

KATHMANDU UNIVERSITY  
End Semester Examination  
August, 2018

Mark Scored:

Level : B. Sc.  
Year : IV

Course : COMP 401  
Semester : I

Exam Roll No. : \_\_\_\_\_ Time: 30 mins.

F. M. : 10

Registration No.: \_\_\_\_\_

Date **AUG 12 2018**

SECTION "A"  
[20 Q × 0.5 = 10 marks]

Pick the correct answer.

1. Which one is false regarding simple software?  
[a] It is generally small program  
[b] The same person is responsible for major activities like designing and developing  
[c] Systematic approach is required  
[d] Both b and c
2. Who defines software engineering as the systematic approach to the development, maintenance, and retirement of the software?  
[a] Fritz Bauer      [b] Barry Boehm      [c] ACM      [d] IEEE
3. Which one of the followings is not considered to compute function-point?  
[a] no. of user inputs      [b] no. of external interfaces  
[c] no. of processes      [d] no. of files
4. Which one of the followings is the key trait of the people on agile team?  
[a] Collaboration      [b] Common focus      [c] Competence      [d] All
5. Odd one out from the followings with respect to XP.  
[a] Requirement Analysis      [b] Design  
[c] Testing      [d] Coding
6. How many elements are there for a system?  
[a] 4      [b] 5      [c] 6      [d] 7
7. Which enables the model to be created in a timely manner?  
[a] Assumptions      [b] Simplifications      [c] Limitations      [d] Constraints
8. Which one is also known as a functional specification?  
[a] Software specification      [b] Requirement definition  
[c] Requirement analysis      [d] Requirement specification
9. Which volatile requirement is due to the introduction of the computer system?  
[a] Consequential requirements      [b] Compatibility requirement  
[c] Emergent requirement      [d] Mutable requirement

10. Which is an end-point of software process activity?  
 [a] Deliverable [b] SRS document [c] Milestone [d] Feasibility report
11. Which one is not set out by the project plan?  
 [a] Resource availability [b] staff allocation  
 [c] Schedule [d] work-break down
12. Which one is Doty Model for  $KLOC > 9$  ?  
 [a]  $5.288 * (KLOC)^{1.047}$  [b]  $5.5 + 0.73 * (KLOC)^{1.16}$   
 [c]  $5.288 * (KLOC)^{1.16}$  [d]  $5.5 + 0.73 * (KLOC)^{1.047}$
13. Which value is the productivity parameter P for real-time embedded software?  
 [a] 10000 [b] 28000 [c] 2000 [d] 14000
14. How many types of comment can a quality review team recommend?  
 [a] 2 [b] 4 [c] 5 [d] 3
15. In which test cases find errors?  
 [a] nodes [b] predicate nodes [c] relationships [d] both b & c

Fill in the blank.

16. Test cases for boundary value analysis are not required from \_\_\_\_\_.
17. \_\_\_\_\_ introduces at least one new set of processing statements.
18. EAF has range of values from \_\_\_\_\_.
19. When a story is \_\_\_\_\_ customer splits the story into smaller stories.
20. Game playing is \_\_\_\_\_ type of software.

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Time : 2 hrs. 30 mins.

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F. M. : 40

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SECTION "B"

[6Q × 4 = 24 marks]

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

1. Why software engineering is synergy between science and art? Explain it.
2. Explain agility principles.
3. Describe information engineering. Explain different restraining factors to construct a system model.
4. With diagram, discuss on requirement engineering process.
5. Define software project management. Briefly explain the roles of software project managers.
6. What are the objectives of project planning? Discuss on different factors that affect project estimation.
7. How could we ensure the quality of software process? Describe quality reviews.

SECTION "C"

[2Q × 8 = 16 marks]

Attempt *ANY TWO* questions (Q. No. 9 is Compulsory).

8. Compare and contrast traditional software development with agile development.
9. Define cyclomatic complexity. Write proper pseudocode for binary search routine and prove that all methods of computing cyclomatic complexity of it result the same value.
10. Considering Online Air Ticket Reservation (OATR) Software, mention four (4) key requirements definitions of the OATR software and provide their requirements specifications.

