



UNIVERSITY COLLEGE TATI (UCTATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: DTD 2062
COURSE TITLE	: TOOL AND DIE ECONOMICS
SEMESTER/SESSION	: SEMESTER 1 / 2023-2024
TIME	: 3 HOURS

Instructions:

1. This booklet contains **5** questions. Answer **all** questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise up your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 5 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

- a) What is the setup time? (3 marks)
- b) Define office overhead with suitable examples. (4 marks)
- c) Distinguish between direct material and indirect material. (5 marks)
- d) A guide bush was produced by a vendor in batches of 150. The direct material cost is RM 20 and direct labor cost is RM 20. Factory expenses charge is 35% of the total material and labor cost. Office and selling expenses respectively charges are 20% of total factory cost. Determine the selling price for each product if the profit required is 13% of total cost. (8 marks)

QUESTION 2

- a) Define Estimation. (4 marks)
- b) What do you understand by over estimation and under estimation? (4 marks)
- c) Find out the cost for the given plastic moulded component.

No of cavity	= 2
Component weight	= 20.5 gms
Sprue Weight	= 3 gms
Runner weight	= 1.5 gms
Raw material	= Polystyrene clear
Raw material Price	= Rm 27/kg
Cycle time	= 30 sec
Projected Area	= 54.3 cm ²
Injection Pressure	= 650 kg/cm ²
Load Capacity	= 35.35 T
Machine capacity	= 80
Machine rate/shift	= Rm 300
Mould cost	= 26,000
(To be amortized in one year)	

(12 marks)

QUESTION 3

- a) What is material? (4 marks)
- b) List at least four (4) components of cost (4 marks)
- c) Calculate the machine hour rate for the following details: - (12 marks)

Cost of machine	= RM 7,500
Installation and erection charge	= RM 255
Scrap value	= RM 350
Energy cost	= RM 80 / year
Maintenance cost	= RM 300 / year
Space cost	= RM 100 / year
Rate of interest	= 9%
Labor cost	= RM 5 hour
Overheads	= 130% of labor cost
Assumed life of machine	= 15 years.

QUESTION 4

- a) Define depreciation. (3 marks)
- b) Explain **one** of the cost elements. (4 marks)
- c) Explain briefly and give the advantages of straight-line depreciation method. (5 marks)
- d) Calculate the depreciation value in the following case. (8 marks)

Cost of machine	= RM 5,000
Cost of accessories	= 2,200
Installation and erection charge	= 500
Scrap value of the machine	= 800
Future worth of the machine	= 30% for 15 years

QUESTION 5

- a) What is the meaning of measurement and checking allowance? (4 marks)
- b) Explain the typical purpose of costing. (6 marks)
- c) On analyzing a machine tool, the manufacturer found that the following expenditure was incurred in the manufacture of a grinding machine.

Material	= Rm 209,000
Labor Cost	= Rm 110,000
Depreciation of plant	= Rm 8,000
Depreciation of machinery	= Rm 10,000
Depreciation of office equipment	= Rm 2,000
Office Rent	= Rm 1,000
Taxes	= Rm 2,000
Insurance for factory	= Rm 3,000
General office expenses	= Rm 2,400
Factory utilities	= Rm 6,600
Office utilities	= Rm 4,500
Direct expenses	= Rm 1,500
Sales commission	= Rm 8,000
Plant manager's salary	= Rm 15,000
Office staff salary	= Rm 20,000
Sales income	= Rm 660,000

Find out **direct cost, factory cost, production cost, total cost and profit.**

(10 marks)

-----End of Question-----

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Criteria	Marks
All questions answered will be marked according to the answer schema	/100

