(41)

1B1N25179 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester B.Sc Computer Science Degree Examination, November 2025

CSC1CJ101 - Fundamentals of Computers and Computational Thinking

(FYUGP 2024 Admission onwards)

Time: 2 hours Max. Marks : 70

PART – A

All questions can be attended.
Each question carries **Three** mark.
Ceiling -24 Marks

		COs	Knowledge Level(KL)	Marks
1	Define the Von Neumann architecture.	CO1	Understand (U)	
2	List any four digital codes and mention one application each.	CO1	Remember (R)	
3	Differentiate between DRAM and SRAM.	CO2	Understand (U)	
4	Define POST and explain its role during booting.	CO4	Understand (U)	
5	Mention different types of software with one example for each.	CO4	Remember (R)	
6	Define algorithm. List any two qualities of a good algorithm	CO6	Understand (U)	
7	Write the flowchart symbols for decision, input/output, and process.	CO6	Remember (R)	
8	Explain the term abstraction in computational thinking.	CO5	Understand (U)	
9	Mention the function of any two active and two passive electronic components.	CO2	Remember (R)	
10	Name any four contributors to computing systems and their key inventions.	CO1	Remember (R)	

PART – B

All questions can be attended.
Each question carries **six** marks.
Ceiling -36 Marks

		COs	Knowledge Level(KL)	Marks
11	Convert the following: (i) 1101 to Decimal, (ii) 27 to Binary, (iii) 19 to Hexadecimal	CO1	Apply (Ap)	
12	Explain with diagrams the key components of a motherboard and their functions.	CO2	Understand (U)	
13	Describe the process of single and dual OS installation. Mention tools used.	CO4	Understand (U)	
14	Differentiate between open source and proprietary operating systems with examples.	CO4	Analyze (An)	
15	Define computational thinking and explain its four pillars.	CO5	Understand (U)	
16	Describe the RAPTOR flowchart for finding the elder among two persons.	CO6	Apply (Ap)	
17	Compare single-core, dual-core, multi-core and QPU	CO1	Analyze (An)	
18	Explain with examples: Resistors, Capacitors, Inductors – definitions and symbols.	CO2	Understand (U)	

PART - C

Answer any ***one*** questions.
Each question carries **Ten** marks.

		COs	Knowledge Level(KL)	Marks
19	What is file system? Compare FAT NTFS file systems.	CO3, CO4	Remember, Analysis	
20	Define algorithmic thinking. Explain how algorithms differ from intuition. Create a flowchart to print the first N numbers.	CO5, CO6	Apply (Ap), Analyze (An)	

1 x 10 = 10 Marks

42

1B1N25180 (Pages : 2) Reg. No:.....

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester B.Sc Computer Science Degree Examination, November 2025

CSC1MN102 – Data Science & AI (Python Programming)

(FYUGP 2024 Admission onwards)

Time: 2 hours Max. Marks : 70

PART – A

All questions can be answered. Each question carries **Three** marks.

Ceiling -24 Marks

No	Question	CO	Level
1	What are the key features of Python?	CO1	K2
2	Define an identifier and give an example.	CO1	K1
3	What is type conversion in Python?	CO1	K2
4	Differentiate between = and == operators.	CO1	K4
5	What is the purpose of the pass statement?	CO1	K2
6	Define tuple with an example.	CO4	K1
7	List two string manipulation methods in Python.	CO4	K1
8	What is a dictionary in Python?	CO4	K2
9	Define a function in Python.	CO5	K1
10	Mention any two built-in math functions in Python.	CO6	K1

PART – B All questions can be answered. Each question carries **six** marks. **Ceiling -36 Marks**			
11	Explain the different ways to run a Python program.	CO1	K2
12	Describe decision-making statements in Python with examples.	CO2	K2
13	Write a Python program to display the multiplication table using a for loop.	CO2	K4
14	Differentiate between list and tuple with examples.	CO4	K4
15	Explain the use of dictionaries with suitable examples.	CO4	K2
16	Write a Python program to define a function that returns the factorial of a number using recursion.	CO5	K3
17	Discuss different types of operators in Python with examples.	CO1	K2
18	What are the various string manipulation methods in Python? Explain with examples.	CO4	K2
PART - C Answer any *one* question. Each question carries **Ten** marks.			
19	Write and explain a Python program that accepts a number from the user and checks whether it is prime.	CO3	K3
20	Explain user-defined functions in Python. Discuss the use of parameters, return values, and flow.	CO5	K2

(43)

1B1N25181 (Pages : 2) Reg. No:.....

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester B.Sc Computer Science Degree Examination, November 2025

CSC1FM105 - Data Analysis and Visualization through Spread Sheets

(FYUGP 2024 Admission onwards)

Time: 1 ½ hours Max. Marks : 50

PART – A

All questions can be attended.
Each question carries **Two** mark.
Ceiling -16 Marks

		COs	Knowledge Level (KL)	Marks
1	List any four features of a spreadsheet.	CO1	U	2
2	What is the use of the Formula Bar in Excel?	CO1	U	2
3	Define conditional formatting. Give an example.	CO2	U	2
4	Write any two differences between relative and absolute referencing.	CO1	U	2
5	What is the use of the Filter option in Excel?	CO2	U	2
6	Mention the steps to create a Pivot Table.	CO3	U	2
7	Define Dashboard in Excel.	CO4	U	2
8	Name any four chart types available in Excel.	CO4	R	2
9	What is Watch Window used for in Excel?	CO3	U	2
10	Explain Group and Ungroup in Excel.	CO2	U	2

PART – B

All questions can be attended.
Each question carries **six** marks.
Ceiling -24 Marks

		COs	Knowledge Level (KL)	Marks
11	Explain different types of referencing in Excel with examples.	CO1	U/Ap	6
12	Describe the steps in importing and exporting data in Excel.	CO2	U	6
13	What-if analysis: Explain and illustrate with an example.	CO3	Ap	6
14	Create a table of student scores and explain how conditional formatting can be applied.	CO2	Ap	6
15	How are charts created and customized in Excel? Give examples.	CO4	Ap	6

PART - C

Answer any *one* questions.
Each question carries **Ten** marks.

		COs	Knowledge Level (KL)	Marks
16	Design a mini-dashboard to analyse sales data using charts and form controls. Describe the steps.	CO4	C	10
17	With an example, explain how Pivot Table and Pivot Chart can be used together for data analysis.	CO3/CO4	Ap	10

1 x 10 = 10 Marks