

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

FIRST SEMESTER EXAMINATION – 2022

FOOD TECHNOLOGY – 4TH YEAR DEGREE

FT 414 INNOVATION AND ENTREPRENEURSHIP

WEDNESDAY 8TH JUNE 2022 – 8:20 A.M.

TIME ALLOWED: 3 HOURS

INFORMATION FOR CANDIDATES

1. You have 10 minutes to read the paper. You must not begin writing in the answer booklet during this time.
2. **ANSWER ALL QUESTIONS.**
3. All answers must be written on the answer book provided.
4. Write your name and number clearly on the front page. **Do it now.**
5. Calculators are permitted in the examination room. Notes and textbooks are not allowed.
6. Show all working and calculations in the answer book.
7. Data required is given on the data sheet.

MARKING SCHEME:

Question 1	[15 marks]
Question 2	[14 marks]
Question 3	[10 marks]
Question 4	[14 marks]
Question 5	[23 marks]
Question 6	[24 marks]

ANSWER ALL QUESTIONS

1. (a) In product development a quote says “no dictation” but to “create one unified technology”. Explain what this means. [5 marks]
- (b) Below is a simple idea screening table.

WEIGHTS	CRITERIA/SCORE						RESULTS		
	15%	17%	23%	5%	19%	21%	BASE SCORE (Out of 60)	WEIGHTED SCORE	RANK OF IMPORTANCE
PRODUCT IDEA	Size of Target Market	Level of Competition	Ease of Manufacture	Time to Market (Development time)	Profitability & Rate of Return	Tangible Benefits to user			
Fruit juice	5	3	8	7	5	8			
Ice cream	4	5	5	8	8	6			
Ice block	6	3	9	9	8	4			
Beef jerky	5	7	6	7	7	8			
Cup cake	4	4	7	7	6	6			

From the above table:

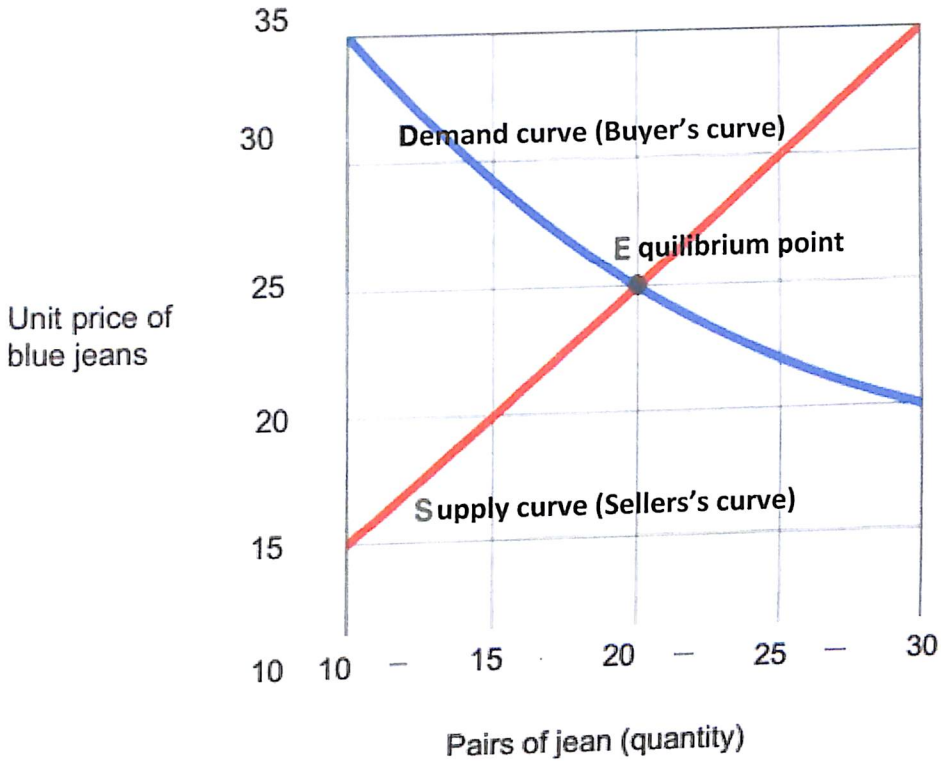
- (i) Estimate the base and the weighted scores for each of the product ideas. [4 marks]
- (ii) Which will be your best product idea? [2 marks]
- (c) Write short notes on:
- (i) Problem definition. [2 marks]
- (ii) Setting objectives. [2 marks]

(Total = 15 marks)

2. (a) There are seven important reasons why entrepreneurship education is vital in life. Discuss ANY THREE. [6 marks]
- (b) Systematic approach to *Design Thinking* was developed by Stanford University, USA and now is used globally to solve complex problems. Discuss. [8 marks]

(Total = 14 marks)

3. (a) Discuss ANY THREE important roles that the government plays in free market system. [6 marks]
- (b) From the supply-demand curve below, answer the following:



- (i) What are the quantities of jeans expected to be sold by the buyer compared to the actual demand at unit price of 35? [1½ marks]
- (ii) Discuss the equilibrium point of the curve. [2½ marks]
- (Total = 10 marks)

4. (a) Differentiate between:
- (i) Goal and objective in strategic planning. [2 marks]
- (ii) Tactical and operational plan. [2 marks]
- (b) Discuss ANY TWO broad categories of leadership styles. [6 marks]
- (c) What is an organizational culture? Discuss. [4 marks]
- (Total = 14 marks)

5. (a) By comparison discuss the difference between the old and new concept of marketing. [4 marks]

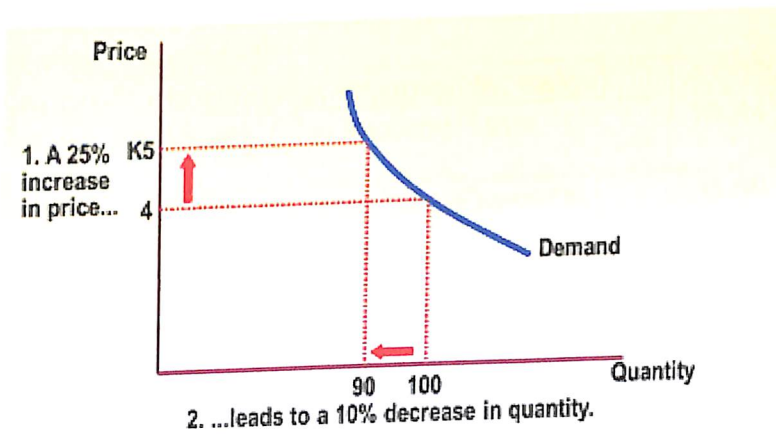
(b) Compare and contrast needs and wants in marketing. [4 marks]

(c) With respect to profit and loss calculations of a business Operation, discuss *Break Even Point* (BEP). [3 marks]

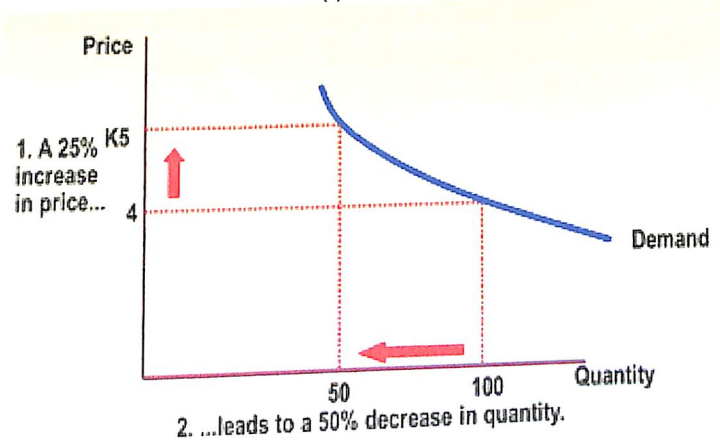
(d) Tambu Man Ltd produces virgin coconut oil for business. Tambu Man Ltd produces 20,000 products (50ml/bottle) and would want to sell at a good price to make a profit. The competitor is selling similar product at K2/product. The company has fixed cost of K4000 (equipment) and his variable cost in producing virgin oil is at a rate of K0.6 per product. Tambu Man Ltd is to sell its product at K1.80. Estimate:

- (i) Total cost. [2 marks]
- (ii) Total revenue. [1 mark]
- (iii) Profit margin. [1 mark]
- (iv) Break Even Point. [3 marks]

(e) Below are Price Elastic Demand Curves (PED).



(i)



(ii)

Identify and discuss each of the curves.

[5 marks]

(Total = 23 marks)

6. (a) (i) What is a budget? Discuss. [3 marks]
 (ii) Define variance in budgeting. [1½ marks]
 (iii) Budget variance highlights important points in a business operation. Discuss. [6 marks]
- (b) Table below gives some normal business evaluation standards to assess business performances. Use this to interpret your answers.

Ratio	Average Industry Standard
Current (Current assets /Current liabilities)	1.60
Quick (Cash + Mk security+Acct Reci/Current liabilities)	0.9
Inventory turnover (Cost of goods sold/Inventory)	16.22
Asset turn over (Net sales/Total assets)	4.11
Debt -to- Equity (Long term debt/Owner's equity)	0.60
Times interest earned (EBIT/Annual interest expense)	7.40
Net profit margin (Net income/Net sales)	4.00%
Return on assets (Net income/Total assets)	16.44%
Return on Equity (Net income/Owner's equity)	26.30

Yomi Investments Ltd Business Data:

- Current assets: K3,000,000 (K3m).
- Total assets: K10,000,000(K10m).
- Net sales: K25,000,000 (K25m).
- Current liabilities; K1,500,000(K1.5m)
- Cash + Marketable secu+ accunts receivable: K1,800,000 (K1.8m).
- Cost of goods sold: K10,000,000 (K10m).
- Inventory: K2,000,000 (K2m).
- Long term debt: K4,000,000 (K4m).
- Owner's equity: K3,000,000 (K3m).
- Earnings before interest and taxes (EBIT): K1,500,000. (K1.5m).
- Net Income; K900,000 (K0.9m).

Calculate the ratios listed in the above table and interpret your answers.

[13½ marks]

(Total = 24 marks)