

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

T1 EXAMINATION- SEP 2017

B.Tech (CSE&IT) V Semester

COURSE CODE: 10B11CI512

MAX. MARKS: 15

COURSE NAME: Software Engineering

COURSE CREDITS: 4

MAX. TIME: 1 Hr

Note: All questions are compulsory.

1. [3 Marks]
 - a) Differentiate between user requirements, Domain Requirements & System Requirements.
 - b) The railway department decides to introduce a computer-based control system to support the driving of the trains. Identify user requirements for the above computer-based control system.
2. [2 + 1 Marks]
 - a) Is it possible to combine process models? If so, provide an example.
 - b) Programs developed using evolutionary development is likely to be difficult to maintain. Justify?
3. [3 Marks]

Draw the activity diagram for student admission procedure at JUIT.
4. [3 Marks]

Develop a sequence diagram showing the interactions involved when a student registers for a course in JUIT. Courses may have limited enrollment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.
5. [3 Marks]

Assume you are a software engineer working on a complex **Patient Monitoring System** for a large hospital chain. The system requirements include integrating hospital records of all patients, providing a means of digitizing and storing physician's reports, acquiring and displaying digital images from equipment provided by another manufacturer, and providing a local area network interconnecting physician's offices with each other and with a central file server. The hardware/ software/operator system is required to allow a physician to call up an enhanced radiographic image from the central file server, evaluate the image, and dictate the report to a microphone attached to his display. The system will be required to store the report, distribute the report to the referring physician, and add the fee to the patient's bill.

Develop a set of use cases that could serve as a basis for understanding the requirements for the above **Patient Monitoring System**.