

# CBCS SCHEME



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Question Paper Version : C

## Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Quality Control and Quality Assurance

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. Which of the following NOT a measure of central tendency?  
a) Mean                      b) Median                      c) Mode                      d) Standard deviation
  2. What is the minimum number of specimens required for a concrete strength test as per IS 456 : 2000  
a) 1                      b) 2                      c) 3                      d) 5
  3. Which of the following measure is used to determine variability in data?  
a) Mean                      b) Median                      c) Range                      d) Mode
  4. What is the recommended cube size for compressive strength testing of concrete?  
a) 100 mm × 100 mm × 100 mm                      b) 150 mm × 150 mm × 150 mm  
c) 200 mm × 200 mm × 200 mm                      d) 50 mm × 50 mm × 50 mm
  5. In sampling, a subset of data taken from a population is called  
a) Census                      b) Population                      c) Sample                      d) Central group
  6. What is the main advantage of using Statistical Quality Control in construction?  
a) It reduces the number of workers needed  
b) It ensures complete elimination of defects  
c) It helps in monitoring and controlling quality using statistical methods  
d) It increases construction costs significantly
  7. The acceptance criteria for concrete as per IS 456 : 2000 states that no individual test result should be less than  
a) Characteristic strength                      b) (Characteristic strength – 3 MPa)  
c) (Characteristic strength + 5 MPa)                      d) (Characteristic strength – 5 MPa)

8. As per IS 456: 2000, concrete should be tested at how many days to determine its characteristic strength?  
a) 3 and 7 days      b) 7 and 14 days      c) 7 and 28 days      d) 14 and 28 days
9. What is the primary purpose of control charts in Statistical Quality Control?  
a) To increase project costs  
b) To monitor variation in construction quality  
c) To eliminate all defects permanently  
d) To calculate the total cost of the project
10. In a normal distribution, approximately what percentage of data falls within  $\pm 1$  standard deviation if the mean.  
a) 50 %      b) 68 %      c) 90 %      d) 99 %
11. At which stage of construction is feasibility and viability of the project assessed?  
a) Conceptual design      b) Preliminary design  
c) Detailed design      d) Construction
12. Which quality assessment test is used to measure the surface hardness of concrete?  
a) Ultrasonic Pulse Velocity (USPV) Test      b) Slump Test  
c) Rebound Hammer Test      d) Compressive Strength Test
13. Which IS Code provides guidelines for NDT of concrete?  
a) IS 456      b) IS 516      c) IS 13311      d) IS 1786
14. The Rebound Hammer Test gives unreliable results of the concrete surface is :  
a) Dry and clean      b) Smooth and flat      c) Rough and wet      d) Newly cast
15. The Ultrasonic Pulse Velocity (USPV) test is primarily used to assess :  
a) Compressive strength of concrete      b) Surface hardness  
c) Density and homogeneity of concrete      d) Water absorption on bricks
16. Which of the following factors affects USPV test results?  
a) Concrete density      b) Surface moisture  
c) Reinforcement presence      d) All of these
17. If USPV test results indicates velocity between 3 km/sec and 3.5 km/sec, the concrete quality is classified as :  
a) Excellent      b) Good      c) Medium      d) Doubtful
18. At which stage construction are the final quality checks and documentation completed?  
a) Conceptual design      b) Detailed design  
c) Handover      d) Preliminary design
19. What is the minimum recommended age of concrete for conducting USPV test?  
a) 3 days      b) 7 days      c) 14 days      d) 28 days
20. According to IS 13311, what is the standard angle at which a rebound hammer should be held during testing?  
a) 30°      b) 45°      c) 60°      d) 90°





34. What is "Quality Function Deployment" (QFD) used for?
- Reducing production costs
  - Translating customer requirements into products features
  - Eliminating process inspections
  - Increasing production speed.
35. Which of the following best describes Benchmarking?
- Comparing an organizations processes with the best industry practices
  - Reducing employee salaries to lower costs
  - Increasing production without considering quality
  - Avoiding competition in the industry
36. Which of the following is not a principle of the ISO 9001 : 2015 standard?
- Customer focus
  - Process approach
  - Profit maximization
  - Continuous improvement
37. ISO 14000 is primarily focused on :
- Financial management
  - Environmental management
  - Reducing employee turnover
  - Increasing production speed
38. Which of the following is not a type of bench marking?
- Internal Benchmarking
  - Competitive Benchmarking
  - Strategic Benchmarking
  - Random Benchmarking
39. What type of waste does ISO 14000 aims to reduce?
- Material waste
  - Time waste
  - Energy waste
  - All of these
40. What is an important element of performance evaluation in Quality Management?
- Customer satisfaction surveys
  - Employee feed back
  - Financial analysis
  - All of these
41. Who is known for the "Zero Defects" concept in Quality management?
- W. Edwards Deming
  - Philip B. Crosby
  - Joseph Juran
  - Walter Shewhart
42. What does "PDCA" in the PDCA cycle stands for?
- Plan, Develop, Control, Act
  - Plan, Do, Check, Act
  - Process, Design, Control, Audit
  - Prevent, Detect, Correct, Apply
43. Which of the following is not a cost associated with quality?
- Prevention cost
  - Appraised cost
  - Inspection cost
  - External failure cost
44. What is the main focus of Quality Assurance (QA)?
- Detecting and fixing defects
  - Ensuring defects do not occur
  - Reducing the cost of materials
  - Speeding up production
45. Which tools is commonly used in Quality control to monitor process?
- Pareto chart
  - Control chart
  - Fish bone diagram
  - Histogram

46. In Total Quality Management (TQM), customer satisfaction is achieved through :
- a) Lowering production costs
  - b) Continuous improvement and employee involvement
  - c) Eliminating the need for inspections
  - d) Faster production time
47. Which of these is a reason for poor quality in construction?
- a) Use of skilled labour
  - b) Adhering to international standards
  - c) Poor process design and lack of training
  - d) Proper material testing
48. What is the primary focus of Quality Engineering?
- a) Managing customer complaints
  - b) Improving design and process reliability
  - c) Reducing worker wages
  - d) Eliminating the need for inspections
49. What is a key benefit of implementing a Quality Management System (QMS)?
- a) Reduced need for raw materials
  - b) Improved customer satisfaction and product reliability
  - c) Eliminates competition
  - d) Avoids the need for process documentation
50. The key purpose of ISO 9001 certification is to :
- a) Improve product pricing strategies
  - b) Provide a framework for consistent quality management
  - c) Eliminate all production defects
  - d) Ensure 100% inspection of products

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