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Total number of printed pages – 2

B. TECH
PCCS 4402

Seventh Semester (Special) Examination – 2013
PRINCIPLES AND PRACTICES IN SOFTWARE ENGINEERING

BRANCH : CSE

QUESTION CODE : D 471

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.*

1. Answer the following questions : 2×10
- (a) What is a software prototype ?
 - (b) Which is the model suitable for development of technically challenging software products ?
 - (c) What are the important activities of the requirements engineering process ?
 - (d) Define the concept of modularization.
 - (e) What is UML ? Why should we go for unified modelling approach ?
 - (f) Distinguish between modeless interface and mode based interface.
 - (g) What is the difference between coding standards and coding guidelines ?
 - (h) What is the difference between white-box and black-box testing ?
 - (i) Define quality. What is quality assurance?
 - (j) Differentiate between CASE tools and CASE environments.
2. (a) Give the diagram for the spiral process model. Explain the various phases. 5
- (b) List various techniques of requirement elicitation. Compare technique of requirement elicitation through interview with questionnaire. 5

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3. (a) Give the structure of SRS. 5
(b) A customer is buying some goods from a supermarket using a debit card. He will make the final payment in the cash counter and collect the goods. Draw the SRS of it. 5
4. (a) A customer is buying some goods from a supermarket using a debit card. He will make the final payment in the cash counter and collect the goods. Draw the structured chart of it. 5
(b) What is transform and transaction analysis ? How these are used in structured design ? 5
5. (a) Identify the objects in a banking system. Draw the class diagram of the system. 5
(b) Name some popular widgets used in GUI and explain their operations. What should be the good characteristics of those GUI ? 5
6. (a) Write down the test cases under boundary value analysis for the different grades in BPUT system. 5
(b) How branch coverage testing can be used for finding the grades of the students in BPUT system ? 5
7. (a) Describe the five steps of six sigma methodology. 5
(b) Give an account of four types of software maintenance. 5
8. Write short notes on any **two** of the following 5×2
(a) Non functional requirements
(b) Code review techniques
(c) Mutation testing.

