INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal, Hyderabad - 500 043

COMPUTER SCIENCE AND ENGINEERING

QUESTION BANK

Course Title	**DATA MANAGEMENT AND REPRESENTATION**				
Course Code	ACDC03				
Program	B.Tech				
Semester	IV	CSE (DS)			
Course Type	Professional				
Regulation	UG-20				
Course Structure	Theory			Practical	
	Lecture	Tutorials	Credits	Laboratory	Credits
	3	1	4	-	-
Course Coordinator	Dr M V Krishna Rao, Professor				

COURSE OBJECTIVES:

The students will try to learn:

I	The data fundamentals, data collection, handling and preservation techniques.
II	The treatment of missed values in large data sets.
III	The data presentation and visual exploartion techniques needed before the data analysis

COURSE OUTCOMES:

After successful completion of the course, students should be able to:

CO 1	**Identify** the data importing methods from the data files of various formats. for data prsenetation and further exploration.	Remember
CO 2	**Make use of** imputation techniques for wrangling the data for subsequent data analysis.	Understand
CO 3	**Identify** the reasons of missing and bad data in various forms for applying cleaning techniques	Apply
CO 4	**Examine** different styles of tables and graphs for presenting and visualizing the data.	Analyze

CO 5	**Determine** the principles like clarity, precision and efficiency of data presentation and visualization.	Evaluate
CO 6	**Build** different data visualizations using tablular data or dataframes.	Apply

QUESTION BANK:

Q.No	QUESTION	Taxonomy	How does this subsume the level	CO's
MODULE I				
PRINCIPLES OF DATA MANAGEMENT				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Define Data? Mention different sources of data?	Understand	This would require the learner to recall different sources of data	CO 1
2	Explain codebooks and coding of data management?	Understand	This would require the learner to recall codebooks and coding of data management	CO 1
3	Illustrate Data Cleaning and Screening process.	Remember	-	CO 1
4	Mention various principles of file management.	Remember	-	CO 1
5	Demostrate Data Screening process.	Understand	This would require the learner to recall the principles of data management	CO 1
6	What are the different sources of data?	Remember	-	CO 1
7	Illustrate documentation of data management?	Understand	This would require the learner to recall the principles of data management	CO 1
8	Explain why coding is required for data management?	Understand	This would require the learner to recall the principles of data management	CO 1
9	Mention the Naming Conventions of data management	Remember	-	CO 1

10	Compare and contrast Data Cleaning and Screening process.	Understand	This would require the learner to recall the principles of data management	CO 1
11	Explain the principles of Naming Conventions of data management.	Remember	-	CO 1
12	Outline the principles of coding of data management.	Understand	This would require the learner to recall the principles of coding	CO 1
13	Classify different types of varibles with an example.	Understand	This would require the learner to recall the different types of variables	CO 1
14	List the commands to reperesent information in code book.	Remember	-	CO 1
15	Illustrate any 6 coding tasks in data management	Understand	This would require the learner to recall the coding tasks	CO 1
PART-B LONG ANSWER QUESTIONS				
1	What is a Data? What are the different sources of data?	Understand	This would require the learner to recall different sources of data	CO 1
2	Explain codebooks and coding of data management?	Understand	This would require the learner to recall codebooks and coding of data management	CO 1
3	Describe Data Cleaning and Screening process.	Remember	-	CO 1
4	Demonstrate various principles of file management.	Remember	-	CO 1
5	Describe Data Screening process.	Understand	This would require the learner to recall the principles of data management	CO 1
6	What are the different sources of data?	Remember	-	CO 1
7	Explain documentation of data management?	Understand	This would require the learner to recall the principles of data management	CO 1

8	Explain coding of data management?	Understand	This would require the learner to recall the principles of data management	CO 1
9	Explain the Naming Conventions of data management	Remember	-	CO 1
10	Differentiate Data Cleaning and Screening process.	Understand	This would require the learner to recall the principles of data management	CO 1
11	Explain the principles of Naming Conventions of data management.	Remember	-	CO 1
12	Outline the principles of coding of data management.	Understand	This would require the learner to recall the principles of coding	CO 1
13	Summarize the various forms of data.	Understand	This would require the learner to recall various forms of data	CO 1
14	Relate the various sources of data?	Understand	This would require the learner to recall the sources of data	CO 1
15	Classify different types of varibles with an example.	Understand	This would require the learner to recall the different types of variables	CO 1
PART-C SHORT ANSWER QUESTIONS				
1	What is a data?	Remember	–	CO 1
2	What are the different sources of data?	Remember	-	CO 1
3	Define codebook.	Remember	-	CO 1
4	What is Data Cleaning?	Remember	-	CO 1
5	What is Data Screening?.	Remember	-	CO 1
6	Define any two principles of file management.	Remember	-	CO1
7	Specify naming conventions of data management.	Understand	This would require the learner to recall naming conventions of data management	CO 1
8	List out various principles of file management.	Remembe	-	CO 1

9	What are the different forms of data?	Remember	-	CO 1
10	What is data management?	Remember	-	CO 1
11	Illustrate any 3 coding tasks in data management	Understand	This would require the learner to recall coding tasks	CO 1
12	List the commands to reperesent information in code book.	Remember	-	CO 1
13	Define the principles for naming conventions n data management.	Remember	-	CO 1
14	What are the sources of data?	Remember	-	CO 1
15	What is a variable?	Remember	-	CO 1
MODULE II				
SECONDARY, PRIMARY AND ADMINISTRATIVE DATA				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Identify different types of secondary Data and its uses	Remember	-	CO 2
2	Classify different sources of secondary Data?	Understand	This would require the learner to recall different sources of secondary Data?	CO 2
3	Demostarte a simple test of the conceptual model.	Understand	This would require the learner to recall simple test of the conceptual model	CO 2
4	List out differences between primary data and administrative Data?	Understand	This would require the learner to recall differences between primary data and administrative Data	CO 2
5	Illustarte some examples of searching for downloading and importing data	Understand	This would require the learner to recall downloading and importing Data	CO 2
6	Describe briefly about Linking Datasets.	Remember	-	CO 2
7	Illustrate differences between primary data and administrative Data?	Understand	This would require the learner to recall differences between primary data and administrative Data	CO 2

8	What are the uses of secondary data?	Understandr	This would require the learner to recall uses of secondary data.	CO 2
9	Summarize the limitations of secondary data?	Understand	This would require the learner to recall limitation of secondary data.	CO 2
10	Develop and summarize a simple test of the conceptual model.	Understand	This would require the learner to recall simple test of the conceptual model	CO 2
PART-B LONG ANSWER QUESTIONS				
1	Classify different types of secondary Data and its uses	Remember	-	CO 2
2	Illustrate different sources of secondary Data?	Understand	This would require the learner to recall different sources of secondary Data?	CO 2
3	Summarize a simple test of the conceptual model.	Understand	This would require the learner to recall simple test of the conceptual model	CO 2
4	Compare and contrast between primary data and administrative Data?	Understand	This would require the learner to recall differences between primary data and administrative Data	CO 2
5	Demonstrate some examples of searching for downloading and importing data	Understand	This would require the learner to recall downloading and importing Data	CO 2
6	Explain briefly about Linking Datasets.	Remember	-	CO 2
7	Mention different types of secondary Data and its uses	Remember	-	CO 2
8	What are the different sources of secondary Data?	Understand	This would require the learner to recall different sources of secondary Data?	CO 2
9	Develop and summarize a simple test of the conceptual model.	Understand	This would require the learner to recall simple test of the conceptual model	CO 2
10	Illustrate differences between primary data and administrative Data?	Understand	This would require the learner to recall differences between primary data and administrative Data	CO 2

11	What are the uses of secondary data?	Understandr	This would require the learner to recall uses of secondary data.	CO 2
12	Summarize the limitations of secondary data?	Understand	This would require the learner to recall limitation of secondary data.	CO 2
PART-C SHORT ANSWER QUESTIONS				
1	List various types of secondary data.	Remember	This would require the learner to recall the types of secondary data.	CO 2
2	List various uses of secondary data.	Understand	This would require the learner to recall the uses secondary data.	CO 2
3	Illustrate various uses of secondary data	Understand	This would require the learner to recall the sources secondary data.	CO 2
4	Give the principles of primary data?	Remember	-	CO 2
5	Write any three principles of Admirative data?	Remember	-	CO 2
6	Mention various types of secondary data.	Remember	This would require the learner to recall the types of secondary data.	CO 2
7	How secondary data can be used for managing a data.	Understand	This would require the learner to recall the uses secondary data.	CO 2
8	Mention various uses of secondary data	Understand	This would require the learner to recall the sources secondary data.	CO 2
9	Demostrate any two principles of Primary data?	Remember	-	CO 2
10	Write any three principles of Admirative data?	Remember	-	CO 2
11	Mention any 3 uses of secondary data?	Remember	-	CO 2
12	List out the limitations of secondary data?	Remember	-	CO 2

MODULE III				
MISSING DATA				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Mention various reasons of missing data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 3
2	Demonsrate various forms of missing data.	Understand	This would require the learner to recall various forms for Missing Data.	CO 3
3	Describe about addressing of missing data in the analysis stage.	Remember	-	CO 3
4	Illustrate different patterns of missing data	Remember	-	CO 3
5	Describe why addressing of missing data happens.	Remember	-	CO 3
6	List out different forms of missing data.	Remember	-	CO 3
7	Identify various forms of missing data.	Remember	-	CO 3
8	Why addressing of missing data happens in the analysis stage?	Remember	-	CO 3
9	Classify various forms of missing data for representing a data.	Understand	This would require the learner to recall various forms for Missing Data.	CO 3
10	Mention various types of missing data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 3
11	Mention some reasons for Missing Data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 3
12	How missing data happens due to design?	Remember	-	CO 3
13	How missing data happens due to wave data?	Remember	-	CO 3
14	What is logical inference?	Remember	-	CO 3
15	What is listwise deletion?	Remember	-	CO 3
PART-B LONG ANSWER QUESTIONS				
1	What are the reasons for missing data and explain its types	Understand	This would require the learner to recall reasons for Missing Data.	CO 3

2	Discuss about various forms of missing data.	Understand	This would require the learner to recall various forms for Missing Data.	CO 3
3	Describe about addressing of missing data in the analysis stage.	Remember	-	CO 3
4	Discuss about different patterns of missing data	Remember	-	CO 3
5	Describe addressing of missing data.	Remember	-	CO 3
6	Explain why missing data is a problem?	Undestand	This would require the learner to recall missing data	CO 3
7	Mention various forms of missing data.	Remember	-	CO 3
8	Why addressing of missing data happens in the analysis stage?	Remember	-	CO 3
9	Demostrate various forms of missing data for representing a data.	Understand	This would require the learner to recall various forms for Missing Data.	CO 3
10	Outline the various types of missing data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 3
PART C-SHORT ANSWER QUESTIONS				
1	What are different types of missing data?	Remember	-	CO 3
2	Demonstrate various patterns of missing data?	Remember	-	CO 3
3	What are different forms of missing data?	Remember	-	CO 3
4	What is unit nonreponse missing data?	Remember	-	CO 3
5	Why are missing data a problem?	Understand	This would require the learner to recall the data missing	CO 3
6	Give some reasons for Missing Data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 5
7	Mention various types of missing data?	Remember	-	CO 3

8	Illustrate various patterns of missing data?	Remember	-	CO 3
9	Classify different forms of missing data?	Remember	-	CO 3
10	Why is missing a data happens?	Understand	This would require the learner to recall the data missing	CO 3
11	Mention some reasons for Missing Data.	Understand	This would require the learner to recall reasons for Missing Data.	CO 3
12	How missing data happens due to design?	Remember	-	CO 3
13	How missing data happens due to wave data?	Remember	-	CO 3
14	What is logical inference?	Remember	-	CO 3
15	What is listwise deletion?	Remember	-	CO 3
MODULE IV				
DATA PRESENTATION				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Illustrate how the data is to be presented and visualized.	Understand	This would require the learner to recall the presentation and visualization of data	CO 4
2	Demostarte Clarity, Precision and Efficiency, principles.	Remember	This would require the learner to recall about tables.	CO5
3	Explain the principles of presenting data.	Remember	This would require the learner to recall about tables.	CO5
4	Classify different types of tables and Graphics.	Understand	This would require the learner to recall types of tables and graphics.	CO 4
5	Mention different types of tables.	Understand	This would require the learner to recall types of tables and graphics.	CO 4
6	Identify different types of graphics.	Understand	This would require the learner to recall different types of graphics.	CO 4
7	Desribe various principles of data presentation.	Remember	-	CO 4

8	How the data is to be visualized and Explain it with an an example.	Understand	This would require the learner to recall the visualization of data.	CO 4
9	What is a graph?	Remember	-	CO 4
10	Define a plot?	Remember	-	CO 4
11	What is a Chart?	Remember	-	CO 4
12	What are Illustrations?	Remember	-	CO 4
13	Define a diagram in data presentation?	Remember	-	CO 4
14	What is a visiual image?	Remember	-	CO 4
15	What are two types of tables?	Remember	-	CO 4
PART-B LONG ANSWER QUESTIONS				
1	Explain how the data is to be presented and visualized.	Understand	This would require the learner to recall the presentation and visualization of data	CO 4
2	Describe Clarity, Precision and Efficiency, principles.	Remember	This would require the learner to recall about tables.	CO 5
3	Describe principles of presenting data.	Remember	This would require the learner to recall about tables.	CO 5
4	Illustrate different types of tables and Graphics.	Understand	This would require the learner to recall types of tables and graphics.	CO 4
5	Demostrate different types of tables.	Understand	This would require the learner to recall types of tables and graphics.	CO 4
6	Classify different types of graphics.	Understand	This would require the learner to recall different types of graphics.	CO 4
7	Explain various principles of data presentation.	Remember	-	CO 5
8	Demostarte how data is to be visualized witan an example.	Understand	This would require the learner to recall the visualization of data.	CO 4
9	Summarize Aspect ratio, Data ordering,Typeface	Understand	This would require the learner to recall principles of data presentation .	CO 4

9	Define the follwing terms i)Graph ii)Plot iii)Chart iv) Illustration v)Table	Remember	-	CO 4
10	Build the data visiualization of any application using graphs and tables.	Apply	-	CO 4
11	Build the data visiualization of any application using any 3 graphs	Apply	-	CO 4
12	Build the data visiualization of any application using tables.	Apply	-	CO 4
PART C-SHORT ANSWER QUESTIONS				
1	Define different types of tables for data presentation.	Remember	-	CO 4
2	Define different types of graphics for data presentation.	Remember	-	CO 4
3	What are the principles of data presentation?	Remember	-	CO 5
4	Define clarity principle.	Remember	-	CO 5
5	Define precision principle.	Remember	-	CO 5
6	Define efficiency principle	Remember	-	CO 5
7	Illustrate main principles of data presentation?	Remember	-	CO 5
8	List out different types of tables for data presentation.?	Remember	-	CO 4
9	What is a visiual image?	Remember	-	CO 4
10	What are two types of tables?	Remember	-	CO 4
11	What is a graph?	Remember	-	CO 4
12	Define a plot?	Remember	-	CO 4
13	What is a Chart?	Remember	-	CO 4
14	What are Illustrations?	Remember	-	CO 4
15	Define a diagram in data presentation?	Remember	-	CO 4

MODULE V				
DESIGNING TABLES AND GRAPHICS FOR DATA PRESENTATIONS				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Define a table? Write a brief note on tables.	Understand	This would require the learner to recall about tables.	CO 6
2	Describe about tables with an example.	Understand	This would require the learner to recall about tables.	CO 6
3	Define graphics and explain it briefly.	Apply	This would require the learner to recall about graphics.	CO 6
4	Demostarte examples of graphics.	Understand	This would require the learner to recall the examples of graphics.	CO 6
5	List out differences between tables and graphics.	Understand	This would require the learner to recall the differences between tables and graphics.	CO 6
6	Identify differences between tables and graphics with an example.	Understand	This would require the learner to recall the differences between tables and graphics.	CO 6
7	What is a table?	Remember	-	CO 6
8	What is alignment in a table?	Remember	-	CO 6
9	What are graphics?	Remember	-	CO 6
10	What is a bar chart?	Remember	-	CO 6
11	Defina dot plots.?	Remember	-	CO 6
12	What is a Line Graph?	Remember	-	CO 6
13	What is a Scatter plot?	Remember	-	CO 6
PART-B LONG ANSWER QUESTIONS				
1	What is a table? Write a brief note on tables.	Understand	This would require the learner to recall about tables.	CO 6
2	Discuss about tables with an example.	Understand	This would require the learner to recall about tables.	CO 6
3	What are graphics and explain it briefly.	Apply	This would require the learner to recall about graphics.	CO 6

4	Discuss about examples of graphics.	Understand	This would require the learner to recall the examples of graphics.	CO 6
5	Compare and contrast between tables and graphics	Understand	This would require the learner to recall the differences between tables and graphics.	CO 6
6	Differences between tables and graphics	Understand	This would require the learner to recall the differences between tables and graphics.	CO 6
7	Discuss any 7 differences between tables and graphics with an example	Understand	This would require the learner to recall the differences between tables and graphics.	CO 6
8	Build the table for any application.	Apply	-	CO 4
9	Construct Line Graph and Scatter plot for any application.	Apply	-	CO 4
10	Apply Bar chart and Dot plot for any application.	Apply	-	CO 4
11	Construct Dot plots and Scatter plot for any application.	Apply	-	CO 4
12	Develop a Line Graph and Scatter plot for any application.	Apply	-	CO 4
13	Construct Bar chart and Scatter plot for any application.	Apply	-	CO 4
14	Develop a Line Graph and Dot plots for any application.	Apply	-	CO 4
PART-C SHORT ANSWER QUESTIONS				
1	Give some examples of tables.	Understand	This would require the learner to recall the examples of tables	CO 6
2	Give some examples of graphics.	Understand	This would require the learner to recall the examples of graphics	CO 6

3	What is a table for data presentation?	Remember	-	CO 6
4	What are graphics for data presentation?	Remember	-	CO 6
5	What are different representation of data in graphics?	Remember	-	CO 6
6	Give any two examples of tables.	Understand	This would require the learner to recall the examples of tables	CO 6
7	Give any two examples of graphics.	Understand	This would require the learner to recall the examples of graphics	CO 6
8	Differences between table and graphics.	Understand	This would require the learner to recall the examples of tables and graphics	CO 6
9	What is a table?	Remember	-	CO 6
10	What is alignment in a table?	Remember	-	CO 6
11	What are graphics?	Remember	-	CO 6
12	What is a bar chart?	Remember	-	CO 6
13	Defina dot plots.?	Remember	-	CO 6
14	What is a Line Graph?	Remember	-	CO 6
15	What is a Scatter plot?	Remember	-	CO 6

Course Coordinator: **HOD CSE(DS)**
Dr M V Krishna Rao, Professor