TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2078 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. Define software. List the typical software characteristics? Justify this statement "software doesn't wear out". [1+3+4]

2. What do you mean by software requirements document? Explain requirement engineering process in detail. [2+6]

3. Draw use case diagram for a system illustrating the interactions between a doctor, who sees patients and prescribes him medicine and treatments. List some functional and non-functional requirements in this case. [5+3]

4. What is software architecture? Why architecture is important to drive software development? Explain multi-tier architecture with example. [2+2+4]

5. Distinguish between a real time and non-real time system. What is a data acquisition system? [2+2]

6. List the different levels in which software reuse may be possible. What are the advantages and disadvantages of software reuse? [3+4]

7. What are the benefits of CBSE? What are software components? Explain with symbols for components. [2+3]

8. Differentiate between verification and validation. Explain how and why the V-model emphasis software V and V. Discuss various hierarchical level of testing. [2+4+4]

9. What is COCOMO? What are the different types of COCOMO models proposed? What is the problem with using lines of code? [1+3+2]

10. Explain formal technical review process. Explain how CMMI model is used to evaluate the maturity of a software development. [5+5]

11. What is the difference between version and variant of a system? Describe change management process in software engineering. [2+4]

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