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B. TECH.

THEORY EXAMINATION (SEM–VIII) 2016-17

SOFTWARE QUALITY ENGINEERING

Time : 3 Hours *Max. Marks : 100*

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

SECTION-A

1 **Explain the following:** **(10×2=20)**

a) What is your view of Software Quality? Explain.
b) Explain Functionality of Software.
c) Define Quality Assurance.
d) Why is defect tracking and defect handling important in quality assurance?
e) Explain the roles of process in software quality
f) Give any five criteria of a good software quality metric.
g) Define review.
h) Define Lines of Code.
i) Define testing and debugging.
j) Write a short notes on origins of defects

SECTION-B

2 **Attempt any five of the following:** **(10×5=50)**

a) What is the relationship between quality, quality assurance and quality engineering? Differentiate between testing and quality.
b) Explain how the faults can be directly detected and removed with the help of Software Inspection method.
c) Define Verification and Validation activities associated with V-Model.
d) Explain Pre-QA activities, In-QA activities and Post-QA activities in detail.
e) What are the activities associated with Defect injection and Removal? Explain.
f) What are Phase Containment and Defect Prevention? Explain in detail with an example.
g) What is business process reengineering? Explain the different dimensions of quality.
h) Is it possible to assess the quality of software if the customer keeps changing?What it is supposed to do?

SECTION-C

Attempt any two of the following: **(15×2=30)**

3. Discuss about Security testing and Performance testing.What are the questions that every software engineer should ask before makingthe "Correction" that remove the cause of a bug?
4. Discuss the Rayleigh model of software Quality management? Explain how it provides an excellent framework for quality management.
5. Discuss the ethical basis for the software quality. Explain principles behind total quality management and different types of quality standards and practices.