[4958]-202

T.E. (IT)

SOFTWARE ENGINEERING

(2008 Pattern) (Semester - I)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:

   1)   *Answer to the two sections should be written in separate answer books.*

   2)   *Answer any three questions from each section.*

   3)   *Neat diagrams must be drawn wherever necessary.*

   4)   *Figures to the right side indicates full marks.*

   5)   *Use of Calculator is allowed.*

   6)   *Assume Suitable data if necessary.*

SECTION - I

Q1) a)   Define software engineering. Explain software engineering as layered technology. **[10]**

    b)   Explain in detail spiral model with its merits and demerits. **[8]**

<div align="center">OR</div>

Q2) a)   Explain the unified processing model in detail. **[10]**

    b)   What are the characteristics of software? Explain in detail following software myths: **[8]**

      i)   Practitioners myths   ii)   Management myths

Q3) a)   Explain in detail requirement engineering task. **[8]**

    b)   Draw level 0, level 1 and level 2 data flow diagram for hospital management system. The system keeps track patients, nurses, doctors, wards, operation theatre and bills. The system generates reports on demand.**[8]**

<div align="center">OR</div>

Q4) a) Explain in detail following UML diagrams stating purpose and applicability

    i) Use case Diagram   ii) State Diagram **[8]**

   b) Explain Class Responsibility Collaborator modelling. **[8]**

Q5) a) Explain in details following design concepts **[8]**

    i) Information hiding

    ii) Function independence

   b) Explain web design pyramid. What are interface design principles for web application? **[8]**

<p align="center">OR</p>

Q6) a) Explain the interface design principles and guidelines. **[8]**

   b) Explain all architectural styles in detail. **[8]**

<p align="center"><u>SECTION - II</u></p>

Q7) a) Explain loop testing for different types of loops with example. **[8]**

   b) Compare and contrast integration testing for conventional and object oriented software. **[8]**

<p align="center">OR</p>

Q8) a) Explain the difference between **[8]**

    i) White box testing and Black box testing

    ii) Alpha testing and Beta testing

   b) Explain following types of system testing **[8]**

    i) Stress testing   ii) Security testing

    iii) Recovery testing   iv) Performance testing

Q9) a) What is the relevance of four P's in project planning? Explain in detail.**[8]**

b) Explain the W5HH principle. **[8]**

OR

*Q10)*a) Explain the decision tree to support make-buy decision with an example. **[8]**

b) Explain the COCOMO II estimation model. **[8]**

*Q11)*a) What is RMMM? Explain in detail. **[10]**

b) Define SCM. What are the contents of SCM repository? **[8]**

OR

Q12) a) What is a task network in project scheduling? Explain with an example. **[8]**

b) What are the software quality factors? Explain any five. **[10]**

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