SET A

Design and Analysis of Software Systems (DASS)

Spring 2026

Quiz – 1 : 25 points

(Total Time 45 minutes)

Roll No: 2024101067 Programme: CSE

Q1. A software team is developing a large system where requirements are only partially understood at the start and are expected to evolve over time. The team wants to deliver usable functionality early, maintain code quality as the system grows, and ensure that frequent changes do not introduce new defects or delay the overall project timeline. (5 points)

Answer the following:

1. Explain which development model the team should adopt and why.
2. Describe how design and code quality should be managed over time as new features are added.
3. Explain how testing and integration practices can reduce risk when changes are made frequently.
4. Discuss how scheduling concepts can help ensure the project is not delayed, even when some tasks change.

SET A

Q2. **Given the task table below perform the following (6 points):**

Task Identifier	Estimated Hours	Task Predecessors
A	10	None (start)
B	25	A
C	20	A
D	20	C
E	18	B
F	10	E
G	52	D,F
H	30	E
I	0 (done)	H,G

a. Construct a network dependence graph:

b. Identify the critical task path:

c. Assuming that all its preceding tasks are performed in exactly the hours estimated how much slack time does Task D have?

d. Assuming that all its preceding tasks are performed in exactly the hours estimated how much slack time does Task E have?

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Q3. Solve the crossword puzzle using terms that were discussed in class over the past four weeks. Note that multiple words may be joined together without any white space. For example: Evolutionary Design may be written the puzzle as EVOLUTIONARYDESIGN (14 points)