



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
THIRD SESSIONAL

SUBJECT: (CE-421) SOFTWARE ENGINEERING PRINCIPLES AND PRACTICES

Examination : B.Tech Semester - IV
Date : 22/03/2024
Time : 1:00 p.m. to 2:15 p.m.

Seat No. : 82
Day : Friday
Max. Marks : 36

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
2. The symbols used to carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

- Q.1 Do as directed.** [12]
- CO5 N (a)** Examine the need of Driver and Stub for Unit Testing. [2]
- CO5 E (b)** State True or False and Justify: "Regression testing requires re-execution of some test cases which have been already tested once." [2]
- CO5 A (c)** Identify two scenarios where stress testing can be applied. [2]
- CO4 N (d)** List Any Four principles of DSDM. [2]
- CO4 R (e)** Which are three golden rules of User Interface Design? [2]
- CO6 C (f)** Write full form of SCM & SCI. Draw the SCM process diagram. [2]
- Q.2 Attempt Any TWO from the following questions.** [12]
- CO5 C (a)** Design black box test suite for the following: [6]
1. "A Mediclaim system which requires customers to satisfy age criteria between 18 and 60 years to buy a policy."
 2. "Mobile Phone number validation tool which checks whether the entered number is valid or not based on length."
- CO5 E (b)** Consider the pseudo-code given below and do following: [6]
1. Draw Flow graph
 2. Determine Cyclomatic Complexity by applying all three methods
- begin
int x, y, power;
float z;
input(x, y);
if(y<0)
power = -y;
else power = y;
z=1;
while(power!=0)
{ z=z*x;
power=power-1;
}
if(y<0)
z=1/z;
output(z);
end
- CO5 E (c)** Why integration testing is carried out in different manner for Object Oriented Software as compared to traditional approach? Explain the techniques which are commonly used to test Object Oriented software. [6]

- Q.3** Attempt the following questions. [12]
CO6 N (a) What is "Agile Manifesto"? Explain any eight Agile Principles. [6]
CO4 N (b) Explain the following terms with respect to Extreme Programming: [6]
Refactoring, Pair-Programming, Test-First Development.

OR

- Q.3** Attempt the following questions. [12]
CO6 N (a) What are DevOps and Jenkins? Draw and Explain DevOps Lifecycle. [6]
What is CI/CD model of software development?
CO4 N (b) What is Scrum? Explain the Role of following terms with respect to [6]
Scrum: Product Master, Scrum Master, Product Backlog, Sprint, Sprint
Planning Meeting, Sprint Backlog, Daily Scrum meeting, Sprint Review
and Sprint Retrospective.