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NMCA-512

(Following Paper ID and Roll No. to be filled in your Answer Book)

Paper ID : 2012364 Roll No. | | | | | | | | | |

M.C.A

Regular Theory Examination, (Odd Sem-V), 2016-17

SOFTWARE ENGINEERING

Time : 3 Hours *Max. Marks : 100*

Section - A

1. Attempt all question parts. (10×2=20)

a) What are the attributes of the good software?

b) Compare data flow and E-R diagram?

c) What are the main problems associated with software development and their underlying causes?

d) Differentiate between verification and validation with an example?

e) How the architecture design can be represented?

f) State any four design principles for software design.

g) What are the two main activities of regression testing?

h) Write any two reasons to increase in the software development cost?

i) Write down the elements of a configuration management system?

j) List advantages of Reverse Engineering?

Section - B

Note : Attempt any five questions from this section (5×10=50)

2. What are the essential characteristics of software engineering? How it is different from other engineering discipline such as house building and bride design etc.? Explain in detail the various phases in a software development project?

3. List and discuss the major quality requirement of a Software Requirement Specification document?

4. Explain the notion of coupling and cohesion in the context of structured design?

5. What are the fundamental issues in software design? Compare function oriented design and object oriented design with suitable examples?

6. Why the testing is important in the software development life cycle? Explain black box and white box testing in detail?

7. Draw a DFD for result preparation automation system of B.Tech. Courses of any university. Clearly describe the working of that system. Also mention all assumptions made by you.

8. What is a formal technical review? What are the objectives of formal technical review? Give a comparative study of code inspection, reviews and walk-through

9. With neat sketch, briefly discuss the process of software re-engineering. How to measure cost, effort duration and size using COCOMO estimation technique? Explain it in detail.

Section - C

Note : Attempt any two questions from this section **(2×15=30)**

10. Write a detailed note on SEI CMM. What are its different levels? How a company can move forward to higher levels of CMM. Use proper diagrams and examples?

11. Current trends in software engineering are moving away from the waterfall model for large projects and moving toward iterative methods such as the spiral model? What are we gaining and losing as a result? Explain with suitable examples.

12. How can project scheduling affect integration testing, Is unit testing possible in all circumstances? Provide examples to justify your answer?