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MCA DEGREE III SEMESTER EXAMINATION DECEMBER 2014

CAS 2304 SOFTWARE ENGINEERING
(*Regular & Supplementary - 2010 Admission onwards*)

Time: 3 Hours   Maximum Marks: 50

PART A
(Answer *ALL* questions)

$(15 \times 2 = 30)$

I.   (a)   Write the IEEE definition of software engineering.
        (b)   What is product-line software? Give an example.
        (c)   What is ISO 9001:2000 standard?

II.   (a)   What is requirements engineering? Why it is important in Software engineering?
        (b)   Explain the purpose of use-case diagram in software engineering, with an example.
        (c)   What is a model? Why we build analysis models in software engineering?

III.   (a)   Why abstraction is important in modeling?
        (b)   Differentiate data design and architectural design.
        (c)   Differentiate ADL and UML.

IV.   (a)   Define any two types of coupling.
        (b)   What is the role of cohesion in component design?
        (c)   What is a component in object oriented view and in conventional view?

V.   (a)   Can we achieve, software quality by testing?
        (b)   What is black box testing?
        (c)   What is the relevance of integration testing?

PART B

$(5 \times 4 = 20)$

VI.   List the different types of software and their challenges for software engineers.
                                                OR
VII.   Which are the two evolutionary process models? Explain each with a diagram.

VIII.   Draw a preliminary use case diagram for a "Safe Home" system with surveillance
        camera. Write the scenario for the use case – "Access Camera".
                                                OR
IX.   What is an analysis class? How do analysis classes manifest from the problem domain?

X.   Explain any four architecture styles (with neat diagrams). Give an example application
        for each one.
                                                OR
XI.   What is the relevance of design phase in software engineering?

XII.   What are the four basic design principles in component level design?
                                                OR
XIII.   What are the golden rules a designer should follow during user interface design.

XIV.   What is validation testing? Who perform it? Explain the two types of validating
        testing.
                                                OR
XV.   What is the relation between testing and debugging? Explain the debugging process.

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