

## CHAPTER 6: Job, Batch & Service Costing

### PART A: STRUCTURED QUESTIONS

- Clearly explain job, batch & service costing with an example.

Job costing	Batch Costing	Service Costing

- Differentiate service costing and manufacturing costing.

### PART B: PRACTICAL QUESTIONS-JOB ORDER COSTING & BATCH ORDER COSTING

- Thomas Manufacturing uses a job order cost system in each of its three departments. Manufacturing overhead applied to jobs on basis of direct labor cost in Department A, direct labor hours in Department B, and machine hours in Department C.

In establishing the predetermined overhead rates for 2016 the following estimates were made for the year.

	Department		
	<u>A</u>	<u>B</u>	<u>C</u>
Manufacturing overhead (\$)	900,000	800,000	750,000
Direct labor cost (\$)	600,000	100,000	600,000
Direct labor hours	50,000	40,000	40,000
Machine hours	100,000	120,000	125,000

During January, the job cost sheets showed following actual costs and production data.

	Department		
	A	B	C

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Direct materials used (\$)	92,000	86,000	64,000
Direct labor cost (\$)	48,000	35,000	50,400
Manufacturing overhead incurred (\$)	76,000	75,000	72,100
Direct labor hours	4,000	3,500	4,200
Machine hours	8,000	10,500	12,600

Required:

- Calculate predetermined overhead rates (OARs) for each department.
- Compute total manufacturing costs assigned to jobs in January in each department.
- Determine whether under or over-applied overhead for each department.

2. Batch No. X37 incurred the following costs:

Department A	420 labor hours at £3.50
B	686 labor hours at £3.00
Direct Materials	£3,280

Factory overheads are absorbed on labor hours and the rates are £8 per hour for Department A and £5 per hour for Department B. The firm uses a cost plus system for setting selling prices and expects a 25% gross profit (sales value minus factory costs).

Administration overheads are based on 10% of sales value.

Assuming that, there are 1,000 units were produced in Batch No. X37.

You are required to calculate:

- Selling price per unit.

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- b) Administrative overheads.
  - c) Net profit per unit.
3. Fateful Morn is a jobbing company. On 1 June 2016, there was one uncompleted job in the factory. The job card for this work is summarized as follows:

Job Card, Job No 6832	
	\$
Direct materials	630
Direct labor	350
Production overhead	240
	1,220

During June, three new jobs were started in the factory, and costs of production for these jobs (including Job 6832) were as follows:

<b>Direct materials</b>	\$
Issued to: Job 6832	2,390
Job 6833	1,680
Job 6834	3,950
Job 6835	4,420
<b>Material transfers</b>	\$
Job 6834 to Job 6833	250
Job 6832 to Job 6834	620

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<b>Material returned to store</b>	\$
From Job 6832	870
From Job 6835	170
<b>Direct labor hours recorded</b>	Hours
Job 6832	430
Job 6833	650
Job 6834	280
Job 6835	410

The cost of labor hours during June 2016 was \$3 per hour, and production overhead is absorbed at the rate of \$2 per direct labor hour.

Completed jobs were delivered to customers as soon as they were completed, and the invoiced amounts (selling prices) were as follows:

Job 6832	\$5,500
Job 6834	\$8,000
Job 6835	\$7,500

Administration and marketing overheads are added to the cost of sales at the rate of 20% of costs of production.

Required:

- Prepare the job accounts (T-format) to show costs of production for each individual job during June 2016.
- Prepare the summarized job cost cards for each job, and calculate the profit or loss on each completed job.

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4. Rio manufactures Brazils to order and has the following budgeted overheads for the year, based on normal activity levels.

Production departments	Budgeted overheads (\$)	Budgeted activity
Welding	12,000	3,000 labor hours
Assembly	20,000	2,000 labor hours

Selling and administrative overheads are 25% of factory costs. An order for 500 Brazils, made as Batch 38, incurred the following costs:

Materials	\$24,000
Labor	200 hours in Welding Department at \$5 per hour 400 hours in Assembly Department at \$10 per hour

\$1,000 was paid for the hire of x-ray equipment for testing the accuracy of the welds.

You are required to compute the cost per unit for Batch 38.

### SERVICE COSTING

- 1) Information has been collected about two hospitals in the year.

	<b>Loamshire General</b>	<b>Brownton Central</b>
Number of beds	780	500
Number of in-patients	23,472	8,165
Average stay	7.5 days	*
Number of out-patient visits	216,500	63,920

\* Not recorded but bed occupation percentage was 85%

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	<b>Cost Breakdown</b>			
	<b>Loamshire General</b>		<b>Brownton Central</b>	
	<b>In-patients</b>	<b>Out-patients</b>	<b>In-patients</b>	<b>Out-patients</b>
	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Direct patient care supplies, drugs etc.	1,821,520	693,600	1,551,350	285,450
Medical staff	8,729,100	3,308,950	6,832,700	1,975,050
Support services	2,210,500	2,563,700	1,845,380	1,591,620
Indirect costs of general services	3,524,470	1,721,800	1,937,410	635,600
<b>Total</b>	<b>16,285,590</b>	<b>8,288,050</b>	<b>12,166,840</b>	<b>4,487,720</b>

Required to calculate:

- a) Average length of stay in Brownton Central.
  - b) Bed occupation percentage in Loamshire General.
  - c) Cost per in-patient day for both hospitals.
  - d) Cost per out-patient attendance for both hospitals.
- 2) Rick Shaw operates a small fleet of delivery vehicles. Standard costs have been established as follows:

Loading	1 hour per tonne loaded
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Loading costs:	
Labor (casual)	\$2 per hour
Equipment depreciation	\$80 per week
Supervision	\$80 per week
Drivers' wages (fixed)	\$100 per man per week
Petrol	\$0.10 per kilometre
Repairs	\$0.05 per kilometre
Depreciation	\$80 per week per vehicle
Supervision	\$120 per week
Other general expenses (fixed)	\$200 per week

There are two drivers and two vehicles in the fleet.

During a slack week, only six journeys were made.

Journey	Tonnes carried (one way)	One-way distance of journey (kilometres)
1	5	100
2	8	20
3	2	60
4	4	50
5	6	200
6	5	300

Calculate the expected average full cost per tonne/kilometre for the week.

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- 3) You are a cost accountant for Hawke Transport Co., a passenger transport concern. The following information from previous year's annual accounts and other sources are available:

Routes	FH 1	FH 2	FH 3	FH 4
Vehicles	22	12	16	8
Number mileage used	250,000	150,000	200,000	100,000
	\$	\$	\$	\$
Revenue from passengers	77,500	48,000	66,000	26,000
Variable costs	62,500	37,500	50,000	25,000
Fixed costs:				
Specific to vehicles	4,400	2,400	3,200	1,600
Garage & administration	7,700	4,200	5,600	2,800
Profit/ (loss)	2,900	3,900	7,200	(3,400)

You are asked to submit a report to the managing director on the following:

- a) The rates of profitability of routes FH 1, FH 2 and FH 3.
  
- b) A proposal to discontinue route FH 4.
  
- c) A proposal to reduce the service on route FH 4 by half on the assumption that only 4 vehicles would be used, running a total of 50,000 miles per annum. Assume that the estimated revenue from passengers would be reduced by \$10,000 per annum and that the next year's order for replacement vehicles would be reduced by four.
  
- d) A proposal to introduce cheap off-peak fares on route FH 1. The present off-peak revenue is \$40,000 per annum and it is estimated that if off-peak fares were reduced by 25% there would be a 30% increase in the number of passengers using the service at off-peak periods.



