

POKHARA UNIVERSITY

Level: Bachelor Semester: Fall Year : 2022
 Programme: BE Full Marks: 100
 Course: Object Oriented Software Engineering Pass Marks: 45
 Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Give your justification on whether software systems should be engineered or manufactured. 7
 b) What are the reasons behind agile popularity? Explain. 8
2. a) What is management spectrum? Explain different types of feasibility for acceptance of software 7
 b) What are the main characteristics of Software Risks? 8
 A software team involved in the development of a software system plans on using 80 reusable components with average component size as 120 LOC and software engineering cost for each LOC as \$ 11. Only 20 percent of the software components scheduled for reuse will be integrated into the application and the remaining functionality will have to be custom developed. The software team defines a project risk with 90% probability of occurrence of this risk. From the given scenario compute the risk exposure for this project and comment on what it implies.
3. a) Define requirement engineering. What are various methods of requirement elicitation? Explain. 2+6
 b) Briefly explain the set of guidelines for formal technical review (FTR). 7
4. a) Draw a use case diagram for following case study: 7
 In hospital a patient goes to registration machine He presses the on button then the screen Opens. He enters patient id number. He books for the doctor for his checkup. He checks the category of disease from given list, then he choose doctors name from given list. He enters time; he wants to meet the doctor. For this registration he need to enters the amount, if the amount digit is ok it accepts the registration and prints

the registration slip, otherwise it will give a signal of alarm of in sufficient amount

- b) A Passenger hands over his ticket at the counter. The employee at counter verifies the ticket. If something is wrong with it, he refers the passenger to the customer services else he asks the customer to hand over his luggage. He then verifies the customer's luggage; if a fee is required the customer pays the necessary fee after which he is issued a boarding pass. 8
 Draw an activity diagram from the above scenario.
5. a) List out the differences between quality control and quality assurance and explain the elements and goals of software quality assurance (SQA). 7
 b) What is regression testing? Differentiate between top- down and bottom- up integration testing. 8
6. a) What are test cases and what is the importance of testing and designing test cases. 7
 b) Highlighting the Software Process Improvement Framework activities, explain why do you think that a Software development company should initiate SPI activities? 8
7. Write short notes on: (**Any two**) 2×5
 a) Class diagram VS Object diagram
 b) Domain and reuse analysis
 c) Six sigma