assignment

Programme Name: B.Sc (Computer Science) **Programme Code: ODLBSCS**

First Semester

Instructions:

1. In the B.Sc (Computer Science) programme, two assignments have been planned for the continuous evaluation of the learner in each course.
   [Note : for course title " Programming in 'C' , Assignment 2 will be practical]
2. The learner can appear in the term-end examination of the concerned course only after completing both assignments and submitting them within the stipulated time period.
3. Each assignment carries 15 marks. Thus, a total of 30 marks are allocated for assignments for each course.
4. The assignments must be written in the learner's own handwriting. Typed or printed assignments will not be accepted.
5. The learner should complete the sessional assignments within the stipulated time and send them by post or submit them in person at the following address:

Address for Submission of Sessional Assignments:

Director, Centre for Distance and Online Education (CDOE), Room - 102, Administration Building, Central University of Rajasthan, Bandarsindari, Jaipur – Ajmer highway, District - Ajmer – 305817, Rajasthan.

Title of the Course: Foundation of Computer Science
Course Code: 4.5 ODLCSC01
Assignment: 01

Maximum Marks: 15

Short Answer type Questions: (attempt all Questions) **(Word Limit: 60 - 80)**

Q. 01 Define Primary Memory. [1]

Q. 02 Define Cache Memory. [1]

Q. 03 What is a Compiler? [1]

Q. 04 Name the four key components of the Von Neumann Architecture. [1]

Q. 05 What is Assembly Language? To which generation of languages does it belong? [1]

Long Answer type Questions: (attempt all Questions) **(Word Limit: 300 - 400)**

Q. 01 Explain the Von Neumann Architecture and describe its main components with a diagram. [5]

Q. 02 Differentiate between Primary Memory and Secondary Storage with suitable examples and uses. [5]

Assignment: 02

Maximum Marks: 15

Short Answer type Questions: (attempt all Questions) **(Word Limit: 60 - 80)**

Q. 01 Convert decimal $(15)_{10}$ to binary. [1]

Q. 02 Explain the purpose of 2's complement. [1]

Q. 03 Define the term 'Digital Footprint'. [1]

Q. 04 What is flagging content on social media ? [1]

Q. 05 What is the purpose of the diamond-shaped symbol in a flowchart? [1]

Long Answer type Questions: (attempt all Questions) **(Word Limit: 300 - 400)**

Q. 01 Explain various data access methods: Random, Direct, and Sequential, with real-life examples. [5]

Q. 02 Discuss the octal and hexadecimal number systems and explain their advantages over the binary system. [5]

Title of the Course: Microeconomics - I
Course Code: 4.5 ODLECO01
Assignment: 01

Maximum Marks: 15

Section A: Multiple Choice Questions **(5 × 1 = 5 marks)**

Choose the correct answer:

1. Utility can be measured in:

   a) Utils b) Rupees c) Dollars d) None

2. Giffen goods violate:

   a) Law of supply b) Law of demand c) Law of returns d) Law of cost

3. Supply curve generally slopes:

   a) Downward b) Upward c) Horizontal d) Vertical

4. Isoquants represent:

   a) Equal cost b) Equal output c) Equal profit d) Equal price

5. Average cost is:

   a) TC/Q b) TC × Q c) TC – Q d) TC + Q

Section B: Short Answer type Questions:(attempt all Questions) **(Word Limit: 100 - 150)**

Q. 01 Distinguish between microeconomics and macroeconomics. [2]

Q. 02 Explain positive and normative economics. [2]

Q. 03 What is an indifference curve? [2]

Q. 04 Define consumer equilibrium. [2]

Q. 05 What is the average cost? [2]

Assignment: 02

Maximum Marks: 15

Long Answer type Questions:(attempt all Questions) **(Word Limit:300 - 400)**

Q. 01 Discuss the indifference curve approach and its assumptions and properties. [5]

Q. 02 Explain the law of demand and factors affecting demand with a diagram. [5]

Q. 03 Discuss production function and the law of variable proportions. Explain isoquants and returns to scale in detail. [5]

Title of the Course: Mathematics-I for Computer Science and Statistics
Course Code: 4.5 ODLMAT86
Assignment: 01

Maximum Marks: 15

Short Answer type Questions: (attempt all Questions) **(Word Limit: 60 - 80)**

Q. 01 Define tautology. [2]

Q. 02 Define equivalence relation. [2]

Q. 03 Determine whether the proposition [2]

$$(p \vee q) \wedge (\neg p \vee r)$$

is a tautology or not.

Q. 04 Find the truth value of $p \rightarrow (q \leftrightarrow \neg p)$ [2]
when p=T,q=F

Q. 05 Find the remainder when 7^100 is divided by 5. [2]

Long Answer type Questions: (attempt all Questions) **(Word Limit: 300 - 400)**

Q. 01 Construct a truth table for the logical expression: [5]

$$(p \rightarrow q) \leftrightarrow (\neg q \rightarrow \neg p)$$

Determine whether it is a tautology, contradiction, or contingency.

Assignment: 02

Maximum Marks: 15

Short Answer type Questions: (attempt all Questions) **(Word Limit: 60 - 80)**

Q. 01 What is the rank of a matrix? [2]

Q. 02 Define linear transformation. [2]

Q. 03 Simplify using Boolean algebra: $(A \cap B) \cup (A \cap B^c)$. [2]

Q. 04 Verify De Morgan's Law for sets: $(A \cup B)^c = A^c \cap B^c$ [2]

Q. 05 Compute rank of matrix: [2]

$$\begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 6 \\ 1 & 1 & 1 \end{bmatrix}$$

Long Answer type Questions: **(Word Limit: 300 - 400)**

Q. 01 Explain rank-nullity theorem. [5]

Title of the Course: Programming in 'C'
Course Code: 4.5 ODLCSC02
Assignment: 01

Maximum Marks: 15

Short Answer type Questions: **(Word Limit: 60 - 80)**

Q. 01 Define the term **identifier** in the context of C programming. [1]

Q. 02 What are storage classes in C? Name them. [1]

Q. 03 What is the use of file handling in C ? [1]

Q. 04 Define **recursion** and state one condition necessary for its implementation. [1]

Q. 05 What is a **switch statement**, and how does it differ from an if-else ladder? [1]

Long Answer type Questions: **(Word Limit: 300 - 400)**

Q. 01 Explain control statements in C (if, switch, loops) with syntax and examples. [5]

Q. 02 Discuss various operators in C (arithmetic, logical, relational, bitwise, assignment) with examples. [5]

Title of the Course: Indian Knowledge System
Course Code: 4.5 ODLECO99
Assignment: 01

Maximum Marks: 15

Multiple Choice Questions (MCQs) **(5*1= 5marks)**
Choose the correct answer:

1. Indian Knowledge Systems (IKS) primarily focus on:

   a) Modern Western science b) Traditional and indigenous knowledge of India

   c) Industrial development d) Political systems

2. Who is known for contributions to grammar in ancient India?
   a) Aryabhata b) Panini c) Charak d) Varahamihira

3. The concept of "Shad Darshan" refers to:
   a) Six seasons b) Six philosophies c) Six rituals d) Six sciences

4. Nyaya philosophy deals with:
   a) Ethics b) Logic and reasoning c) Meditation d) Rituals

5. Which text is associated with ancient Indian astronomy?
   a) Arthashastra b) Aryabhatiya c) Ramayana d) Manusmriti

Short Answer type Questions (Attempt any 5) **(Word Limit: 100 - 150)**

1. Explain the concept of Upaveda. [2]
2. What are the key features of Ayurveda? [2]
3. Describe the importance of sacred groves. [2]
4. What is the role of folklore in indigenous knowledge? [2]
5. Write a note on traditional agricultural practices in India. [2]
6. Explain the concept of Yoga in Indian philosophy. [2]
7. What are the socio-cultural linkages in traditional communities? [2]

Assignment: 02

Maximum Marks: 15

Long Answer type Questions: (Attempt any 3) **(Word Limit: 300 - 400)**

Q. 01 Explain the concept, scope, and significance of Indian Knowledge Systems in detail. [5]

Q. 02 Discuss the contributions of ancient Indian scholars in mathematics and astronomy.[5]

Q. 03 Analyze the role of traditional knowledge in biodiversity conservation and environmental sustainability. [5]

Q. 04 Explain the importance of traditional livelihood practices and their relevance in modern society. [5]