U20IT502 SOFTWARE ENGINEERING

UNIT I SOFTWARE PROCESS
PART-B

1. What are the differences between system engineering & software engineering? State and explain the stages that distinguish the two. **(April/May 2008)**
2. What are the necessities of life cycle model? Elaborate on the various issues of software life cycle. **(April/May 2008)(April/May 2011)**
3. Explain in detail the following software process models with a neat diagram. **(April/May2008)**
4. Explain the system engineering hierarchy. What does a system engineering model accomplish? (**Nov/Dec 2009)**
5. What are the restraining factors to construct a system model? **(May/June2007)**
6. Explain the linear software life cycle model with suitable illustration. Bring out the demerits of this model. **(May/June 2007)**
7. Explain Software Life Cycle .List all life cycle model and explain spiral model with neat diagram(**May/June 2012)(Nov/Dec 2008)**
8. Describe waterfall, incremental, iterative waterfall, spiral model based on SLCS and compare.**(Nov/Dec 2012)**
9. Discus detail about WINWIN spiral model.[Nov/Dec 2012].
10. Describe COCOMO model [April/ May 2015].

UNIT II SOFTWARE REQUIREMENTS

1. Discuss in details about the elements in data modeling. (May/June 07).
2. Explain the various prototyping methods and tools used for requirement analysis. (May/June07)
3. With a suitable example explain about the application of use cases in deriving the scenarios.
4. Explain software prototyping. What are the various prototyping methods and tolls. MAY/JUNE07)
5. Explain with example diagram the functional and behavioral modeling. How do we model the software's reaction to some external event?
6. State and explain the requirements engineering tasks in detail. (NOV/DEC10),(APR/MAY11), (NOV/DEC12),(MAY/JUNE13)
7. Explain functional and non-functional requirements in details. (NOV/DEC 17)
8. Write a detailed note on scenario based modeling.
9. Why is traceability an important aspect of requirements management? Why context system models are useful for requirement validation?
10. Describe how Software requirements are documented? State the importance of documentation.

UNIT III DESIGN CONCEPTS AND PRINCIPLES

1. Discuss in detail about the design process in software development process Dec 2017

2. Discuss the design heuristics for effective modularity design. May 2016
3. What are the different types of architectural styles exist for software and explain Software architecture in details? MAY 2007
4. Discuss about user interface design of software with an example and neat sketch. DEC 2017
5. Explain about architectural mapping and data flow with neat diagram. MAY 2018
6. What is software architecture? Describe the different software architectural styles with examples. MAY 2018
7. Explain about the various design concepts considered during design. DEC 2017
8. What is modularity? State its importance and explain coupling and cohesion. MAY 2016
9. For a case study of your choice show the architectural and component design. MAY 2015
10. Explain in detail about component level design with neat sketch.DEC 2016

UNIT IV TESTING

1. Explain in detail about white box testing with examples. DEC 2013
2. What is black box testing? Explain the different types of black box testing strategies. DEC2016
3. Why is testing important? Narrate the path testing procedure in detail with a sample code. MAY 2016
4. Distinguish between black box and white box testing. DEC 2017
5. What is Integration Testing? Explain the different Integration testing approaches. MAY 2015
6. What is BVA? Explain with usage with examples. DEC 2013
7. Describe the various software implementation techniques DEC 2016
8. Explain the basis path testing in detail. MAY 2013
9. What is system testing? Discuss types of system tests. DEC 2014
10. Explain in detail about Regression and Smoke testing. MAY 2013
11. Compare and contrast alpha and beta testing. MAY 2016

UNIT V SOFTWARE PROJECT MANAGEMENT

1. What is Estimation? Explain the various types of Estimation with examples. MAY 2017
2. Explain Risk Management in detail. DEC 2015
3. Explain Project Scheduling. DEC 2016
4. Explain detail about COCOMO I Model. MAY 2014, NOV 2019
5. Brief about Earned Value Analysis [May/June 2012]
6. Explain in detail about Empirical Estimation models.
7. Define Risk. Explain its four major categories. May/June 2012,2014
8. Write short note on project planning and planning process. MAY 2016
9. Explain the methods of cost estimation.
10. Explain detail about COCOMO II Model. MAY 2015, NOV 2016