



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management- 3 years /Lateral
PAPER No. 16
Business Strategies and World Class Practices

Dec 2019

Date : 27.12.2019
Time : 2.00 p.m to 5.00 pm

Max. Marks :100
Duration : 3 Hrs.

Instructions:

1. The question paper is in three parts
2. Part A is compulsory. Each sub question carries one mark.
3. In Part B answer any 3 questions . Each question carries 16 marks
4. Part C is a case study with sub questions and it is compulsory.

Total marks-32
Total marks-48
Total marks-20

PART A (32 marks)
(Compulsory. Each sub-question carries 1 mark)

Q.1. Expand the following [8 marks]

- a) DFM b) CSF c) OPT d) PWP e) CNC f) SPM g) CRP h) CIM

Q. 2. State True or False (Do not reproduce the statements) [8 marks]

- i) An international business organization is a firm that engages in cross border transactions.
- ii) Class A world class manufacturer should have inventory turns in the range of 25 to 30 per year.
- iii) Distinctive competencies are core competencies.
- iv) The term world-class manufacturing was introduced by Maskell.
- v) Order winner is a criterion that differentiates products or services of a firm from another.
- vi) External exchange of die can be achieved while the machine is running.
- vii) Manufacturing is the bedrock on which the economic wealth of nation is built.
- viii) PDF 417 is a linear barcode symbology.

Q.3. Fill in the blanks. (Do not reproduce the statements) [8 marks]

- i) In the 21st century _____ will be the primary competitive motive of business.
- ii) _____ flexibility is the company's ability to introduce new products and modifications to current products.
- iii) Integration of supply chain requires _____ orientation
- iv) _____ inspection looks for errors before they become defects.
- v) Flexibility in manufacturing is referred as _____ manufacturing.
- vi) Good _____ are vital link in the supply chain
- vii) Cusum charts are used to detect _____ in variation.
- viii) The tool that operationalizes pull production system is _____.

Q.4. Match A and B [8 marks]

No.	A		B
1.	Concurrent engineering	A	Drastic improvement in performance
2.	ASRS	B	Reduction in labour force
3.	Reengineering	C	Integrated design team
4.	Downsizing	D	Computer controlled warehouse
5.	Lean production	E	Customer centric
6.	Theory of constraints	F	Group technology
7.	TQM	G	Use of minimal amount of resources
8.	Cell	H	Focus on bottlenecks

PART B
(Attempt any 3. Each question carries 16 marks)

48 marks

- Q.4. a)** What is world-class manufacturing? Explain the concept using Schonberger's model. **8 marks**
b) Explain Time based competition. **8 marks**
- Q.5. a)** Discuss the characteristics of world class customers. **[8 marks]**
b) Explain the contributions of Deming to TQM **[8 marks]**
- Q.6. a)** What is process capability and capability ratios? **[8 marks]**
b) Explain the features and significance of MBO. **[8 marks]**
- Q.7. a)** Explain the lean production tools. **[8 marks]**
b) Explain the goals and criteria of Malcom Baldrige National Quality Award **[8 marks]**
- Q.8. Write short notes any four [4 x4 = 16 marks]**
a) Theory of constraints
b) Rapid prototyping
c) Four absolutes of quality
d) Cost of quality
e) POP system

PART C

20 marks

Q. 10. Case study - Compulsory

Perlos (Texas) Inc., is a subsidiary of the Perlos Corporation, which is based in Nurmijarvi , Finland. Located in Fort Worth, Texas, the Perlos manufacturing facility produces a variety of plastic components for mobile phones. The Texas plant produces parts exclusively for Nokia, the world's leading producer of cell phones. Although some of the parts produced at Perlos plant are shipped to Nokia plants around the world, most are sent to the Nokia plant just across the street from Perlos. With around 500 employees and 300 robots, Perlo's two-year old plant is a state-of-the art facility for injection molded plastic components. The plant operates 24 hours a day.

Perlos uses a JIT approach to production control, including Kanaban cards. Nokia provides Perlos with forecasts for six months in the future and provides a blanket purchase order for plastic components. Production and delivery of components are controlled by Knanban cards. Perlos does not produce anything unless there is a Kanban card authorizing it to do so. If Noika increases production rate for cell phones during a week, then Perlos must also increase or decrease its production rate for plastic components.

Perlos make frequent deliveries of parts to Noikia throughout each day to support Noika's production plan. The parts delivered to Nokia are not packaged, which would slow Nokia's use of the parts, but rather they are placed on partitioned plastic trays holding a standard number of parts. After Noika uses the parts, the empty trays are then returned to Perlos for reuse. There are no wasted packaging materials, such as cardboard boxes, with the parts provided to Nokia's Fort Worth Plant.

Questions:

- 1) Centre to JIT philosophy is elimination of waste. How this is taken care of in Perlos plant?
- 2) Explain the concepts of JIT as mentioned in the case study.
- 3) JIT production is important before moving on to JIT supply. Substantiate.
- 4) JIT supply helps in reducing package waste. Discuss.
