



Date: 12.12.2017

Max. Marks: 100

Time: 10.00 a.m. to 1.00 p.m.

Duration: 3 Hrs.

Instructions:

1. From Part A – answer all questions (compulsory). Each sub questions carries 1 mark. **Total: 32 Marks**
 2. From Part B – Answer any 3 questions out of 5 questions. Each sub-question carries 16 marks. **Total : 48 Marks**
 3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions. **Total: 20 Marks**
 4. Please read the instructions given in the answer sheet.
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Part – A

32 Marks

(Attempt all questions Each sub questions carries 1 mark)

Q.1 Fill in the blanks:

- a) Inspection is represented by _____ during recording for method study.
- b) _____ is one of the techniques used for Material Planning for high value material.
- c) The _____ is characterized by manufacture of a several number of a standard product produced and stocked in the warehouse as finished goods awaiting sales.
- d) A _____ helps to determine the time required by the operator to complete a specified task for the defined method at the defined pace of performance.
- e) Principle underlying the Moving Average method is that future demand shall be _____ past demand.
- f) The _____ pertain to the climatic conditions which the component, product or material should withstand.
- g) The _____ is the maximum percentage defective that for the purpose of sampling inspection can be considered satisfactory as a process average.
- h) The _____ is the probability that a good lot will be rejected by the sampling plan.

Q.2 True or False:

- a) Objective of Work Study is to improve Productivity
- b) The operator should not stop production if first piece is not approved by the inspector.
- c) The ratio of output to input of a production system is commonly known as productivity.
- d) Cent percent inspection does not mean inspection of component for 100% quality characteristics.
- e) Maintenance function must be decentralized apart from a size of a manufacturing organisation for it's better functioning.
- f) Cellular layout is based on the concept of Group Technology.
- g) The control chart for number of defectives is more convenient to make than control chart for fraction defectives since the figure of number of defectives units can be directly taken from the inspection report.
- h) After goods have been manufactured, route sheets and operation layouts should not be collected back

Q.3 Select the right answer:

- 1) What are the two basic types of production systems?
 - a. Automated and manual
 - b. Intermittent and non-intermittent process
 - c. Normal and continuous process
 - d. Continuous process and batch
- 2) Which of the following is the correct cycle for the implementation of a Six Sigma quality improvement programme?
 - a. Design, Monitor, Analyse, Control, Improve.
 - b. Define, Measure, Analyse, Improve, Control.
 - c. Design, Measure, Control, Improve, Analyse.
 - d. Define, Measure, Improve, Analyse, Control.
- 3) The quality management strategy which is most associated with quality standards such as ISO9000 is _____?
 - a. Quality Inspection
 - b. Quality Control.
 - c. Quality Assurance.
 - d. Total Quality Management
- 4) Which of these reasons to keep inventory will improve flexibility?
 - a. It allows processes to flow more smoothly.
 - b. It makes deliveries more reliable.
 - c. It helps to deal with short term demands.
 - d. It enables the best material to be sorted prior to production.
- 5) In the product life cycle what is the correct order of the main phases?
 - a. Maturity, Growth, Saturation, Decline.
 - b. Growth, Maturity, Saturation, Decline.
 - c. Growth, Saturation, Growth, Decline.
 - d. Maturity, Saturation, Growth, Decline.
- 6) In a materials processing operation, which process is associated with the highest variety?
 - a. Project.
 - b. Job shop .
 - c. Batch process.
 - d. Mass production.
- 7) According to Lawson (2003) the two viewpoints of operations strategy are the market driven view and the _____?
 - a. Operations based view.
 - b. Resource based view.
 - c. Quality driven view.
 - d. Supply chain view.
- 8) Operations Management is a _____ process.
 - a. Translation.
 - b. Transformation.
 - c. Transaction.
 - d. Transition.

Q. 4 Expand the words

- a) AQL.
- b) ANOVA
- c) COQ
- d) EOQ.
- e) FIFO.
- f) POQ
- g) QA.
- h) TQC.

Part – B

48 marks

(Answer any 3 questions out of 5 questions. Each sub-question carries 16 marks.)

- Q. 5** What do you mean by Operations Management? Define characteristics of Production/Operations Management.
- Q. 6** How many types of Plant Layout? Define the fix position/static layout.
- Q.7** There are so many factors that affect Productivity. Define.
- Q.8** Discuss Inventory Management with its various importance.
- Q. 9** Short note **on any 4** of the following:
- a. PDCA.
 - b. Six Sigma.
 - c. JIT
 - d. Work Measurement.
 - e. Forecasting.

Part – C

Q. 10 Case study: (compulsory)

Total Marks: 2 x 10 (20)

The reputation of a business may be affected by what its customers think and say about its products or services. This is driven by the experience of customers when dealing with the business. High quality customer service will encourage customers to become regular or repeat users or purchasers. On the other hand, a poor customer experience may damage a business through loss of consumer confidence.

TNT was founded in Australia in 1946 by Ken Thomas with a single truck. Today, TNT is a global business and the market leader in business-to-business (B2B) express delivery services, delivering up to 150 million items per year. It has the largest individual share of the national market and employs over 10,000 people across the UK and Ireland. TNT operates in the tertiary (or service) sector of the economy which provides widely varying services to other businesses and to consumers. The tertiary sector is the largest sector of the UK economy, ahead of the primary (extraction) and secondary (manufacturing) sectors.

In 2008 TNT recognised that the increasing expectations of customers meant the business had to make major changes to ensure it could meet their needs. In-depth research showed that customer satisfaction depended not just on the process of delivering the service, but also on how the service was carried out. This resulted in TNT adopting a core strategy focused on delivering a quality customer experience. It developed a two-year programme to implement and communicate its Customer Promise to employees and customers.

In order to achieve the levels of process innovation and continuous improvement that the customer focus strategy required, TNT also needed to ensure the capabilities of its people were aligned to this, particularly in delivering a high quality customer experience. A review of new employees to the company showed that only 10% held qualifications above QCF (Qualifications and Credit Framework) level 2, compared to the industry norm of 52% (as identified by Skills for Logistics Research).

Questions:

- 1) Why is customer focus so important? What are the relevant factors affecting customer satisfaction in TNT?
- 2) What is the customer experience at TNT?
