B.TECH. SEM -IV (COMPUTER) 2014 COURSE (CBCS) :
WINTER - 2017
SUBJCT: FUNDAMENTALS OF SOFTWARE ENGINEERING

Day: **Thursday**
Date: **23/11/2017**

W-2017-2076

Time: **02.30 PM TO 05.30 PM**
Max. Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labelled diagrams wherever necessary.
4) Assume suitable data if necessary.

Q.1 **a)** How do software characteristics differ from Hardware characteristics? Also illustrate with a diagram that the software doesn't wear out. **[05]**

b) What do you mean by component based development model? Explain with an example. **[05]**

OR

a) Describe the various steps in Software Development Lifecycle (SDLC)? What are the end product of each step? **[05]**

b) What do you mean by software myth? Explain any three software myths in detail. **[05]**

Q.2 **a)** What is requirement engineering? Also discuss the significance and use of requirement engineering. **[05]**

b) What is SRS? Describe five desirable characteristics of a good requirement specification document. **[05]**

OR

a) What is requirement analysis? Also explain functional requirements and non-functional requirements. **[05]**

b) List different models used for requirement analysis. Explain any two in detail. **[05]**

Q.3 **a)** Draw the component level and deployment level design to model the working of washing machine. **[05]**

b) Explain how software modeling is useful in software engineering. **[05]**

OR

a) What is the fundamental difference between the approaches of structured design and object oriented design. **[05]**

b) What is design model? Illustrate the Interface design flow for student Admission system. **[05]**

P.T.O.

Q.4 Explain in detail the various testing strategies and testing levels? **[10]**

OR

Define Debugging. Compare various debugging techniques available. Also explain four debugging strategies in detail. **[10]**

Q.5 **a)** What is software Quality? List down the Quality factors and explain it. **[05]**

b) Explain elements of software Quality Assurance (SQA) **[05]**

OR

a) Explain Goals, metrics and attributes of SQA. **[05]**

b) What is software configuration management (SCM) and explain the elements of SCM. **[05]**

Q.6 **a)** Explain the Software Management Spectrum. **[05]**

b) What is Risk management? Explain Risk identification, Risk Projection and Risk Refinement. **[05]**

OR

a) What is Effort Estimation Model? Explain different types of Effort Estimation model? **[05]**

b) Describe the difference between process metrics and project metrics . **[05]**

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