Punjab Technical University
Master of Computer Application Examination

MCA 3rd Semester SOFTWARE ENGINEERING 2006

Time: Three hours maximum: 100marks

PART A Answer all questions (8x5=40 marks)

1. (a) State the primary goal of software engineering and explain how to achieve the same. Or (b) List and explain the main objectives of software engineering.

2. (a) Explain the principles of working of large projects and extremely very large projects. Or State the various factors that influence quality and productivity.

3. (a) Explain Cost model of software life cycle. Or (b) Write short notes on matrix format.

4. (a) Explain break down example with a neat example. Or (b) explain the working and principle of Jackson's structured programming.

5. (s) State and explain various categories of software products. Or (b) Explain regular expression with a neat example.

6. (a) Enumerate the different between life cycle verification and formal verification. Or (b) Write short notes on: I) function tests. II) Stress tests.

7. (a) State and explain symbolic execution. Or (b) discuss on source code metrics.

8. (a) State and explain some of the automated tools for software maintenance. Or (b) explain the technique for assessing the structural characteristics of source code.

PART B Answer ALL questions (5x12=60 marks)

9. (a). Explain in detail about managerial issues of software engineering. Or (b) Explain phased life cycle method with a neat diagram.

10. (a). Discuss the process of developing a problem, developing a solution strategy and planning the development process. Or (b). Explain the process of petrinet having overcome the limitations of finite state mechanism.

11. (a). Explain the static analysis capabilities test. Or (b) State the development activities to enhance the software.

12. (a). Construct a transition table and a transition diagram to specify the operation of a bank teller machine. Or (b). State the various specifications of software requirements.
(a) Explain the fundamental concept of software design. Or (b) describe the managerial aspects of software maintenance.