

KATHMANDU UNIVERSITY
End Semester Examination
January/February, 2025

Marks Scored:

Level : B.Sc.
Year : IV

04 FEB 2025

Course : COMP 401
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date :

SECTION "A"

[20Q. × 0.5 = 10 marks]

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

1. Which one is the concern of Mentcare system?
a. privacy b. safety c. both d. none
2. Which is **NOT** a utility service in iLearn architecture?
a. user storage b. identity management
c. search d. authentication
3. For process measurement, whenever possible, which process data should be collected?
a. qualitative b. quantitative c. both d. none
4. In which maturity model product management procedures are defined and used?
a. repeatable b. defined c. managed d. initial
5. Delivery is which type of issue?
a. system b. team c. organization d. a and c
6. Which one is factor in large systems?
a. brownfield development b. regulatory constraints
c. system configuration d. all
7. IBM's agility at scale model has how many layers?
a. 2 layers b. 4 layers c. 5 layers d. 3 layers
8. Which is **FALSE** about form-based specification?
a. definition of the function b. description of the action
c. positive impacts of the function d. pre and post conditions
9. What is **TRUE** about software requirements document?
a. it is an informal statement of requirements
b. it is a design document
c. it should set of how the system should do
d. none
10. Which one indicates that the requirements can be checked?
a. realism b. validity c. verifiability d. none

11. Which one is a black-box testing?
a. unit testing b. release testing c. integration testing d. all
12. In which a release of the software is made available to users?
a. Alpha testing b. Beta testing c. Acceptance testing d. both a and b
13. Which one is Not True about system delivery and deployment?
a. environment assumptions may be correct b. operator training has to be identified
c. data cleanup may be required d. may be physical installation problems
14. Which system has a long time?
a. large system b. small system c. both d. none
15. The effectiveness of a team depends on which one of the followings?
a. people in the group b. group organization
c. technical communication d. all

Fill in the blank.

16. Small software engineering groups are usually organized informally without a _____.
17. _____ reflects how well the development team knows each other and works together.
18. A very rapid build-up of people often correlates with _____.
19. Static metrics have an _____ with quality attributes.
20. System component can be _____ separately using a range of metrics.

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4 FEB 2025

SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt *ANY SIX* questions. (Q. No. 1 is Compulsory).

1. Justify that software engineering is the synergy of science and art. [4]
2. Briefly explain software process models. [4]
3. Discuss on the system issues in terms of agile and plan-based factor. [4]
4. Briefly discuss on requirements checking and requirements validation techniques. [2+2]
5. Define a successful testing. Explain types of user testing. [1+3]
6. Discuss on factors that affect system life times. [4]
7. Define a cohesive group. Mentions the advantages of a cohesive group. [4]

SECTION "C"

[2 Q. × 8 = 16 marks]

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

8. Considering an application for *Sale and Purchase of Agricultural Products*, suggest four (4) key requirements definition with their requirements specification. [2+6]
9. With a diagram, describe project planning processes. Explain CK object-oriented metrics. [4+4]
10. With a diagram, explain scrum sprint cycle. Discuss on distributed scrum. [4+4]

