



University of Kelaniya - Sri Lanka

Centre for Distance and Continuing Education

Faculty of Commerce & Management Studies

Bachelor of Business Management (General) Degree Third Examination (External) – 2013

January - 2017

BMGT E3035 – Total Quality Management

Time: 03 Hours

Graph papers are provided

Instructions

Part I -


Answer for all questions. Answer sheet will be provided

Use a black or blue ballpoint pen. Write as clearly as you can.

Mark one field only per question. Mark the relevant field like this :



Write outside the designated field is not permitted.

If you mark the wrong field, fill it completely, like this :  Then mark the correct field.

Part II – No of questions : 05

Answer three (03) questions only.

Part I

1. Which of the following manufacturing activities is value-added?
 - (a) Setup
 - (b) Process
 - (c) Calibration
 - (d) Inspection

2. If data are plotted overtime, the resulting chart will be a
 - (a) line chart
 - (b) histogram
 - (c) pareto chart
 - (d) poisson distribution

3. The roles and responsibilities of a process improvement team should be established by which of the following company authorities?
 - (a) The board of directors
 - (b) The human resources department
 - (c) The team members' supervisors
 - (d) The quality steering committee

4. Which of the following pairs of measures is most useful for indicating the overall state of a process?
 - (a) Conformance to specifications and cost of quality
 - (b) Conformance to specifications and statistical control
 - (c) Cycle time and cost of quality
 - (d) Cycle time and statistical control

5. Which of the following departments provides services primarily to external customers?
 - (a) Human resources
 - (b) Purchasing
 - (c) Marketing
 - (d) Manufacturing

6. To determine who the customers are for a specific process, it would be most useful to create a
 - (a) Pareto chart
 - (b) flow diagram
 - (c) Cause and effect diagram
 - (d) Scatter diagram

7. Using Deming's chain reaction theory, rank order the following events that will result from improving quality, from first to last.
1. The company will stay in business
 2. The company will capture the market
 3. The company will be able to provide more jobs
 4. Productivity will improve
 5. Costs will decrease
- (a) 1, 2, 3, 4, 5
(b) 1, 5, 4, 2, 3
(c) 5, 3, 4, 2, 1
(d) 5, 4, 2, 1, 3
8. Which of the following topics is NOT included in the Malcolm Baldrige National Quality Award (MBNQA) criteria for customer and market focus?
- (a) Customer and market knowledge
(b) Customer satisfaction determination
(c) Customer survey instruments
(d) Customer relationship management
9. Which of the following groups should have the primary role in establishing an organization's quality policies?
- (a) All employees
(b) Middle managers
(c) The quality council
(d) The quality department
10. A company's accounts payable department is trying to reduce the time between receipt and payment of invoices and has recently completed a flow chart. Which of the following tools would be the best for them to use next?
- (a) Fishbone diagram (Eshikawa)
(b) Scatter diagram
(c) Pereto chart
(d) Histogram

11. To ensure a successful benchmarking outcome, the first step that the quality manager should take is to
 - (a) contact a best-in-class benchmark partner
 - (b) gather data to help identify process areas for improvement
 - (c) prepare a standardized benchmark agreement
 - (d) assign a quality professional to the benchmark team

12. Which of the following is the final step in the Juran Trilogy[®]?
 - (a) Quality control
 - (b) Quality planning
 - (c) Quality documentation
 - (d) Quality improvement

13. Improving quality through small, incremental improvements is a characteristic of what type of quality management system?
 - a) Just in time
 - b) Six Sigma
 - c) Total Quality Management
 - d) Kaizen

14. Which of the following are key components of a Total Quality Management system?
 - a) Individual responsibility, incremental improvement, use of raw data
 - b) Collective responsibility, continual improvement, use of raw data
 - c) Group responsibility, staged improvement, knowledge
 - d) Involves everyone, continual improvement, use of data and knowledge

15. Two "quality gurus" that were involved in training Japanese manufacturers in the 1950's were:
 - a) Crosby and Shewhart
 - b) Crosby and Juran
 - c) Juran and Deming
 - d) Deming and Crosby

16. Which of the following is a principle of total quality management?
- a) Continuous process improvement
 - b) Continuous productivity improvement
 - c) Continuous value enhancement
 - d) Continuous defect elimination
17. The difference between an internal and an external customer is:
- a) Internal customers usually work in the business, external customers do not.
 - b) External customers care about what they receive, internal customers do not.
 - c) Internal customers do not evaluate quality, and external customers do.
 - d) Quality-oriented businesses care only about external customers.
18. The most frequently used framework for obtaining continuous improvement is:
- a) The plan-do-check-act cycle
 - b) benchmarking
 - c) The quality circle
 - d) The cause and effect process
19. An ISO 9000 certified business:
- a) Has shown that it produces high quality products.
 - b) Has demonstrated six sigma quality.
 - c) Has shown that it has quality systems in place.
 - d) Has demonstrated a quality reputation.
20. TQM expands on earlier approaches to quality management. Which of the following is ordered correctly from earlier to later ideas?
- a) Inspection, Quality Control, Quality Assurance, Total Quality Management
 - b) Quality Assurance, Quality Control, Inspection, Total Quality Management
 - c) Quality Assurance, Inspection, Quality Control, Total Quality Management
 - d) Quality Control, Inspection, Quality Assurance, Total Quality Management

21. All the following are not examples of quality assurance EXCEPT?
- a) Inspection
 - b) Team training
 - c) Pareto diagram
 - d) Fishbone diagram
22. According to Juran, any one is a customer of a product or services, it the person.
- a) Purchase it
 - b) Uses it
 - c) Is affected it
 - d) Produces it
23. A control chart helps to manager:
- a) Focus on the most critical issues to improve quality
 - b) Focus on stimulating thinking
 - c) Explore a desired future outcome
 - d) Determine if a process is functioning within control limits
24. What percentage of the total distribution are 3 sigma from the mean equal to?
- a) 68.26%
 - b) 99.9%
 - c) 95.4%
 - d) 99.7%
25. A control chart shows seven data points in a row on side of the mean. What should be done?
- a) A design of experiments
 - b) Adjust the chart to reflect the new mean
 - c) Find suitable causes
 - d) This is the rule of seven and can be ignored

(1 marks for each question)

(Total 25 Marks)

Part 2

- (02) a) Explain the contribution of following quality gurus.
W. Edwards Deming
Joseph M. Juran
Kaoru Ishikawa
(10 marks)
- b) List down and describe the obstacles for the implementation TQM in an organization.
(10 marks)
- c) Explain the historical review of quality control.
(5 marks)
- (Total 25 Marks)
-
- (03) a) What are control charts? How could you interpret abnormal patterns in control charts? (Draw and explain)
(10 marks)
- b) Explain:
(i) Quality Function Deployment (QFD)
(ii) Pareto analysis
(iii) Ishikawa Diagram
Illustrate your answer with suitable examples.
(10 marks)
- c) What are the basic requirements for ISO 9000? Describe.
(05 marks)
- (Total 25 Marks)
-
- (04) a) Define TQM and Explain six (6) basic concepts of TQM.
(15 marks)
- b) What are the general requirements on the quality award process? List the key features of any one of the quality awards (National or international).
(10 marks)
- (Total 25 Marks)

- (05) a) The table below shows the causes of injuries for which children needed hospital treatment in 2015.

Accidents (000)	Age 0-4	Age 5 -14
Fall	175	175
Struck	125	133
Cut	32	38
Poisoning	117	39
Burn	15	18
Bite	12	35
others	85	95

Select the appropriate quality tool/s and analyse the problem and come with your conclusion

(10 marks)

- b) "TQM is a total system approach and is an integral part of corporate strategy. It works horizontally across functions and departments involving all employees from top to bottom." Explain of the statement.

(10 marks)

- c) What you mean by "Six Sigma" Explain it using examples

(05 marks)

(Total 25 Marks)

- (06) a) List and explain steps in Benchmarking Process

(10 marks)

- b) What you mean by "Cost of Quality"

(05 marks)

- c) List down main elements of cost of quality and describe them.

(10 marks)

(Total 25 Marks)