C (Printed Pages 4)

Roll No. _____

25/1665

B.C.A. (Fourth Semester)

Examination, 2025

Third Paper

(Software Engineering)

Time : Two Hours] *[Maximum Marks : 75*

Note : Attempt all sections as per Instructions.

Section-A

(Very Short Answer Type Questions)

Note : Attempt all the 05 (Five) questions. Each questions carries 02 (two) marks and answer of each question should not exceed 50 words. 5×2=10

1. (a) List any two reasons for increase in the software costs.

   (b) Define the term software engineering.

P.T.O.

   (c) What is meant by software prototyping?

   (d) Write major software characteristics.

   (e) What is software quality?

Section-B

(Short Answer Type Questions)

Note : Attempt all the 05 (five) questions out of total 08 (Eight) questions. Each questions carries 05 (five) marks and answer of each question should not exceed 100 words. 5×5=25

2. (a) Distinguish between functional and non-functional requirements. Provide two examples of each.

   (b) Describe the importance of white box testing.

   (c) Explain risk management in detail. Also discuss the points that differentiate project risk from technical risk.

   (d) Explain function oriented design.

   (e) List any two reasons for increase in the software costs.

(f) What are the types of software maintenance?

(g) Elaborate on the series of tasks of a software configuration management process.

(h) List any five CASE tools classified by function in the taxonomy of CASE tools.

Section-C

(Long Answer Type Questions)

Note : Attempt any 02 (Two) questions out of total 04 (Four) questions. Each questions carries 20 (Twenty) marks and answer of each question should not exceed 400 words. 2×20=40

3. (a) List and briefly describe four major paradigms in software engineering. For each paradigm, mention one key characteristic and a typical use case.

(b) (i) Briefly explain any three techniques used for requirement gathering.

(ii) Explain SDLC. Also discuss various activities during SDLC.

(c) Discuss software configuration management and various tasks in SCM process. Explain version control and various types of project risks.

(d) What are the various stages of requirement engineering process? Explain it with diagrammatic representation.