Reg. No. | | | | | | | | | | | | |

Question Paper Code : 27341

5 Year M.Sc. DEGREE EXAMINATION, MAY/JUNE 2016

Elective

Software Engineering

ESE 520 – SOFTWARE RELIABILITY

(Regulations 2010)

Time : Three Hours **Maximum : 100 Marks**

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. What is reliability ?

2. Distinguish between error, fault and failure.

3. What are dependable systems ?

4. How to inspect Software ?

5. What is Goal Question Metric ?

6. When to remove fault in project development ?

7. How to analyze model accuracy ?

8. Define trend analysis.

9. List two needs for regression testing.

10. Who is responsible for Quality Assurance plan ?

PART – B (5 × 16 = 80 marks)

11. (a) Imagine yourself as one of a software developer among globally located developers. How will you communicate requirement, design and test case generation in reliable, safe and secure manner among your geographically distributed team ? **(16)**

OR

(b) (i) Brief about different views of software reliability.

(ii) Discuss about cause of unreliability in software.

12. (a) (i) Discuss about the three most important techniques that are used in Structured Analysis and Design Methodology.

(ii) In what way WIN WIN spiral model is different from general spiral model.

OR

(b) With the help of activity chart and task dependency diagram estimated cost for any project of your own interest. **(16)**

13. (a) (i) Explain in detail Quality Improvement Paradigms.

(ii) Bring out the importance of Software Quality Assurances.

OR

(b) (i) With an appropriate example explain in detail about the software reliability metric.

(ii) In what way software measurement for object oriented project differ from structure oriented project.

14. (a) (i) List and explain the reliability prediction modules that provides powerful and competitive advantages.

(ii) Discuss about trend analysis for software.

OR

(b) Explain for any project of your interest the recalibration of the models. **(16)**

15. (a) (i) What are the classes a logical Testing ? Explain each with examples.

(ii) Discuss about fault tree analysis.

OR

(b) (i) Discuss about functional testing for Result processing system. **(16)**