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complexity adjustment factor of 1.10.  
What are the unadjusted and adjusted  
function point counts ? (CO2)

5. (a) What is software configuration  
management ? Explain its process in  
detail. (CO1)

OR

- (b) What are Activity Networks ? Explain  
how do the Forward Networks and  
Backward Networks different from each  
other by citing the relevant difference  
between these two. (CO1)

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## TBC-403/TBI-405

B. C. A./B. SC. (IT)

(FOURTH SEMESTER)

MID SEMESTER

EXAMINATION, April, 2023

SOFTWARE PROJECT MANAGEMENT AND  
INFORMATION SYSTEM

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing  
any *one* of the sub-questions.

(ii) Each sub-question carries 10 marks.

1. (a) What is a project ? Define software  
project. Discuss the need for software  
project management. (CO1)

OR

- (b) Discuss the role of software project  
manager in project management. Enlist

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few responsibilities that a project manager shoulder. (CO1)

2. (a) Differentiate between the following :
- (i) Software development process and Project management process.
  - (ii) LOC and Function point
- (CO2)

OR

- (b) Give an outline of stepwise planning activities for a project with a neat diagram. (CO2)
3. (a) What are the different categories of software development projects according to the COCOMO estimation model? Give examples of software product development projects belonging to each of these categories. (CO1)

OR

- (b) A simple stand-alone software utility is to be developed in 'C' programming by a team of software experts for a computer

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running Linux and the overall size of this software is estimated to be 20,000 lines of code. Considering  $(a, b) = (2.4, 1.05)$  as multiplicative and exponentiation factor for the basic COCOMO effort estimation equation and  $(c, d) = (2.5, 0.38)$  as multiplicative and exponentiation factor for the basic COCOMO development time estimation equation, approximately how long does the software project take to complete? (CO1)

4. (a) Give detailed overview of PERT and GANTT charts with a suitable example. Discuss their merits and demerits over each other. (CO2)

OR

- (b) An application has the following :  
10 low external inputs, 12 high external outputs, 20 low internal logical files, 15 high external interface files, 12 average external inquiries, and a value of

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