

KATHMANDU UNIVERSITY
End Semester Examination
February, 2025

Marks Scored:

Level : B.E./B.Sc.
Year : IV

Course : COMP 401
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date 13 FEB 2025

SECTION "A"

[20Q. × 0.5 = 10 marks]

Choose the most appropriate answer and **encircle**.

1. Which one is relatively easy to measure?
a. static metric b. internal attributes c. dynamic metric d. a and b
2. Buffer overflow falls under which fault class?
a. storage management b. input/output
c. exception management d. data
3. A development task should take how many hours?
a. 4-8 b. 4-16 c. 8-12 d. 4-12
4. Which one is indicated by the handover of the system for testing?
a. deliverable b. milestones c. both d. none
5. Reusable software components contain defects is which type of risk?
a. tools b. estimation c. technology d. organizational
6. Which risks affect resources?
a. project b. product c. business d. b and c
7. Which is NOT an organizational element in a system?
a. standards b. policies c. processes d. jobs
8. How many layers are there in the structure of socio-technical systems?
a. 4 b. 5 c. 6 d. 7
9. During which process errors can mask other errors?
a. testing b. review c. inspection d. coding
10. Which can reveal the presence of errors NOT their absence?
a. verification b. validation c. testing d. review
11. Percentage of target dependent statements is which property?
a. speed b. size c. reliability d. portability
12. Safety requirements is which type of requirement?
a. product b. organizational c. operational d. external

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3 FEB 2025

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Semester : I
F. M. : 40

SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt *ANY SIX* questions. (Q. No. 3 is Compulsory).

1. What differences has the web made to software engineering? How software engineering is distinct from other engineering domains? [1+3]
2. Describe incremental development and delivery with its pros and cons. [1+1+1+1]
3. Define a user story. Write a story about prescribing medication. [1+3]
4. With a diagram, explain test-driven development with its benefits. [2+2]
5. With a diagram, discuss on system development process. [1.5+2.5]
6. Elaborate strategies to help risk management. [4]
7. Discuss on inspection checklists. [4]

SECTION "C"

[2 Q. × 8 = 16 marks]

Attempt *ANY TWO* questions. (Q. No. 8 is Compulsory).

8. Considering *Weather Prediction System*, suggest four (4) major key requirements definition with their requirements specification. [2+6]
9. Compare and contrast agile development with conventional approach of software development. [4+4]
10. Discuss on scale factors used in the exponent computation in the post-architecture model. With example, show the effect of cost drivers on effort estimates. [4+4]

