

May - June 2012

Total No. of Questions : 12]

SEAT No. :

P1147

[Total No. of Pages : 3

[4163] - 354

T.E. (IT)

SOFTWARE ENGINEERING

(2008 Pattern) (Sem. - I)

Time : 3 Hours]

[Max. Marks : 100

Instructions to candidates:

- 1) Answer three questions from Section - I and three questions from Section - II.
- 2) Answers to the two sections should be written in separate books,
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

SECTION - I

Q1) a) What is software Engineering? What are the characteristics of software? Explain in detail following software myths. [10]

- i) Management myths.
- ii) Practitioner's myths.

b) Explain in detail the following models. [8]

- i) Incremental model.
- ii) Prototyping model.

OR

Q2) a) What is software process? What are framework and umbrella activities? Explain in detail all the process phases of waterfall process model and state merits/demerits of the same. [10]

b) Explain in detail the Rational Unified Process. [8]

Q3) a) What is meant by normal and exciting requirements? How requirements are validated? [8]

b) List all the rules of thumb. Explain in detail following UML diagrams stating purpose and applicability. [8]

- i) Use - case diagram.
- ii) Activity diagram.

OR

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Q4) a) Draw level 0, level 1, and level 2 data flow diagram for Hospital management system. The system keeps track of patients, nurses, doctors, wards, operation theatre and bills. The system generates reports on demand. [10]

b) Explain various stakeholders involved in the project along with their viewpoints. [6]

Q5) a) What are the elements of design model? What are the elements of architectural design? What is the importance of software design? [8]

b) Explain the Golden rules used for user interface design. [8]

OR

Q6) a) Explain the web design pyramid. What are interface design principles for web application? [8]

b) Explain all architectures styles in details. [8]

SECTION - II

Q7) a) Explain following system testing types: [8]

i) Recovery testing.

ii) Security testing.

iii) Stress testing.

iv) Performance testing.

b) What is black box testing? What are the ways to perform black box testing? [8]

OR

Q8) a) What is difference between testing and debugging? Explain in detail debugging process. [8]

b) What are the testing strategies for web application? Explain the testing process for web application. [8]

Q9) a) What are the 4 Ps involved in software project management? Explain the W5HH principles. [8]

b) Define the term 'software scope'. Write short note on make by decision. [8]

OR

Q10) a) What factors should be considered when planning the structure of software engineering teams? What are the organizational paradigms for software engineering teams? [8]

b) Describe in detail the project estimation with use - cases. What are its pitfalls? [8]

Q11) a) Define software risk. Explain various types of risks with suitable example. Explain risk management process. [10]

b) What are elements that exist when an effective SCM system is implemented? Explain each in detail. [8]

OR

Q12) Write short notes on: [18]

a) Software quality assurance (SQA).

b) Change control process.

c) Earned value analysis.

