TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2076 Ashwin

Exam.	Back		
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 do you mean by requirement elicitation and analysis? List the characteristics, advantages and disadvantages of Incremental Development Model. [4+6]
2. In a particular college, a sports week needs to be organized you have been assigned a role of business analyst to design a DFD diagram for the whole system. Assuming the activities such as online registration, student council, form fill up, sport event venue and time, score card, rules and regulations, card system and prize distribution. [3+5+2]
   a) Prepare the list of process and agents.
   b) Draw the DFD up to level 1.
   c) Distinguish between functional and non-functional requirements.
3. Why is architectural design really important? What are the different types of control styles used by software engineers in designing the architectures? Explain in detail. [2+6]
4. Differentiate between hard real time system and soft real time system. Outline real time system design process. [2+3]
5. Justify the statement "Advantages of reuse are lower costs, faster software development and lower risks." What is a design pattern? [3+2]
6. What is a component? Explain the component based software engineering (CBSE) process in brief. [2+4]
7. Differentiate verification and validation. Write different types of fault that can be determined from inspection. [5]
8. Explain the V-model for software development process. Distinguish between alpha and beta testing. [5+2]
9. Explain the cocomo model for software cost estimation. [5]
10. a) Define SQA. What are the main objectives of Formal Technical Reviews? [2+3]
    b) Define term software reliability. Explain how CMM encourages continuous improvement of software process. [2+4]
11. Write short notes on: [4×2]
    a) SEI Capability Maturity Model
    b) Software version, variant and release

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