B.E. (Information Technology) Fifth Semester (C.B.S.)

Software Engineering

P. Pages : 2 **AHK/KW/19/2204**

Time : Three Hours * 1 4 6 5 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Explain Agile methodology with XP Agile development process. **6**

b) List evolutionary models and explain any one in detail. **7**

OR

2. a) Explain in detail Incremental process model with advantages & disadvantages. **6**

b) Elaborate spiral model for software engineering. Explain how it combines the features of waterfall model & prototyping model. **7**

3. a) Explain different metrics for size estimation with their advantages & disadvantages. **7**

b) Discuss in brief a task network for concept development. **7**

OR

4. a) Enlist & explain the steps required to perform a cost estimation using COCOMO model. **8**

b) What are milestones? How are they set, achieved & renewed? How are they used in Project Monitoring. **6**

5. a) What are different requirement engineering tasks? Why identifying software requirement is difficult? **6**

b) Explain in detail data modeling concepts. **7**

OR

6. a) Explain CRC model & Draw class diagram for floor plan. **7**

b) Explain metrics for Analysis model in brief. **6**

7.	a)	Discuss & compare coupling and cohesion in brief.	**6**
	b)	Draw DFD upto level 2 for a Restaurant management system which has food ordering, food delivering invoice creation and payment subsystems.	**7**

OR

8.	a)	Explain pattern-based software design with an example.	**7**
	b)	How data flow is mapped into software architecture.	**6**
9.	a)	What is the difference between testing & debugging? Explain debugging process in detail.	**6**
	b)	What test is carried out during verification & validation. Explain with example.	**7**

OR

10.	a)	Define & explain black box testing with equivalence partitioning & boundary value analysis.	**7**
	b)	Explain Black Box testing in detail with the help of example.	**6**
11.	a)	Design RMMM plan for a database project. Explain plan with at least 5 risks and analysis for the same.	**8**
	b)	What is Software Quality Assurance? Discuss various levels of QA in Software engineering?	**6**
12.	a)	List various risks associated with software projects. How do the project managers manage such risks?	**10**
	b)	Explain Reverse & restructuring engineering.	**4**

****