

POKHARA UNIVERSITY

Level: Bachelor
Semester: Spring
Programme: BE
Course: Object Oriented Software Engineering

Year : 2016
Full Marks: 100
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) Define Software Engineering and its significant role over the system design. 7
b) Define agile software development with its advantages and disadvantages. 8
2. a) A software project started on June 2015 was supposed to be completed by August 2016. But the progress review at the end of December 2016 shows that only 20% of the tasks have been completed and the major reason in delay of the project was the people factor. Explain briefly the possible reasons that the people factor affects the software development process. 7
b) Explain briefly the need of risk identification during software development process. Also explain RMMM and RMMM plan. 8
3. a) How eliciting requirement is difficult task? Explain the basic guidelines of collaborative requirements gathering. 7
b) Explain how Use case diagram and CRC modeling aids in object oriented analysis. 8
4. a) Obtain 1-level DFD for the following system of encashing cheque in a bank. A customer presents a cheque to a clerk. The clerk checks the ledger containing all account numbers and make sure whether the account number in the cheque is valid, Whether adequate balance is there in the account to pay the cheque, and whether the clerk also debits customer's account by the amount specified on the cheque. If cash cannot be paid due to an error in the cheque, the cheque is returned. The token number is written on the top of the cheque and it is passed on to the chashier. The cashier calls out the token number, 8

takes the customer's signature, pays cash, enters cash paid in ledger called day book, and file the cheque.

- b) Design a class diagram for Class Books which has following attributes and operations. 7

Attributes : name, Author Name, ISSN Number, Price

Operations: to take value for the above data, to search a book by its ISSN and to display the details of a book.

5. a) Suppose a Hotel is going to design an online hotel booking system for its guests. There are following requirements: 7

Cost-effectiveness

Reliability

User friendliness

Suggest priority of the above mentioned representative software qualities in most required to least required order. Also give appropriate reasons in favor of your answer.

- b) What is FTR? Why it is importance in SQA activities? Explain briefly about Defect amplification and removal. 8

6. a) What do you mean by Software Configuration Management? Explain with example. 7

- b) What is Software process improvement? Explain Process Improvement according to CMMI. 8

7. Write short notes on: (Any two)

- a) Modularity
b) Verification and Validation
c) Domain and reuse analysis

2×5