

Mark Scored:

KATHMANDU UNIVERSITY
End Semester Examination [C]
May/June, 2019

Level : B.E./ B.Sc.

Year : IV

Exam Roll No. :

Time: 30 mins.

Course : COMP 401

Semester : I

F. M. : 10

Registration No.:

Date 06 JUN 2019

SECTION "A"
[20 Q. x 0.5 = 10 marks]

Pick the correct answer.

1. Which one holds the methods and tools together?
[a] Method [b] Procedure
[c] System engineering [d] Function
2. Which one is software maintenance cost?
[a] 10-20 % [b] 30-50 % [c] 50-70 % [d] 60-80 %
3. Which one is unpredictability in software development?
[a] Analysis [b] Design [c] Testing [d] All
4. Which is not XP value?
[a] Collaboration [b] Courage [c] Respect [d] Feedback
5. How many restraining factors are there to construct a system model?
[a] 3 [b] 5 [c] 4 [d] 6
6. Which of the following statement is NOT True?
[a] SRS document should only specify external system behavior
[b] SRS document should be easy to change
[c] SRS document should characterize acceptable responses to undesired events
[d] SRS document should specify only internal system behavior
7. Requirement specification is also known as _____.
[a] technical specification [b] non-technical specification
[c] functional specification [d] non-functional specification
8. Regarding software project management, the following statement is True.
[a] Software product is tangible
[b] There is standard process
[c] Large software projects are often "one-off" projects
[d] Large software projects are often "off-the-shelf" projects
9. Activity networks represent _____.
[a] project plan [b] project management
[c] project schedule [d] resource allocation

10. Walston-Felix Model is _____.
- [a] $3.2 * (KLOC)^{1.05}$ [b] $5.2 * (KLOC)^{0.91}$
 [c] $3.2 * (KLOC)^{0.91}$ [d] $5.2 * (KLOC)^{1.05}$
11. Which of the followings is the first activity of project planning?
- [a] Estimation of resources [b] Reviews
 [c] Determining project scope [d] Resource allocation
12. Four (4) cost drivers have how many attributes?
- [a] 15 [b] 12 [c] 8 [d] 16
13. Odd one out from the followings.
- [a] cohesion [b] Cyclomatic complexity
 [c] coupling [d] Adaptability
14. Which of the followings is a flow graph notation?
- [a] Circle [b] Diamond shape
 [c] Rectangle [d] Parallelogram
15. Which one is the correct equation for calculating cyclomatic complexity?
- [a] $E-N+2$ [b] $N-E+2$ [c] $R+1$ [d] $P+2$

Fill in the blank.

16. _____ checks interconnections between modules.
17. _____ help to be bound a system.
18. _____ is a detailed and precise description of the software system.
19. _____ is an end-point of some software process activity.
20. Earthquake planning is a _____.

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SECTION "B"
[6Q × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. With example, describe different types of software.
2. What is agility? Explain Scrum model for software development.
3. With diagram, explain system engineering process.
4. Describe the structure of software requirements specification (SRS) document.
5. What are the responsibilities of software project managers? Explain them.
6. Define software quality assurance. Explain software quality reviews.
7. Describe Graph-based testing methods.

SECTION "C"
[2Q × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. Suppose that Kathmandu University is going to develop "Student Information Management System". Provide four (4) key requirement definitions and their requirement specifications for it.
9. Define Cyclomatic Complexity (CC). With meaningful pseudo-code, explain different methods of computing CC.
10. By referring to the activity duration and dependency chart below, draw activity network and activity bar chart. Also, trace the critical path and calculate the time required to finish the project.

Task	Duration	Dependencies
T1	8	
T2	15	
T3	15	T1 (M1)
T4	10	
T5	40	T2, T4 (M2)
T6	5	T1, T2 (M3)
T7	20	T1 (M1)
T8	25	T4 (M5)
T9	10	T3, T6 (M4)
T10	15	T5, T7 (M7)
T11	7	T9 (M6)
T12	5	T11 (M8)

