

SVKM's NMIMS
MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Programme: B. Tech (COMPUTER)

Year: III

Semester: V

Batch: 2014-15/ 2015-16/ 2016-17

Academic Year: 2016-2017

Subject: Software Engineering

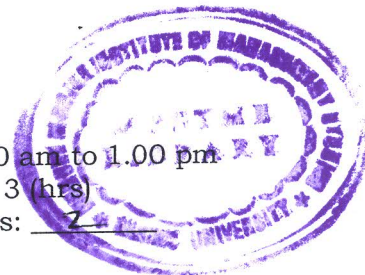
Date: 30 May 2017

Marks: 60

Time: 10.00 am to 1.00 pm

Durations: 3 (hrs)

No. of Pages: 2



Re-Examination

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

- NB :
- 1) Question No. 1 is compulsory.
 - 2) Out of remaining questions, attempt any 4 questions.
 - 3) In all 5 questions to be attempted.
 - 4) All questions carry equal marks.
 - 5) Answer to each new question to be started on a fresh page.
 - 6) Figures in brackets on the right hand side indicate full marks.
 - 7) Assume Suitable data if necessary.

Q1

- a) Explain W5HH principle with respect to software project management. [6]
- b) Explain the golden rules for user interface design. [6]

Q2

With the help of neat labelled diagram, describe the Scrum methodology for developing software. [12]
Give example of applications using scrum methodology.

Q3

- a) What is Software Configuration Management Repository? Discuss the different SCM tasks. [8]
- b) Describe in detail the XP concepts of refactoring and pair programming. [4]

Q4

- a) What are software risks? Discuss Reactive and Proactive risk strategies. [5]
- b) Draw a Data Flow Diagram for an Online Railway Reservation System up to Level 2. [7]

Q5 public double calculate (int amount) { [12]

```

    double rushcharge = 0;
    if (nextday.equals("yes")) {
        rushcharge = 14.5;
    }
    double tax = amount * 0.0725;
    if (amount >= 1000 ) {
        shipcharge = amount * 0.06 + rushcharge;
    }
    else if (amount >= 200) {
        shipcharge = amount * 0.08 + rushcharge;
    }
    else if (amount >= 100) {
        shipcharge = 13.25 + rushcharge;
    }
    else if (amount >= 50) {
        shipcharge = 9.95 + rushcharge;
    }
    else if (amount >= 25) {
        shipcharge = 7.25 + rushcharge;
    }
    else {
        shipcharge = 5.25 + rushcharge;
    }
    total = amount + tax + shipcharge;
    return total;
} // end calculate method

```

For the above mentioned calculate program perform the following

- i. Draw a control flow graph for the calculate method.
- ii. Determine the Cyclomatic complexity of the method.
- iii. Determine the basis set of independent path.
- iv. Prepare the test cases.

Q6

- a) With the help of suitable example scenario, describe the incremental model of software development. [6]
- b) Discuss Data flow architectural style with suitable example. [6]

Q7

Explain the process of effort estimation using function point analysis, with an example. Discuss the advantage of this method over other estimation methods. [12]

----- X -----