



Faculty of Management Studies

End Semester Examination May 2025

MS3EG15 Data Analysis Using "R"

Programme	:	BBA	Branch/Specialisation	:	-
Duration	:	3 hours	Maximum Marks	:	60

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary.

Notations and symbols have their usual meaning.

Section 1 (Answer all question(s))						Marks	CO	BL
Q1.	What is the default data structure created when using the c() function?					1	1	1
	<input checked="" type="radio"/> Vector		<input type="radio"/> Matrix					
	<input type="radio"/> List		<input type="radio"/> Data frame					
Q2.	Which operator is used for assignment in R?					1	1	1
	<input type="radio"/> =		<input type="radio"/> :=					
	<input checked="" type="radio"/> <-		<input type="radio"/> ==					
Q3.	What is the use of filter() in dplyr?					1	2	3
	<input checked="" type="radio"/> Subset rows		<input type="radio"/> Summarize data					
	<input type="radio"/> Add rows		<input type="radio"/> Pivot table					
Q4.	What will distinct() return when used on a data frame?					1	2	3
	<input type="radio"/> All rows		<input type="radio"/> Only NA values					
	<input type="radio"/> Row count		<input checked="" type="radio"/> Unique rows					
Q5.	Which function is used to create a histogram in base R?					1	3	1
	<input checked="" type="radio"/> hist()		<input type="radio"/> bar					
	<input type="radio"/> pie		<input type="radio"/> plot()					
Q6.	Which package in R implements the Grammar of Graphics?					1	2	1
	<input type="radio"/> lattice		<input checked="" type="radio"/> ggplot2					
	<input type="radio"/> grid		<input type="radio"/> base					
Q7.	What is the purpose of t.test() in R?					1	4	1
	<input checked="" type="radio"/> Hypothesis test		<input type="radio"/> Regression					
	<input type="radio"/> Variance		<input type="radio"/> Correlation					
Q8.	Which function is used to test independence in a contingency table?					1	4	2
	<input checked="" type="radio"/> chisq.test()		<input type="radio"/> t.test()					
	<input type="radio"/> cor.test()		<input type="radio"/> lm()					
Q9.	Which package is used for machine learning in R?					1	5	1
	<input checked="" type="radio"/> Random forest		<input type="radio"/> Tidymverse					
	<input type="radio"/> Readr		<input type="radio"/> Stringr					
Q10.	What is R Markdown used for?					1	5	2
	<input type="radio"/> Saving datasets		<input checked="" type="radio"/> Reporting					
	<input type="radio"/> Analysis		<input type="radio"/> Debugging					

Section 2 (Answer all question(s))

Marks CO BL

Q11. Describe logical vectors with an example.

4 1 3

Rubric	Marks
3 marks for logical vector and 1 mark for example	4

Q12. (a) Explain different data structures in R with examples.

6 1 4

Rubric	Marks
1 marks for each point	6

(OR)

(b) How can you inspect and manage workspace variables in R?

Rubric	Marks
1 marks for each point	6

Section 3 (Answer all question(s))

Marks CO BL

Q13. How do you import data from CSV and Excel files in R?

4 2 3

Rubric	Marks
1 mark for each step	4

Q14. (a) Describe steps to handle missing and duplicate values in R.

6 2 3

Rubric	Marks
1 marks for each step	6

(OR)

(b) How do you clean inconsistent data in a dataset?

Rubric	Marks
1 mark for each point	6

Section 4 (Answer all question(s))

Marks CO BL

Q15. Describe the importance of data visualization in data analysis.

4 3 2

Rubric	Marks
1 mark for each point	4

Q16. (a) How do you create a multi-faceted plot in ggplot2?

6 3 3

Rubric	Marks
1 mark for each point	6

(OR)

(b) Compare boxplot and histogram. When would you use each?

Rubric	Marks
3 mark for comparison and 3 marks for use	6

Section 5 (Answer all question(s))

Marks CO BL

Q17. How is ANOVA different from a t-test?

4 4 4

Rubric	Marks
1 mark for each difference	4

Q18. (a) Explain the steps of linear regression with implementation in R.

6 4 3

Rubric	Marks
1 mark for each step	6

(OR)

(b) How do you evaluate regression models in R?

Rubric	Marks
1 mark for each step	6

Section 6 (Answer all question(s))

Marks CO BL

Q19. Describe basic concepts of clustering in R.

4 5 2

Rubric	Marks
1 mark for each point	4

Q20. (a) How do you work with large datasets in R efficiently?

6 5 4

Rubric	Marks
1 mark for each point	6

(OR)

(b) How R can be integrated with Python or SQL?

Rubric	Marks
1 mark for each point	6
