

IB Business Management – Operations Management

5.5 Production planning: Exam Practice Question



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5.5 PRODUCTION PLANNING: EXAM PRACTICE QUESTION

Read the case study information below and answer the questions that follow.

MFLEX TO EXPAND OPERATIONS IN MALAYSIA



After reaching full **capacity utilisation** at its existing plant, MFLEX, the leading global maker of high-quality advanced circuit boards to the electronics industry, has leased a 35,000 square metre factory in Johor Darul Takzim, Malaysia. It has purchased new manufacturing equipment for the plant and employed 125 workers, which will mean a considerable increase in capacity and scale of operation for the company.

The factory will allow the business to respond more rapidly and flexibly to just-in-time demands from its customers. The company will also expect its suppliers to be able to deliver materials and components on a JIT

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basis and it has signed exclusive deals with certain suppliers and is connected to them by computer link to speed up ordering.

Productivity rates are expected to increase with the investment in sophisticated new capital equipment and state-of-the art IT infrastructure and software systems. Labour productivity, in particular, is forecast to become much more efficient. Currently, the existing plant employs 248 full-time equivalent staff to produce 700,000 million circuit boards monthly. The new plant will produce 1.2 million boards a month, with just 125 full-time equivalent workers.

However, rapid inflation in Malaysia, as in other countries, is forcing some businesses to re-think their use of JIT manufacturing systems. With rising costs of industrial materials and components and much higher charges for transport, some operations managers are looking again at whether the 'no buffer stock' policy of the JIT method with frequent small orders being delivered is actually costing more than a large stock-order policy.

QUESTIONS: 25 MARKS, 45 MINUTES

1. Define the following terms:
 - a. Capacity utilisation
 - b. Productivity

[4 marks]

2. Explain the difference between stock-holding costs and the costs of not holding enough stock.

[4 marks]

3. Calculate labour productivity rates at the existing plant **and** the rate forecasted at the new plant.

[4 marks]

4. Outline **two** reasons why productivity rates are important for companies such as MFLEX.

[4 marks]

5. Evaluate MLEX's decision to use JIT stock management.

[9 marks]