

## Chapter 1: Productivity

### Question 1.1

In not more than ten lines, discuss why it is important to measure productivity in an organization. Why financial indicators such as revenue and profit are not reflective of actual effectiveness and efficiency in company operations.

(5 marks)

### Question 1.2

XY Sdn. Bhd. is a local frozen food manufacturing company. To meet the increased customer demand in 2014 the management has hired four (4) contract workers in addition to the existing eight (8) full time workers (year 2013). The average monthly production for 2013 was 8000 packages and the average monthly production for 2014 was 8400 packages. The selling price was RM40 and RM45 per package for 2013 and 2014 respectively. Table 1 provides other related input and output data.

Table 1: Input and output data

	Year 2013	Year 2014
Monthly average production output (packages)	8000	8400
Working hours per day	8 hours	8 hours
Average monthly number of working days	20	21
Average wage per hour per worker (RM)	RM12.00	RM13.00
Amount of material (kg per month)	200	210
Price of material (RM per kg)	2.00	2.20
Average monthly energy used (kW)	400 at RM0.40 /kW	500 at RM0.45/kW
Annual capital costs (RM)	100,000	110,000
Annual miscellaneous expenses (RM)	10,000	13,000

Deflator indices for year 2014 for capital and miscellaneous expenses were 1.1 and 1.3 respectively. Assume the contract and full-time workers were paid the same wage rate.

- a). Compare the performance of the above company in term of average monthly profit (5 marks)
- b). Analyze and comment on the performance of the above company with respect to labour productivity and total productivity (multi-factor productivity). (10 marks)
- c). Based on the above analysis, suggest one possible approach/strategy/technique for the company to further improve its productivity. Provide justification for your suggestion. (5 marks)

### Question 1.3

- a) Compare the concept of profit, production rate and productivity
- b) A manufacturing company makes 2000 wheels in January 2013 and 2500 wheels in February 2013. The selling price for each wheel is \$150 in January 2013 and \$160 in February 2013.

The following resources were used in the production:

	Jan 2013	Feb 2013
Working hours per day	8 hours for 21 days	8 hours for 22 days
Number of labour (persons)	10	10
Wage per hour	\$10.50	\$11.50
Raw Material (kg)	200 kg at \$2.00 per kg	210 kg at \$2.50 per kg
Energy (kW)	500 kW at \$0.40 /kW	600 kW at \$0.40/kW
Capital Costs	\$100,000	\$100,000
Other expenses	\$10,000	\$10,000

Compare the performance of the wheel production for January 2013 and February 2013 with respect to partial (single factor) and total productivity (multifactor) productivity. Specify your assumptions.