

# NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY

(Affiliated to Pokhara University)

Dhangadhi, Kailali

## Pre-University Examination

Level: Bachelor

Semester: V\_Fall

Year : 2024

Programme: B.E. Computer

F.M. : 100

Course: Software Engineering

P.M. : 45

Time : 3hrs.

*Candidates are required to give their answer in their own words as far as practicable. The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) Define Software Engineering. Explain 4 p's in Software Project Management. 7

**“OR”**

Suppose a project size of 200 KLOC is to be developed. Software Development team has average experience on similar type of projects. The projects schedule is not very tight. Calculate the effort, Development time, Average Staff size and productivity of the project.

- b) Calculate the function point, productivity, with multiple Processing Factors 5, 1, 0, 4, 3, 5, 4, 3, 4, 5, 2, 3, 4, 2 by using following given Data: 8

The number of EI(Avg): 22,

The number of EO(Low): 45,

The number of EI(High): 06,

The number of ILF(Avg): 05,

The number of ELF(Low): 02,

Effort: 37 MM,

Software technical documents: 250 pages,

User related documents: 120 pages and

Budgeting/Cost: \$7520 per month.

2. a) Define SDLC with its process. 8

- b) Define Software Reengineering. Explain its process. 7

3. a) Define Domain Analysis. List and Explain different kinds of System Models. 7

- b) List out and Explain the Different kinds of Architectural Design Available for Software Engineering. 8

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|----|--|--------|
| 4. | a) Define Design Modeling. Explain the Software Design Process.<br>b) Define Software Testing. Explain Testing Phases in detail.   | 8<br>7 |
| 5. | a) Explain Test case Development Strategies by taking one test case development Scenario.<br>b) Define Software Reliability. Explain the software Engineering Standards Available in Market. | 8<br>7 |
| 6. | a) Define software configuration management? Explain the need and its process.<br>b) Define Software Reuse with its Process and Need.  | 8<br>7 |
| 7. | Write short notes on following (Any Two)   | 5x2    |
|    | a) OOAD<br>b) Object Oriented Design in Software Engineering<br>c) Alpha Testing VS Beta Testing   |        |

Good Luck!!!