



UNIVERSITI MALAYSIA TERENGGANU

FINAL EXAMINATION

SEMESTER I SESSION 2025/2026 (BACHELOR DEGREE)

COURSE	:	STATISTICAL METHODS FOR ACCOUNTING AND FINANCE
COURSE CODE	:	FNC3123
DURATION	:	3 HOURS

MATRIC NO.	:	_____
PROGRAMME	:	_____
SEAT NO.	:	_____

INSTRUCTIONS TO CANDIDATES

- i. Answer all questions.
- ii. All answers must be written in answer booklet provided.
- iii. Formulas can be found in the booklet provided separately.

DO NOT OPEN THE QUESTION PAPER UNTIL INSTRUCTED

THIS QUESTION PAPER CONSISTS OF FOUR (4) PRINTED PAGES

Please answer all question.

1. RAI AGRITECH INDUSTRIES is a start-up company manufacturing rack and equipment for florist and nursery sellers. Currently, they hired seven production staff (considered the population). The hourly wages of each employee are given in Table 1.

Table 1

ID	Staff Name	Hourly Wages
S01	Jamal	RM14
S02	Samihah	RM14
S03	Suryani	RM16
S04	Borhan	RM16
S05	Janna Nicky	RM14
S06	Amy Mastura	RM16
S07	Tengku Anis	RM18

- Compute the population mean. (3 marks)
 - Find the sampling distribution of the sample mean for samples of size 2. (2 marks)
 - List all possible samples of two employees and compute the sample mean for each. (7 marks).
 - Tabulate the sampling distribution and the sample mean probability. (2 marks)
 - Compute the mean of the sampling distribution. (2 marks)
 - Describe the two observations that can be made about the population and the sampling distribution. (4 marks)
2. Syarikat Logistik Aman Jaya is planning to purchase a second-hand lorry for its daily delivery operations. The management has assigned an employee to browse online platforms to find a suitable vehicle for the company's needs. One of the main requirements is that the total distance travelled by the used lorry must not exceed 500 kilometers. The following are the recorded mileage of several used lorries identified by the employee:

418	420	421	422	425	427
431	434	437	439	446	447
448	453	454			

- Compute the mean for kilometers covered by the used trucks. (3 marks)
- Compute the standard deviation for the kilometers covered by the used trucks. (9 marks)
- By assuming that the population's distribution is normal, construct a 99% confidence interval for the mean of the kilometers covered by the used trucks. (5 marks)
- Predict if it is reasonable to conclude that the population mean for the kilometers covered by trucks is 440. (3 marks)

3. You have recently been appointed as the Chief Investment Officer of UMD-CGX Trading Centre (UCTC), an investment company licensed by the Securities Commission Malaysia. To explore your fund performance, you have been tasked to solve the following issues.
- UCTC Dragon Fund aims for a mean monthly return of 1.2%. From the last 25 months, the sample shows a mean of 0.8% with a sample standard deviation of 1.5%. Assume monthly returns are approximately normal and σ is unknown. At $\alpha = 0.05$, test whether the fund's true mean monthly return differs from 1.2%.
 - Classify the null and alternative hypotheses. (2 marks)
 - Compute the test statistic. (2 marks)
 - Present the critical value and the rejection region. (2 marks)
 - Formulate and interpret the results. (2 marks)
 - Your analyst has compared the mean monthly returns of two mutual funds over the last 20 months as follows:

Funds	Sample Mean	Sample Std Deviation
Alpha Shariah	1.50%	0.80%
Beta Conventional	0.90%	1.00%

Assume independent samples, approximately normal returns, and equal population variances. At $\alpha = 0.05$, you are required to test whether the mean returns differ.

- Classify the null and alternative hypotheses. (2 marks)
 - Compute the pooled standard deviation. (3 marks)
 - Compute the test statistic. (3 marks)
 - Present the critical value and the rejection region. (2 marks)
 - Formulate and interpret the results. (2 marks)
4. A sample of 10 undergraduate students was selected from the Department of Finance. Each student reported the average number of study hours per day (X) during the revision week before the final exam. Their corresponding exam score (Y) in the Statistics course was also recorded.

Student	Study Hours, X	Exam Score, Y
Aminah	2	40
Mohamad	3	48
Ben	4	53
Julia	5	60
Kamelia	6	65
Chong	7	70
Atikah	8	75
Wong	9	82
Zack	10	88
Maryam	11	91

- Demonstrate the regression equation between study hours and exam scores. (22 marks)
- Predict whether more study hours tend to increase or decrease exam scores by analysing the equation. (2 marks)
- If the student spent 12 hours studying, estimate the score he or she would achieve. (2 marks)

5. Zulaikha is an economic analyst at Bright Future Consultancy. She is tasked with studying the change in living costs in Kuala Nerus. The living cost includes basic household items. She was given the following sample data of selected items, together with their prices and quantities consumed by a family in 2023 and 2024:

Item (per unit)	2023		2024	
	Price (RM)	Quantity (units)	Price (RM)	Quantity (units)
Bread (loaf)	3.00	4	3.50	5
Milk (1 litre)	6.00	3	6.50	4
Eggs (10 pcs)	5.00	4	5.50	3
Sugar (1 kg)	2.50	2	3.00	2
Cooking Oil (1 litre)	8.00	3	9.00	4

- Compute the Laspeyres Price Index for 2024 using 2023 as the base period. (6 marks)
- Compute the Paasche Price Index for 2024 using 2023 as the base period. (6 marks)
- Interpret your findings in parts (b) and (c) above. (2 marks)

End of Question Paper