Total No. of Questions : 07

BCA (Sem.–4)
SOFTWARE ENGINEERING
Subject Code : UGCA1921
M.Code : 79725
Date of Examination : 17-12-22

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 have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Define Software Engineering. List out the elements in Computer-Based System.

   b) What are the formal models of size estimation?

   c) What are the models used for Architectural design?

   d) What is Cohesion?

   e) What are the advantages and disadvantages of size measure?

   f) What are the basic principles of Software Testing?

   g) Write the names of the different phases of Unified Process?

   h) What are the objectives of Analysis modeling?

   i) What are non-functional requirements? Explain with the help of examples.

   j) Explain the concept of decision table.

SECTION-B

2. What are the fundamental activities of a software process? Explain why incremental development is the most effective approach for developing business software systems. Why is this model less appropriate for real-time systems engineering.

3. Explain specialized models. Compare ordering of software processes in the V-model of the Software Life Cycle with ordering of software processes in the Agile approach to software development and testing. Also discuss the view that Agile methods are far abler to deliver high customer and worker satisfaction than their traditional counterparts.

4. Distinguish between error and failure. Testing detects which of these two? Justify it. Explain steps for validation testing.

5. What is the role of system analyst? What are the important roles of Conventional Component within the Software Architecture?

6. What is Requirement Engineering? What are the characteristics of SRS?

7. Suppose that you are working for a software engineering firm that is interested in developing a software to detect certain types of cancer, based on information fed to it. Your software will also suggest possible treatment for the cancer diagnosed. You are given a list of twelve physicians who are cancer experts; they will form part of your resource team. Answer the following questions:

   a) What type of software would you seek to develop and why?

   b) What methodology would you use for obtaining critical information from the cadre of physicians.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.