

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION)**

**CLASS: BE  
BRANCH: IT**

**SEMESTER: V  
SESSION : MO/2018**

**SUBJECT : IT5023 SOFTWARE ENGINEERING PRINCIPLES**

**TIME: 1.5 HOURS**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

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- Q1 (a) Systems developed as prototypes should not normally be used as production systems. Give reasons why. [2]  
(b) Would you use scrum-based software development for online pizza ordering system? Justify your answer. [3]
- Q2 (a) Give the block diagram representation of RAD and Incremental model. [2]  
(b) Give the best reason (only one) for the following statements: [3]  
1. Test first development gives the programmer a better understanding of the system requirements  
2. The productivity rate in Pair programming is more than half of two programmers working individually.  
3. Change is inevitable in software engineering.
- Q3 (a) A program is to be developed to simulate the operations of a scientific calculator. Analyse two functional, nonfunctional requirements and exciting requirements. [2]  
(b) Draw a use case diagram for the scientific calculator. [3]
- Q4 (a) Define a stakeholder. List ways in which a requirements document can be written? [2]  
(b) What do we check requirements for? Discuss the strategies adopted for validating requirements [3]
- Q5 (a) List risk management and prioritization Steps. [2]  
(b) List the factors on which effectiveness of a group composition and communication depends. [3]
- Q6 (a) Draw the Network and determine the Critical Path [2]

Task	Schedule in days( $t_0$ )	Pre-decessors	$t_m$	$t_p$
Task 1	4		6	9
Task 2	2		3	4
Task 3	4	2	6	8
Task 4	2		4	6
Deliverable A		1,3,4		
Task 6	6	5	8	9
Task 7	2	5	5	6
Deliverable B 6, 7		6,7		
Task 9 2d 1	2	1	3	7

- (b) For the above given statistics find out the Float values and the actual time for project completion. [3]