

ADCA / MCA (II Yr)
Term-End Examination
June, 2008

CS-10 : SOFTWARE ENGINEERING

Time : 3 hours

Maximum Marks : 75

Note : *Question number 1 is compulsory. Answer any three questions from the rest.*

1. (a) Suppose we wish to computerize the activities of study centres, which offer various programmes of the university. The activities are as follows :
- (i) Forwarding the counselor's biodata to Regional Centre
 - (ii) Schedule the classes (both theory and practical)
 - (iii) Identify Practical Centres
 - (iv) Collect TMA's from students and get it evaluated by the counselors
 - (v) Student's enquiry
 - (vi) Despatch of Award lists of TMA's to University

For the above mentioned system,

- (1) Develop SRS.
- (2) Draw DFDs upto second level.
- (3) Identify the software modules and their functions.

- (4) Propose a testing strategy for any two software modules mentioned in (3) above.

Make assumptions, wherever necessary. $4 \times 4 = 16$

- (b) List at least five important qualities of software product and process. 5
- (c) What is Agility ? List all the principles for those who want to achieve agility. 5
- (d) With the help of an example, explain the significance of the PERT chart. 4
2. (a) What is a design method ? What are its five components ? 8
- (b) What is 4GL ? Explain at least three areas which are impacted by the advent of 4GLs. 7
3. (a) "Independence is measured using two qualitative criteria : Cohesion and Coupling." Explain both of them in detail. 8
- (b) Explain how version control combines procedures and tools to manage different versions of configuration objects that are created during the s/w engineering process. 7
4. (a) The requirements engineering process is accomplished through the execution of functions like : Inception, Elicitation, Elaboration, Negotiation, Specification, Validation and Management. Explain the role and significance of each of the functions. 7
- (b) Explain the purpose of each of the system tests given below : 8

- (i) Recovery testing
- (ii) Security testing
- (iii) Stress testing
- (iv) Performance testing

5. Write short notes on :

15

- (i) The Incremental Model
- (ii) Dynamic Systems Development Method (DSDM)
- (iii) Basis Path Testing