

Roll No.

Total No. of Pages : 02

Total No. of Questions : 07

BCA (2013 & Onward) (Sem.-4)

**SOFTWARE ENGINEERING**

Subject Code : BSBC-401

Paper ID : [B0240]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.

**SECTION-A**

**1. Answer briefly :**

- a) Write any two characteristics of Software.
- b) Define the term Metric. Write any two examples.
- c) How is size of a computer program measured?
- d) Identify the entities in a computer game for modelling the game of cricket.
- e) What is a test oracle?
- f) What is a data dictionary?
- g) What is the purpose of software testing?
- h) Create two test cases to test a program that finds calculates multiplication of two given matrices.
- i) What is a legacy system?
- j) Write any two challenges of software reengineering.

## SECTION-B

2. What is a software process? How is it different from a software product? Discuss any two software process models. (2,2,6)
3. What is the role of metrics and measurements in software development? Give examples of atleast 3 metrics and the purpose they serve. (4,6)
4. Differentiate between :
  - a) Structured Analysis and Object Oriented Analysis
  - b) Verification and Validation
  - c) DFD and ER Diagram
  - d) Waterfall and Spiral model (10)
5. Discuss the taxonomy of CASE tools. (10)
6. How is testing integrated with the life cycle of a software product? Is it sufficient to test a software product only at the end of its life cycle? (8,2)
7. How is cost of a software product estimated? Are these estimates always correct? If not, why? (8,2)