(3 Hours) **[Total: 80 Marks]**

Note : (1). Question number 1 is compulsory.
(2).Attempt any three questions from the remaining.
(3).Assume suitable data wherever necessary.

Q1	Solve any Four out of Six	
a)	What are major challenges in software engineering?	05
b)	What is a Feasibility Study?	05
c)	write about the Non Functional Requirements for "Online Pizza Ordering system". It should contains following: 1.Performance 2.Availability 3.Relibility 4.Security 5.Maintainability	05
d)	Explain Evolutionary process model?	05
e)	What is the difference between bug, error and defect explain with example.	05
f)	Discuss Mc-Calls Quality factors?	05
Q2a)	Draw UML Use Case diagram and Class Diagram for "Smart Agriculture Monitoring System".	10
b)	Explain COCOMO Model with example.	10
Q3a)	Explain Function Point Cost Estimation Technique with example.	10
b)	Draw UML Component Diagram and Deployment Diagram for "College Management System".	10
Q4a)	Formal Technical Review (FTR)in details?	10
b)	Discuss the various types of design patterns.	10

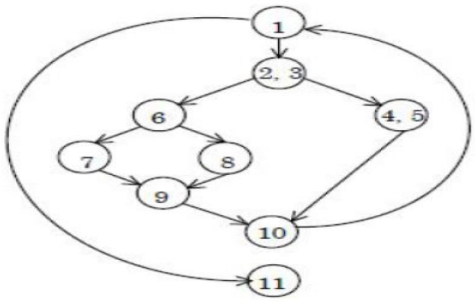
Q5a) Explain in detail the Software configuration Management Process and benefits of SCM. 10

b) Explain Reengineering in details. 10

Q6a) Explain what is a risk? Different types of risk? and describe RMMM in detail? 10

b) Why is cyclomatic complexity important to testers? A Given flow graph F with entry node (1) and exit node (11) is shown below. Calculate the following 10

1. How many predicate nodes are there and what are their names?
2. How many regions are there in flow graph F?
3. What is the cyclomatic complexity of flowgraph F?
4. How many nodes are there in the longest independent path?
5. How many nodes are there in flow graph F?



Flowgraph F

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