

(2 ½ Hours)

[Total Marks: 75]

- N.B.**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q. 1 Attempt ANY FOUR from the following:

(20M)

- (a) What is an error? Explain Types of Errors.
- (b) What is quality in software development? Explain software quality factors.
- (c) What is Quality Assurance? Define the purpose of QA in software development.
- (d) Explain the role of testing in each phase of SDLC.
- (e) What is a V-Model in software testing?
- (f) Explain the concepts of Software Review, Inspection and walkthrough

Q. 2 Attempt ANY FOUR from the following:

(20M)

- (a) What are software Testing metrics? Explain different types of metrics.
- (b) What is Black Box testing and its types? Explain state transition testing.
- (c) Explain top-down integration testing.
- (d) What is White Box testing and its types? Explain flow graph notation.
- (e) What is System Testing? Explain different types of testing.
- (f) Explain testing documentation in detail.

Q. 3 Attempt ANY FOUR from the following:

(20M)

- (a) Explain the defect management process in detail with a neat diagram.
- (b) Explain cause and effect diagram.
- (c) Explain about software metrics and its importance.
- (d) What is a Pareto diagram? Explain steps of drawing a Pareto chart.
- (e) List various methodologies of quality improvement. Explain any four.
- (f) Explain scatter diagram in detail.

Q. 4 Attempt ANY FIVE from the following:

(15M)

- (a) Explain objectives of SQA.
- (b) Discuss Cyclomatic Complexity with an example.
- (c) How to use a defect for process improvement.
- (d) State the principles of software testing.
- (e) Explain metric lifecycle.
- (f) How to measure quality cost?
