

# NB-144

December-2015

T.Y.M.Sc. (CA & IT)

Software Engineering

Time : 3 Hours]

[Max. Marks : 100

1. (A) Answer the following : 10
- (a) Explain Incremental process model in detail.
  - (b) Explain XP process model in detail.

**OR**

- (A) Draw UML usecase and activity diagram for online admission process of Gujarat University. 10
- (B) Justify any **four** principles : 10
- (a) Remember that someone will maintain the software.
  - (b) Create work products that provide value for others.
  - (c) Describe how you intend to accommodate change.
  - (d) Design should be traceable to the requirement model.
  - (e) The Pareto principle applies to software testing.

2. Attempt any **five** : 20
- (a) Explain scenario-based model and its importance.
  - (b) Explain class responsibility and collaboration modeling (CRC).
  - (c) Explain the content model for a webApp.
  - (d) Explain any two characteristics of “well formed” design class.
  - (e) Explain data modeling concept in brief.
  - (f) Define Quality Function Deployment technique. Which three type of requirements are identifies by QFD.

3. Attempt any **four** : **20**
- (a) What is Architecture ? Explain Data-Flow architecture and “Call & Return” architecture with figure.
  - (b) What is component ? Justify Open-Closed Principle for class based component design.
  - (c) Define Coupling, Content Coupling, Data Coupling, Stamp Coupling and Control Coupling.
  - (d) Explain Golden Rules.
  - (e) Explain basic characteristics of webApp interface design.
4. Answer any **five** : **20**
- (a) Explain Internal-External views of Testing.
  - (b) Explain overall strategy for Software testing.
  - (c) Define Verification, Validation and the role of an independent test group.
  - (d) Explain Formal Technical Review.
  - (e) Explain Defect Amplification and Removal.
  - (f) Define Quality and explain Quality Dimensions.
5. Attempt any **five** : **20**
- (a) Explain a design pyramid for WebApps.
  - (b) What types of content architecture are commonly encountered ? Explain.
  - (c) What characteristics can be measured when we assess an OO design ? Explain.
  - (d) What are the steps of an effective measurement process ? Explain.
  - (e) Explain SCM features in detail.
  - (f) Explain change control process.
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