Roll No. ..... Total Pages : 2

BT-6/M-13 **8617**

SOFTWARE ENGINEERING

Paper : IT-354

Time : Three Hours] [Maximum Marks : 100

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Define the term "Software Engineering". Explain the major differences between Software engineering and other traditional engineering disciplines. 10

(b) Write a detailed note on Software crisis. 10

2. How cost estimates of software development are made? Explain any *one* model for cost estimation. 20

3. What are the central problems in Software requirement specification? What are the basic activities performed during the requirement phase? Discuss the characteristics of Software requirement specification. 20

4. Define the term "Modularization". Why a system design with high cohesion and low coupling is desired? Also discuss in brief various types of cohesions. 20

5. Discuss the following in brief :

(a) Verification *vs.* Validation. 5

(b) Debugging *vs.* Testing. 5

(c) Reverse re-engineering. 5

(d) Security testing. 5

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6. Integration testing can be tacked top-down or bottom-up. Describe each of these strategies? Why is integration testing harder than unit testing? 20

7. Differentiate between Quality control and Quality assurance. What is meant by Software Quality Assurance (SQA)? Enumerate the objectives and goals of SQA. 20

8. What do you mean by Software engineering tools? Give functional classification of CASE tools. How do they help in improving the quality of software product? 20

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