

**M.COM DEGREE (CSS) EXAMINATION**  
**THIRD SEMESTER – FACULTY OF COMMERCE (Private Registration)**  
**CM820301 - Total Quality Management**  
**(Management and Information Technology)**  
**Multiple Choice Questions**

1. How a quality can be quantified
  - A. performance + expectations
  - B. performance x expectations
  - C. performance – expectations
  - D. performance / expectations
  
2. Traditional culture of quality requirements focuses on
  - A. product oriented
  - B. process oriented
  - C. customer oriented
  - D. supplier oriented
  
3. American quality guru who took the message of quality to Japan
  - A. Genichi Taguchi
  - B. Masaaki Imai
  - C. Shigeo Shingo
  - D. W. Edwards Deming
  
4. PDCA cycle is the contribution of
  - A. Walter Shewhart
  - B. Philip Crosby
  - C. Genichi Taguchi
  - D. W. Edward Deming
  
5. Which one is Juran's "three- role model"
  - A. supplier – process – customer
  - B. customer - process – customer
  - C. process – customer – supplier
  - D. process – supplier – customer
  
6. In TQM, how many elements are there in Quality statements
  - A. 1
  - B. 2
  - C. 3
  - D. 4
  
7. What are the elements of Quality statements
  - A. vision statement
  - B. mission statement
  - C. quality policy statement
  - D. all the above

8. Quality Trilogy is the contributions of
- A. Walter Shewhart
  - B. Philip Crosby
  - C. Joseph M Juran
  - D. W. Edward Deming
9. In TQM, the contributions of quality Guru Joseph M Juran
- A. internal customer
  - B. cost of quality
  - C. breakthrough concept
  - D. all the above
10. The contributions of quality Guru Philip Crosby in TQM
- A. PDCA cycle
  - B. quality trilogy
  - C. PDSA
  - D. concept of zero defects
11. The contribution of Four absolute of Quality is given by
- A. Walter Shewhart
  - B. Philip Crosby
  - C. Joseph M Juran
  - D. W. Edward Deming
12. Cost of quality is given by costs of
- A. prevention + appraisal + internal failure + external failure
  - B. prevention + appraisal
  - C. internal failure + external failure
  - D. appraisal + internal failure
13. In components of CoQ, Cost of good quality contains
- A. prevention cost
  - B. appraisal cost
  - C. both a and b
  - D. none of the above
14. In components of CoQ, Cost of poor quality contains
- A. internal failure cost
  - B. external failure cost
  - C. both a and b
  - D. none of the above
15. The Teboul's customer satisfaction model depends on
- A. company offer
  - B. customer needs
  - C. both a and b
  - D. none of the above

16. Customer perception on quality contains

- A. performance
- B. features
- C. service
- D. all the above

17. Tools used for collecting customer complaints

- A. comment cards
- B. focus groups
- C. toll free telephone numbers
- D. all the above

18. PDCA cycle stands for

- A. plan do check act
- B. plan did check act
- C. process do check act
- D. process did check acknowledge

19. Dimensions of quality contains

- A. performance
- B. reliability
- C. conformance
- D. all the above

20. Dimensions of Service quality contains

- A. tangibles
- B. reliability
- C. assurance
- D. all the above

21. Japanese quality guru who developed new concepts in response to the American gurus

- A. Walter Shewhart
- B. Philip Crosby
- C. Joseph M Juran
- D. W. Edward Deming

22. In TQM, the customer need can be understandable by which model

- A. Taguchi model
- B. Kano model
- C. Deming model
- D. Kaizen model

23. The most common techniques used for analyzing the quality costs are

- A. trend analysis
- B. pareto analysis
- C. both a and b
- D. none of the above

24. In continuous improvement, PDSA stands for

- A. plan do study act
- B. plan did study act
- C. process do study act
- D. process did study acknowledge

25. The system for causing quality is preventive, not appraisal is

- A. first absolute
- B. second absolute
- C. third absolute
- D. fourth absolute

26. The Quality as “ Fitness of Use” is given by

- A. Walter Shewhart
- B. Philip Crosby
- C. Joseph M Joran
- D. W. Edward deeming

27. Cost generated before the before a product is shipped as a result of non-conformance to requirements is

- A. appraisal cost
- B. internal failure cost
- C. external failure cost
- D. prevention cost

28. The expression of dissatisfaction with a product either orally or written is

- A. customer retention
- B. customer satisfaction
- C. customer complaints
- D. customer service

29. Success of each organization is depending on the performance of

- A. employer
- B. management
- C. employee
- D. vendor

30. A satisfied employee will be a

- A. manager
- B. high performer
- C. motivator to others
- D. team leader

31. Motivation includes

- A. job satisfaction
- B. job enrichment
- C. job enlargement
- D. all of the above

32. Which is the process of stimulating people to actions to accomplish the goals?

- A. bonus
- B. motivation
- C. performance-based incentive
- D. promotion

33. The Need which improves the confidence level of an employee is

- A. social
- B. safety
- C. basic
- D. esteem

34. Which of the following is not a part of hygiene factor of two factor theory

- A. company policy
- B. administration
- C. responsibilities
- D. interpersonal relations

35. Responsibility, Advancement etc are example of

- A. motivators
- B. hygiene factors
- C. improvement factors
- D. advance factors

36. Continual improvement is in

- A. environmental objective
- B. audit result
- C. corrective action
- D. all of the above

37. Kaizen is

- A. small change
- B. big improvement
- C. sudden impact
- D. all of the above

38. Plan-do-study-act cycle is a procedure to

- A. overall improvement
- B. continuous improvement
- C. permanent improvement
- D. immediate improvement

39. Quality practices must be carried out

- A. at the start of the project
- B. throuout the life of the project
- C. at the end of the project
- D. no need to carry out quality practices

40. Quality Trilogy includes
- A. quality planning
  - B. quality improvement
  - C. quality control
  - D. all the three
41. “Poko-Yoke” is the Japanese term for
- A. card
  - B. fool proof
  - C. continuous improvement
  - D. fishbone diagram
42. Identify the cost not likely to reduce as a result of better quality.
- A. maintenance costs
  - B. inspection costs
  - C. scrap costs
  - D. warranty and service costs
43. Quality Management includes forming and directing a team of people to achieve a qualitative goal within an effective cost and time frame that results in
- A. a project completed in shortest possible time.
  - B. a product or service that conforms to the required specifications.
  - C. an award-winning product that brings public recognition to the project
  - D. an innovative project that establishes qualification of the project team
44. Quality fulfils a need or expectation that is
- A. explicitly stated
  - B. implied
  - C. legally required
  - D. all of the above
45. Which of the following is not a target of Total Quality Management
- A. customer satisfaction
  - B. reducing manpower
  - C. continuous cost reduction
  - D. continuous operational improvement
46. The roof of House of Quality shows the interrelationship between
- A. functional requirements
  - B. design attributes
  - C. service process
  - D. manufacturing process
47. Two major component of fitness of use are Quality Design and
- A. quality of conformance
  - B. quality of service
  - C. quality of specification
  - D. quality of manufacturing

48. Which is the set of activities that ensures the quality levels of product and services are properly maintained and that supplier and customer quality issues are properly resolved?
- A. quality assurance
  - B. quality planning
  - C. quality control
  - D. quality management
49. While setting Quality objective, which need has to be considered.
- A. customer need
  - B. organizational need
  - C. supplier need
  - D. worker need
50. The role of management is to
- A. provide resources
  - B. define ems
  - C. monitor the effectiveness of the system
  - D. all of the above
51. \_\_\_\_\_ is not a process tools for TQM systems
- A. process flow analysis
  - B. histograms
  - C. pliers
  - D. control charts
52. Inspection, scrap, and repair are examples of \_\_\_\_\_
- A. internal costs
  - B. external costs
  - C. costs of dissatisfaction
  - D. societal costs
53. Customers are primarily concerned with \_\_\_\_\_
- A. Communication, courtesy, and credibility of the sales person
  - B. Competence, courtesy, and security of the sales person
  - C. Competence, responsiveness, and reliability of the sales person
  - D. Communication, responsiveness, and cleverness of the sales person
54. Assured quality is necessary for building customer confidence.
- A. correct
  - B. correct to some extent
  - C. correct to great extent
  - D. incorrect
55. \_\_\_\_\_ is the areas that will be covered by the organization's processes
- A. process areas
  - B. product Areas
  - C. private areas
  - D. preset areas

56. All of the following costs are likely to decrease as a result of better quality except
- A. customer dissatisfaction costs
  - B. inspection costs
  - C. maintenance costs
  - D. warranty and service costs
57. "Quality is defined by the customer" is
- A. An unrealistic definition of quality
  - B. A user-based definition of quality
  - C. A manufacturing-based definition of quality
  - D. A product-based definition of quality
58. TQM stands for \_\_\_\_\_
- A. Total Quality Management
  - B. Total Quantity Management
  - C. Total Qualitative Management
  - D. To question management
59. After Deming, who is considered to have the greatest impact in quality management?
- A. Kauro Ishikawa
  - B. Joseph M. Juran
  - C. W.E. Deming
  - D. Genichi Taguchi
60. Deming's 4 step cycle for improvement is \_\_\_\_\_
- A. plan, do, check, act
  - B. schedule, do, act, check
  - C. do, act, check, monitor
  - D. plan, control, act, sustain
61. Plan-do-study-act cycle is a procedure to \_\_\_\_\_
- A. Overall improvement
  - B. Continuous improvement
  - C. Permanent improvement
  - D. Immediate improvement
62. Quality practices must be carried out \_\_\_\_\_
- A. at the start of the project
  - B. throughout the life of the project
  - C. at the end of the project
  - D. no need to carry out quality practices
63. Quality circles work best if employees are initially trained in \_\_\_\_\_
- A. Group dynamics
  - B. Motivation principles
  - C. Communications
  - D. All of the three. (Not sure)



64. Quality Trilogy includes

- A. Quality planning
- B. quality improvement
- C. quality control
- D. All the three

65. Inspection is part of the \_\_\_\_\_

- A. quality control (not sure)
- B. Quality Planning
- C. Quality improvement
- D. Quality circle

66. Elements of quality management system are \_\_\_\_\_

- A. organizational structure
- B. responsibilities
- C. procedures
- D. all the three (not sure)

67. Based on his 14 Points, Deming is a strong proponent of \_\_\_\_\_

- A. inspection at the end of the production process
- B. an increase in numerical quotas to boost productivity
- C. looking for the cheapest supplier
- D. training and knowledge

68. According to Deming most of the problems are related to systems and it is the responsibility of the management to improve the systems

- A. correct
- B. correct to some extent
- C. correct to great extent
- D. Taguchi

69. Quality management includes forming and directing a team of people to achieve a qualitative goal within an effective cost and time frame that results in \_\_\_\_\_

- A. A project completed in shortest possible time.
- B. A product or service that conforms to the required specifications.
- C. an award-winning product that brings public recognition to the project
- D. an innovative project that establishes qualification of the project team

70. Identify the cost not likely to reduce as a result of better quality.

- A. Maintenance costs
- B. Inspection costs
- C. Scrap costs
- D. Warranty and service costs

71. Processes that operate with "six sigma quality" over the short term is assumed to produce long-term defect levels below \_\_\_\_\_ defects per million opportunities (DPMO).

- A. 2
- B. 2.4
- C. 3
- D. 3.4

72. \_\_\_\_\_ are used in six sigma

- A. black belt
- B. green belt
- C. both black belt and green belt
- D. none of the Above

73. \_\_\_\_\_ is about supplying customers with what they want when they want it.

- A. JUT
- B. HET
- C. JAT
- D. JIT

74. \_\_\_\_\_ are the areas that will be covered by the organization's processes

- A. process areas
- B. product Areas
- C. private areas
- D. preset areas

75. All of the following costs are likely to decrease as a result of better quality except \_\_\_\_\_

- A. customer dissatisfaction costs
- B. inspection costs
- C. maintenance costs
- D. warranty and service costs

76. The x bar chart monitors:

- A. Between sample variability
- B. Within sample variability
- C. Instantaneous variability
- D. Natural variability

77. In case someone is interested in process standard deviation, he should construct the \_\_\_\_\_ chart.

- A. X bar
- B. R chart
- C. S chart
- D. None of the above

78. If data for MR chat shows non-normality, it is better to determine the control limits for the individuals control chart based on the \_\_\_\_\_ of the correct underlying distribution.

- A. Percentage
- B. Percentiles
- C. Rank
- D. Mean

79. A sample of size 10 contains 50 non-conformities. The average number of non-conformities is:

- A. 7
- B. 4
- C. 5 (50/10 i.e. total non-conformities/sample size)
- D. 1

80. When the number of defects is low, which of the following is true:

- A. We should use c or u chart
- B. Most samples will have non-zero defects
- C. Create a time between occurrence control chart
- D. None of the above

81. Bias reflects the:

- A. The differences in observed accuracy and/or precision experienced over the range of measurements made by the system.
- B. The difference between observed measurements and a "true" value obtained from a master or gold standard
- C. Different levels of variability in different operating regimes, resulting from warm-up effects, environmental factors, inconsistent operator performance
- D. None of the above

82. If variability of a product decreases, its quality \_\_\_\_\_

- A. remains unchanged
- B. decreases
- C. increases
- D. may increase or decrease

83. The focal point of all quality control should be:

- A. Price focus
- B. Cost Focus
- C. Customer Focus
- D. Manufacturing Focus

84. The key process input variables (KPIV) and key process output variables are developed during the \_\_\_\_\_ phase.

- A. Define
- B. Analyze
- C. Measure
- D. Improve

85. An unbiased dice is rolled once. The probability of getting a number greater than 4 is:

- A.  $\frac{1}{4}$
- B.  $\frac{1}{6}$
- C.  $\frac{1}{2}$
- D.  $\frac{1}{3}$

86. Which of the following statement is false:

- A. Important step of strategic quality management is identification of those dimensions in which the organization will compete
- B. Selection of suppliers should be based on quality, schedule, and cost, rather than on cost alone
- C. All of the individuals in the organization must have an understanding of the basic tools of quality improvement
- D. Manufacturing Unit should be the unit focusing on Quality Improvement among all units in an organization

87. Cause and Effect Diagram can be used in the \_\_\_\_ and \_\_\_\_ step of DMAIC.

- A. Define, Measure
- B. Analyze, Control
- C. Analyze, Improve
- D. Define, Improve

88. Which of the following is false regarding when acceptance sampling is useful:

- A. When testing is destructive
- B. When 100% inspection cost is very low
- C. When there are potentially serious product liability risk
- D. When 100% inspection is not technically feasible

89. Let  $p_0$  be the incoming fraction defective and  $p_1$  be the outgoing fraction defective (Assume both  $p_1$  and  $p_0$  is greater than 0). If rectifying inspection is performed then:

- A.  $P_0 < p_1$
- B.  $P_1 < p_0$
- C. None of the above
- D. Cannot be determined

90. A company wants to measure the length of a fan as a part of its quality control exercise. The type of data collected will be:

- A. Variable
- B. Attribute
- C. Cannot be determined
- D. None of the above

91. If only \_\_\_\_\_ causes of variation are present, the output of a process forms a distribution that is stable over time and is predictable.

- A. Assignable
- B. Non-Random
- C. Natural
- D. Cannot be said

92. For an  $\bar{x}$  chart,  $\beta$  risk can be defined as:

- A. The probability of detecting the shift in process mean from  $\mu_0$  (in control value) to  $\mu_1$
- B. The probability of not detecting the shift in process mean from  $\mu_0$  (in control value) to  $\mu_1$
- C. The probability of detecting the shift in process range from  $\mu_0$  (in control value) to  $\mu_1$
- D. The probability of not detecting the shift in process range from  $\mu_0$  (in control value) to  $\mu_1$

93. Consider that for a process  $\bar{s}$  bar (average standard deviation of 50 samples each of size 4) is found to be 10.04. The value of  $c_4$  (corresponding to sample size of 4) is .92. What is the estimated value of process standard deviation?

- A. 10.91 ( $\bar{s}$  bar/  $c_4$  is an unbiased estimator of standard deviation)
- B. 11.89
- C. 12.67
- D. 9.67

94. The basic assumption of calculating the control limits based on average sample size (for a pchart) will \_\_\_\_\_ from/as those previously observed.
- A. Greatly differs
  - B. Will be exactly the same
  - C. Not greatly differ
  - D. None of the above
95. The g chart is the control chart for:
- A. Average number of events
  - B. Total number of events
  - C. Mean number of events
  - D. None of the above
96. Attribute charts may be used when:
- A. Several characteristics can be jointly measured
  - B. When one particular quality characteristic is of importance
  - C. Specific information like process mean is required
  - D. None of the above
97. The thickness of the blade of a fan is specified to lie between 4 cm and 6 cm. The length of the blades must lie between 10 cm and 20 cm. A fan blade randomly selected from a sample of 100 blades has a thickness of 5cm and a length of 21cm. The number of defect(s) the blade has is \_\_\_\_\_.
- A. One
  - B. Two
  - C. There is no defect
  - D. Three
98. The probability of getting a multiple of 2 on throwing a dice once is:
- A.  $1/6$
  - B.  $1/4$
  - C.  $1/2$
  - D.  $1/3$
99. Inspection of incoming/outgoing items is an example of \_\_\_\_\_.
- A. Prevention Cost
  - B. Appraisal Cost
  - C. Internal Failure Cost
  - D. External Failure Cost
100. Four basic characteristics of an optimal process are:
- A. Economy, efficiency, control, quality
  - B. Quality, Improvement, efficiency, productivity
  - C. Economy, efficiency, productivity, cost
  - D. Economy, efficiency, productivity, quality

## ANSWER KEY

1.D	2.A	3. D	4. D	5. A	6.C	7.D	8.C	9.D	10.D	11.B	12.A	13.C
14.C	15.C	16.D	17.D	18.A	19.D	20.D	21.C	22.B	23.C	24.A	25.B	26.C
27.B	28.C	29.C	30.B	31.D	32.B	33.D	34.C	35.A	36.D	37.A	38.B	39.B
40.D	41.B	42.A	43.B	44.D	45.B	46.B	47.A	48.A	49.A	50.D	51.C	52.A
53.A	54.A	55.A	56.C	57.B	58.A	59.B	60.A	61.B	62.B	63.D	64.D	65.A
66.D	67.D	68.A	69.B	70.A	71.D	72.C	73.D	74.A	75.C	76.A	77.C	78.B
79.C	80.C	81.B	82.C	83.C	84.C	85.D	86.D	87.C	88.B	89.B	90.B	91.C
92.B	93.A	94.C	95.B	96.A	97.A	98.A	99.B	100. D				