Register Number: ……..

B.E DEGREE EXAMINATIONS: APRIL/MAY 2014

(Regulation 2009)

Fifth Semester

COMPUTER SCIENCE AND ENGINEERING

CSE113: Software Engineering

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Software deteriorates rather than wears out because
   a) Software suffers from exposure to hostile environments
   b) Defects are more likely to arise after software has been used often
   c) Multiple changes made in the software over a period of time induce errors
   d) Software spare parts become harder to order
2. A software process model is:
   a) A representation of the way in which software processes data
   b) A representation of the way in which software is developed
   c) A representation of the way in which software is used
   d) An attractive young person used in the process of selling software
3. The requirements validation examines the specification to ensure that
   a) the right process model is adopted for s/w development
   b) timely documentation is made
   c) Version control is easily handled
   d) all system requirements have been stated unambiguously
4. Which is not a software life cycle model?
   a) Waterfall model
   b) Spiral model
   c) Capability maturity model
   d) Scrum
5. Which of the following statement is not correct?
   a) Coupling is a measure of interconnection among modules
   b) A cohesive module performs a single task within software procedure
   c) Fan-out indicates how many modules directly control a given module
   d) For effective modularity one should attempt to minimize structures with high fan-out & strive for fan-in as depth increases
6. An SRS
   a) establishes the basis for agreement between client and the supplier.
   b) provides a reference for validation of the final product
   c) is a prerequisite to high quality software
   d) all of the above.
7. Data structure suitable for the application is discussed in?
   a) data design
   b) architectural design
   c) procedural design
   d) interface design
8. Detecting a defect at which of the following stage is most economical?
   a) Testing
   b) Deployment
   c) Design
   d) Coding
9. Which of the following items should not be included in the software project management plan?
   a) The techniques and case tools to be used
   b) Detailed schedules, budgets and resource allocations
   c) The life cycle model to be used
   d) All of the above
10. Defect prevention is defined as:
   a) Finding and fixing errors after insertion
   b) Finding and fixing errors before release but after insertion
   c) Finding and fixing errors after release
   d) Avoiding defect insertion

PART B (10 x 2 = 20 Marks)

11. List the phases of unified process.
12. What is the need for prototyping?
13. What is requirements elicitation?
14. Distinguish between client “needs” and “wants”
15. What is “fan-out” in a software structure?
16. How do frameworks differ from patterns?
17. What are software configuration items?
18. Differentiate between verification and validation.
19. What is reengineering?
20. List any four software metrics.

PART C (5 x 14 = 70 Marks)

21. a) Explain various people factors involved in agile development teams.

(OR)

	b)	(i)	Explain the waterfall model of software development. Under what circumstances, will the waterfall model be best suited?	(7)
		(ii)	Explain any one evolutionary process model.	(7)

22. a) What is an SRS? Describe its contents in detail.

(OR)

	b)	(i)	What are the problems faced during requirements elicitation?	(6)
		(ii)	Distinguish between behavioral and data modeling with appropriate examples.	(8)

23. a) Explain in detail how data flow is mapped into software architecture.

(OR)

	b)	(i)	What does cohesion mean? Explain the different types of cohesion.	(10)
		(ii)	What is refactoring? Why is it needed?	(4)

24. a) Discuss the difference between black-box testing and structural testing and suggest how they can be used together in the defect testing process.

(OR)

	b)	(i)	What is the constitution of the change control board? What are its responsibilities?	(7)
		(ii)	What are the measurable quantities using which software reliability can be assessed?	(7)

25.	a)	(i)	What are the major objectives of software maintenance? Explain.	(7)
		(ii)	What are the prominent risk factors in a software project? Explain.	(7)

(OR)

b) Explain how COCOMO model can be used for estimation of software?

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