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MCA**(SEM V) ODD SEMESTER EXAMINATION 2015-16****Software Engineering****[Time: 3 hrs.]****[Max. Marks: 100]****Note- Attempt All Questions. All Questions carry equal marks:-****Q.1. Attempt any TWO parts of the following.**

10X2=20

- (a) What do you understand by software engineering? How do software engineering principles help to reduce development time & cost? Discuss.
- (b) Discuss the various phases of waterfall model to develop a software product.
- (c) Explain the following-
 - (i) Software characteristics.
 - (ii) Feasibility analysis.

Q.2. Attempt any TWO parts of the following.

10X2=20

- (a) Discuss the major advantages of the object oriented design methodologies over the modular design.
- (b) What are the different types of requirement gathering tools that the software engineers use to gather requirements from a customer. Discuss
- (c) Discuss the following-
 - (i) Data Flow Diagram with example.
 - (ii) SEI Capability Maturity Model (SEI- CMM).

Q.3. Attempt any TWO parts of the following.

10X2=20

- (a) Define the term software design. Also right the criteria for good design to achieve software quality.
- (b) What do you mean by the cohesion in the context of software design? What problems are likely to occur if a module has low cohesion? Discuss
- (c) Discuss the following in brief-
 - (i) Formal technical review.(FTR)
 - (ii) Lines of code (LOC) Metric for project size estimation

Q.4. Attempt any TWO parts of the following.

10X2=20

- (a) Discuss deferent types of code reviews. Why code review is considered a more efficient way to remove errors from code compared to testing?
- (b) What is software testing Discuss black box testing and white box testing in brief.
- (c) Discuss the following –
 - (i) Debugging Approaches.
 - (ii) Integration Testing.

Q.5. Write short notes on any Two of the following:

10X2=20

- (a) Software Configuration Management.
- (b) Software reengineering and reverse engineering.
- (c) Constructive Cost estimation Model (COCOMO)