

Total No. of Questions : 7]

SEAT No. :

**P3387**

[Total No. of Pages : 4

**[6027] - 303**

**Second Year M.C.A. (Mgmt. Faculty)**

**IT - 33 : Testing and Quality Assurance**

**(2019 Pattern) (Semester - III)**

*Time : 3 Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *All questions are compulsory.*
- 2) *Draw neat diagrams whenever necessary.*

**Q1)** Write a test plan for the following sections of IEEE 829 test plan template for a online library system. **[10]**

- a) Scope of testing.
- b) Objectives.
- c) Risks.
- d) Strategy.
- e) Approach.

**Q2)** a) Enumerate and explain the SQA activities. **[8]**

b) Define Software Process metrics with an example. **[2]**

OR

a) What is reliability? What are the factors that affect reliability. **[8]**

b) Define Software Product metrics with an example. **[2]**

**Q3)** a) Explain the Phases of testing life cycle. **[8]**

b) Explain stress testing. **[2]**

OR

a) Differentiate between white box and black box testing. **[8]**

b) Explain acceptance testing. **[2]**

**P.T.O.**

**Q4) A)** Solve the following.

- a) For the given sample code which of the following test cases will ensure that statement `u or` is executed?

Input number of male rabbits

Input number of female rabbits

If male rabbits > 0 and female rabbits > 0 then

Input Do you want to breed (Yes/No)

If breed = "No"

Print "keep male and female rabbits apart !"

Endif

Endif

- i) male rabbits = 1, female rabbits = 1, breed = 'yes'
- ii) male rabbits = 1, female rabbits = 1, breed = 'no'
- iii) male rabbits = 1, female rabbits = 2, breed = 'yes'
- iv) male rabbits = 1, female rabbits = 0, breed = 'no'

[3]

- b) In a examination a candidate has to score minimum of 24 marks in order to clear the exam. The minimum that he can score is 40 marks. Identify the valid Equivalence values if the student clears the exam.

[3]

- i) 22, 23, 26
- ii) 21, 39, 40
- iii) 29, 30, 31
- iv) 0, 15, 22

- c) Find the cyclomatic complexity of the code

[2]

If X=z

THEN statement 2;

END

- B) Explain unit testing.

[2]

OR

A) Solve the following.

a) Mention valid collection of equivalence classes for the following.

Paying with credit cards shall be possible with Visa, Master and Amex cards only. [3]

b) Find the minimum test required for statement coverage.

order\_qty = 0

Read order\_qty

If order\_qty >= 20 then

Disc = 0.05

If order\_qty >= 100 then

Disc = 0.1

Endif

Endif

[3]

c) A name field in software accepts 3 to 25 alpha characters only. Using BVA technique what will be possible number of combinations? [2]

i) 3, 4, 24, 25

ii) 2, 3, 25, 26

iii) 2, 3, 24, 25

iv) 3, 5, 25, 26

B) Explain Integration testing.

[2]

Q5) Write 4 test cases for testing debit card payment form of the payment module for an e-commerce web application. [10]

OR

Write any 4 test cases for testing login functionality of an E-mail application. [10]

- Q6)** a) Explain test design tool and test data preparation tool. [6]  
b) Enumerate the limitations of Selenium testing tool. [4]

OR

- a) Explain the process of automation testing. [6]  
b) What are the testing types supported by Selenium? [4]

**Q7)** Write short notes on [2×5=10]

- a) Static testing.  
b) Alpha testing.

OR

- a) Walkthrough.  
b) Reliability.

