



SECTION-C			
7.	Justify the four strategies of Disaster Management also define State Disaster Management and Central Disaster Management Authority of India.	CO4	L5
8.	Identify the strategies to harvest rain water, also infer the uses of the harvested water.	CO3	L3
9.	Examine various natural sources of energy and methods to fetch them for future.	CO2	L4

**NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the student.**





	girls and the combined standard deviation.																																
5.	<p>Given the following distribution of income</p> <table border="1"> <tr> <td>Income (thousands)</td> <td>0-1</td> <td>1-2</td> <td>2-3</td> <td>3-4</td> <td>4-5</td> <td>5-6</td> <td>6-7</td> <td>7-8</td> </tr> <tr> <td>No. of families</td> <td>4</td> <td>6</td> <td>10</td> <td>15</td> <td>8</td> <td>5</td> <td>4</td> <td>2</td> </tr> </table> <p>Find out : (i) Highest income among the poorest 25%. (ii) Lowest income among the richest 30%.</p>	Income (thousands)	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	No. of families	4	6	10	15	8	5	4	2	CO2	L5												
Income (thousands)	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8																									
No. of families	4	6	10	15	8	5	4	2																									
6.	<p>Following is the data concerning the students getting marks in various ranges in class A and class B. Construct percentage cumulative frequency curves. If the same proportion of candidates are to be passed, estimate graphically the distinction marks for class A if the distinction marks for class B are taken as 75%.</p> <table border="1"> <thead> <tr> <th>Marks Range</th> <th>Class A</th> <th>Class B</th> </tr> </thead> <tbody> <tr><td>0 – 10</td><td>9</td><td>5</td></tr> <tr><td>10 – 20</td><td>42</td><td>32</td></tr> <tr><td>20 – 30</td><td>61</td><td>50</td></tr> <tr><td>30 – 40</td><td>140</td><td>90</td></tr> <tr><td>40 – 50</td><td>250</td><td>110</td></tr> <tr><td>50 – 60</td><td>102</td><td>92</td></tr> <tr><td>60 – 70</td><td>71</td><td>60</td></tr> <tr><td>70 – 80</td><td>23</td><td>41</td></tr> <tr><td>80 – 90</td><td>2</td><td>20</td></tr> </tbody> </table>	Marks Range	Class A	Class B	0 – 10	9	5	10 – 20	42	32	20 – 30	61	50	30 – 40	140	90	40 – 50	250	110	50 – 60	102	92	60 – 70	71	60	70 – 80	23	41	80 – 90	2	20	CO3	L4
Marks Range	Class A	Class B																															
0 – 10	9	5																															
10 – 20	42	32																															
20 – 30	61	50																															
30 – 40	140	90																															
40 – 50	250	110																															
50 – 60	102	92																															
60 – 70	71	60																															
70 – 80	23	41																															
80 – 90	2	20																															
7.	<p>Following are the data about market share of 4 brands of T.V. set sold in Amritsar and Jalandhar. Construct a pie diagram that represents the following data :</p> <table border="1"> <thead> <tr> <th>Brands of set</th> <th>Units sold in Amritsar</th> <th>Units sold in Jalandhar</th> </tr> </thead> <tbody> <tr><td>Samsung</td><td>480</td><td>625</td></tr> <tr><td>L.G.</td><td>360</td><td>500</td></tr> <tr><td>Onida</td><td>240</td><td>438</td></tr> <tr><td>Sony</td><td>120</td><td>312</td></tr> </tbody> </table>	Brands of set	Units sold in Amritsar	Units sold in Jalandhar	Samsung	480	625	L.G.	360	500	Onida	240	438	Sony	120	312	CO2	L3															
Brands of set	Units sold in Amritsar	Units sold in Jalandhar																															
Samsung	480	625																															
L.G.	360	500																															
Onida	240	438																															
Sony	120	312																															

**NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the student.**

Roll No. 

Total No. of Pages: 1

Total No. of Questions: 07

B.Sc-AI&amp;ML, Semester-2nd

DATA STRUCTURE

Subject Code: UGCA1915

M.Code: 79858

Date of Examination: 23-12-2025

Time: 3 Hrs.

Max. Marks: 60

**INSTRUCTIONS TO CANDIDATES:**

1. SECTION-A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. SECTION-B consists of **SIX** questions, each carrying **TEN** marks each and students must attempt any **FOUR** questions.

Q. No.	Question	Course Outcome	Bloom's Level
<b>SECTION-A</b>			
1.	Answer briefly:		
a.	Explain the concept of a circular linked list.	CO2	L2
b.	List of different types of binary trees.	CO5	L1
c.	Define hashing and collision.	CO5	L1
d.	Classify an AVL tree.	CO3	L2
e.	Contrast between a stack and a queue.	CO1	L2
f.	Define data structure and give its types.	CO1	L1
g.	List the applications of a stack.	CO2	L1
h.	Comparison between array and linked list.	CO3	L2
i.	Explain recursion with an example.	CO4	L2
j.	What is circular queue and its use?	CO4	L1
<b>SECTION-B</b>			
2.	Categorize different types of trees traversal methods with examples and applications.	CO4	L4
3.	Explain stack implementation and its applications.	CO1	L5
4.	Explain graph representation techniques and their advantages.	CO4	L5
5.	Classify various types of data structures with suitable examples.	CO3	L4
6.	Identify various sorting techniques with suitable examples.	CO5	L3
7.	Apply queue implementation using array and linked list with algorithms.	CO2	L3

**NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the student.**

1|M-79858