Printed Pages: 4 **EIT-061**

(Following Paper ID and Roll No. to be filled in your Answer Books)	
Paper ID : 113651	**Roll No.**

B.TECH.

Theory Examination (Semester-VI) 2015-16

SOFTWARE QUALITY ENGINEERING

Time : 3 Hours ***Max. Marks : 100***

Section-A

1. Attempt all the parts. **(2×10=20)**

(a) What is software review?

(b) Explain various software reviews.

(c) What do you understand by software measurement?

(d) Give two benefits of software quality planning.

(e) Explain statistical software quality assurance.

(f) Differentiate between software faults, defect and failure.

(g) What is meany by defect rate and reliability?

(h) Name various static and dynamic testing tools.

(i) What is hierarchical model of quality.

(j) Give two objectives of verification and validation.

Section-B

2. Attempt any five questions from the following.

(10×5=50)

(a) Explain various characteristics of modern testing tool in respect of software quality.

(b) Define Total Quality Management and what is the cost of poor software management?

(c) What are zero defect and zero defect software? Write the principles of zero defects. Also write the basic rules of zero defect software development.

(d) Why do we need to have statistical models for quality estimation? Write about software quality assessment models and their classification.

(e) What is hierarchical model of quality? Explain the McCall's Quality Model for quality assessment with example.

(f) What are the various objectives of verification and validation? Also discuss the limitations of Verification and validation.

(g) Explain the defect prevention techniques and practices with examples. What are the benefits of Software defect preventions?

Section-C

Attempt any two questions. **(15×2=30)**

3. (a) What is backlog management index (BMI)? Explain Fix Response Time and fix Responsiveness with examples.

(b) Describe the following terms with respect in SQE:

(i) Mean Time to Failure (MTTF)

(ii) Defect density

(c) Explain following terms with examples :

(i) Customer problems

(ii) Customer satisfaction

4. Attempt any two parts :

(a) What do you understand by function points? Explain in detail with suitable examples.

(b) Explain the evolution of software quality assurance and structure of sotfware quality assurance.

(c) Why Quality Estimation is required? How one can use this tool to estimate the cost of the project?

5. (a) Describe the defect prevention. What are the different types of defect prevention techniques?

(b) What is software quality indicator? Explain in detail the classification of quality indicator.

(c) What is the role of software metrics in SQE? Explain Process and Product Quality Metrics in detail with examples.