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**V Semester B.C.A. 4 Degree Examination, March - 2022****PROGRAMMING WITH PYTHON****(Repeater / Regular)****Time : 3 Hours****Maximum Marks : 80****Instructions to Candidates :**

- 1) *ALL Sections are Compulsory.*
- 2) *Give examples wherever necessary..*

**SECTION - A**

Answer the following questions.

**(10×2=20)**

1.
  - a) Define Python.
  - b) Define Variable. State the rules of defining a variable.
  - c) Define Tuples. Give an example.
  - d) Differentiate between Lists and Dictionaries.
  - e) State the significance of Range ( )
  - f) Define Testing.
  - g) Define Inheritance and Encapsulation.
  - h) Define Regular Expression.
  - i) Name any four Tkinter widgets.
  - j) What is Cursor ?

**SECTION - B**Answer any **FOUR** of the following questions.**(4×5=20)**

2. Explain Scoping with examples.
3. Explain any five String built-in functions with examples.
4. Differentiate between Block-box and White-box Testing.
5. Explain any five Meta characters with Regular Expressions.
6. Explain steps for Database connectivity in python.

**[P.T.O.]**

**SECTION-C**

Answer any **FOUR** of the following questions.

(4×10=40)

7. a) Explain features of python. (5)
  - b) Explain Recursion with an example (5)
  8. Explain any five built-in functions of Dictionaries with example (10)
  9. a) Explain Exception Handling in python. (5)
  - b) Explain Debugging in python (5)
  10. Explain any five Widgets related to GUI (10)
  11. Explain following terms each: (5×2=10)
    - i) Commit ( )
    - ii) Alter table
    - iii) Update operation
    - iv) Fetchall ( )
    - v) Delete ( )
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**V Semester B.C.A. 4 Degree Examination, March - 2022**  
**SOFTWARE ENGINEERING**  
**(Repeater/Regular)**

**Time : 3 Hours**

**Maximum Marks : 80**

**Instructions to Candidates :**

1. *ALL Sections are Compulsory.*
2. *Answer the questions of a particular Section Together.*

**SECTION - A**

Answer the following **TEN** questions.

**(10×2=20)**

1. a) Define Software Engineering.  
b) Name any four generic process activities.  
c) What is Data Dictionary?  
d) What is the System Model?  
e) What is Software Architecture?  
f) What is a component and what role it plays in design?  
g) Define defect removal efficiency (DRE).  
h) What is Unit Testing?  
i) Define Software Quality.  
j) State the two characteristics that risk always involves.

**SECTION - B**

Solve any **FOUR** questions of the following.

**(4×5=20)**

2. Draw a neat diagram and explain the layered technology of Software Engineering.
3. Draw a neat diagram and explain briefly the requirement engineering process.
4. State all the design concept w.r.t. Software engineering and explain any two of them.
5. Why is debugging so difficult?
6. Explain different categories of Risk.

**[P.T.O.]**

**SECTION - C**Solve any **FOUR** full questions of the following.**(4×10=40)**

7. Discuss in detail the different categories of Software. **(10)**
  8. What is formal technical review (FTR)? Identify its any four objectives. Explain briefly any five guidelines of FTR. **(10)**
  9. Draw a neat diagram & briefly explain
    - a) Waterfall Model. **(5)**
    - b) Spiral Model. **(5)**
  10.
    - a) Explain in brief the three golden rules w.r.t. user interface design. **(5)**
    - b) Discuss in brief designing conventional components. **(5)**
  11.
    - a) What is Integration Testing? Explain in brief Top-down Integration. **(5)**
    - b) Explain the measures of Software Quality. **(5)**
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V Semester B.C.A. 4 Degree Examination, March - 2022

**CYBER SECURITY**

**(Repeater / Regular)**

**Time : 3 Hours**

**Maximum Marks : 80**

**Instructions to Candidates :**

***ALL Sections are Compulsory.***

**SECTION - A**

**I. Answer the following questions.**

**(10×2=20)**

- a) What is Internet Time Theft?
- b) What is Data Diddling?
- c) List the tips to prevent Credit Card Frauds.
- d) Write the meaning of Reconnaissance.
- e) Mention the methods of minimizing the buffer overflow.
- f) List the tools used to protect buffer overflow.
- g) What is Cyber Forensics?
- h) What is the goal of Wireless Forensics?
- i) List the advantage of Social Media Marketing.
- j) What is IPR?

**SECTION - B**

**II. Answer any FOUR Questions.**

**(4×5=20)**

2. Explain any five Important Indian IT ACT 2000.
3. Explain how Cyber Stalking Works?
4. Write the difference between Virus & Worm.
5. Explain chain of Custody Concept.
6. Explain importance of end point security in organizations.

**[P.T.O.]**



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**SECTION - C**

Answer any **FOUR** Questions.

(4×10=40)

7. Explain the classification of Cyber Crime.
  8. Why Cloud Computing? What are the service provided by Cloud Computing and also discuss the risk associated with Cloud Computing.
  9. What are the different components of Wireless Network?
  10. Write the Key steps to be performed in solving a Computer Forensics Case.
  11. What is Social Media Marketing? Write the Security Risks and Perils for Organization.
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V Semester B.C.A. 4 Degree Examination, March - 2022  
SOFTWARE PROGRAMMING & TESTING  
(Repeater / Regular)

Time : 3 Hours

Maximum Marks : 80

*Instructions to Candidates :*

1. Answer the questions of ALL Three Sections as per the Instructions.
2. Draw Diagrams wherever necessary.

SECTION - A

Answer ALL the questions 2 marks each.

(10×2=20)

1. a) What is SRS?  
b) What is RAD? Is it a prototype?  
c) Define Stress Testing.  
d) What is Acceptance Testing?  
e) What is Aesthetic Testing?  
f) Name the classification of Test Cases.  
g) What is Risk Mitigation Planning?  
h) Write any two responsibilities of CTO.  
i) Name the choice of Standards.  
j) What is Software Test Automation?

SECTION - B

Answer any 4 of the following, 5 marks each.

(4×5=20)

2. Explain the phases of Software Development.
3. Differentiate between Static Testing and Structural Testing.
4. What is Regression Testing? Explain its types.

[P.T.O.]



5. What are the responsibilities of Test Lead?
6. Explain the aspects of Risk Management with neat diagram.

### SECTION - C

Answer any 4 of the following - 10 marks each.

(4×10=40)

7. a) Explain V-Model of S/w Development with neat diagram. (5)  
b) Differentiate between Prototype and RAD model of software development. (5)
  8. a) Explain black box testing with test cases. (5)  
b) Explain the criteria for acceptance testing. (5)
  9. a) Explain the tools used for testing object oriented systems. (5)  
b) Explain the categories of accessibility testing. (5)
  10. a) Explain the career progressions for the testing professionals. (5)  
b) Explain the structure of a multiproduct company. (5)
  11. a) How test automation can help us to address several problems? (10)  
b) Explain the process of calculating cyclomatic complexity with an example.
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V Semester B.C.A. 4 Degree Examination, March - 2022

**.NET FRAMEWORK USING C#****(Repeater / Regular)**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates :**

- 1) *Answer ALL Sections.*
- 2) *Draw diagram wherever necessary.*

**SECTION - A**

Answer the following questions.

**(10×2=20)**

1.
  - a) Expand JIT and CTS.
  - b) Define Class and Objects.
  - c) Define constructor in C#.
  - d) List two methods of system Console Class.
  - e) What is .NET Assembly?
  - f) How to invoke base class constructor in C#?
  - g) Define exception in C#.
  - h) List any four relational operators in C#.
  - i) Differentiate list and dictionary in C#.
  - j) List different types of deployment in Window Service.

**SECTION - B**Answer any **FOUR** questions.**(4×5=20)**

2. Explain Characteristics of C#.
3. Write a C# Program to demonstrate Method Overloading.
4. Explain Access modifiers in C#.
5. Explain Properties in C#.
6. Explain List in C# with methods and examples.

**[P.T.O.]**



## SECTION - C

Answer any **FOUR** questions.

(4×10=40)

7. What is .NET Framework? Explain building blocks of .NET framework with neat diagram. (10)
8. a) Write a program to illustrate Operator Overloading. (6)  
b) Write the steps to create Private Assembly. (4)
9. a) Explain try catch and finally block with example. (5)  
b) Write a program to illustrate interface in C#. (5)
10. a) Write the steps to create window services in C#. (6)  
b) Explain menustrip, menu items in C#. (4)
11. Explain the following (4×2½=10)
- i) Method Overriding.
  - ii) Custom Controls.
  - iii) Delegates.
  - iv) Events.
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