

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

**CLASS: BE
BRANCH: IT**

**SEMESTER: V
SESSION : MO/2019**

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) State the IEEE definition of Software Engineering. [2]
(b) Explain with neat diagram exploratory (build and fix) style of software development. [3]
What is wrong with this style?
- Q2 (a) Draw the following: Bath-Tub Curve, Software Curve(ideal and actual). [2]
(b) Which principles are deployed by software engineering techniques to overcome human cognitive limitations? Indian companies have largely focused on which type of software projects and why? [3]
- Q3 (a) Draw a neat diagrams to distinguish between Plan and Agile development methods. [2]
(b) Draw the neat diagrams: SCRUM and XP. [3]
- Q4 (a) List four important properties of good SRS. Why requirement elicitation is difficult? [2]
(b) Draw a Use Case Diagram for Course Management Software. At the beginning of each semester. [3]
(i) Each professor shall register the courses that he is going to teach. (ii)A student can select up to four-course offerings. (iii)During registration a students can request a course catalogue showing course offerings for the semester. (iv) Information about each course such as professor, department and prerequisites would be displayed. (v) The registration system sends information to the billing system so the students can be billed for the semester.(vi)For each semester, there is a period of time during which dropping of courses is permitted.(vii) Professors must be able to access the system to see which students signed up for each of their course offerings.
- Q5 (a) List the category to which the following software risk belong to: Technology change, Staff turnover, Requirements change and Size underestimate. [2]
(b) What is the goal of Software Project Management? List three important activities of SPM. [3]
- Q6 (a) Which activity of SDLC spans all the stages of software development? List SEI-CMM levels. [2]
(b) Create a context diagram and level 1 and 2 of DFD of Airline Reservation System. [3]

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