

TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2079 Bhadra

Exam.	Regular		
Level	BE	Full Marks	80
Programme	BCT	Pass Marks	32
Year / Part	III / I	Time	3 hrs.

Subject: - Software Engineering (CT 601)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt **All** questions.
- ✓ The figures in the margin indicate **Full Marks**.
- ✓ Assume suitable data if necessary.



1. What was the software crisis in the history of software engineering? Discuss the advantages and disadvantages of waterfall model of software development. [3+4]
2. Distinguish between user and system requirements. Why does an engineer ensure that functional and non-functional needs are in a requirement specification document? [2+4]
3. What is the importance of SRS document in Software development? Identify and document functional as well as non functional requirements for "issuing book from library". [2+5]
4. Draw level 0 and level 1 DFD's for an online shopping system. [3+5]
5. What are the different modular decomposition styles used during system design? What is repository model in software architecture? Explain its advantages and disadvantages. [4+3+2]
6. Define periodic and aperiodic stimuli in real time system. What are the different tasks to be performed in real time design process? [1+4]
7. Discuss about the advantages and disadvantages of software reuse. What is COTS integration? [5+1]
8. What are software components? Explain with examples their interfaces. [3+3]
9. What is software inspection? Explain. Distinguish between verification and validation. [5+2]
10. What distinguishes black box testing from white box testing? Are both necessary for software testing, or is just one sufficient? Justify with a few suitable examples. [5+3]
11. What is Software Quality Assurance (SQA)? Discuss all the levels of CMMI. [2+5]
12. Define Version, Variants and Release with respect to configuration management. [4]
