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**Examination: Odd Semester Examination 2024**

**Paper Name: Programming with Python**

**Paper Code: BTCSE AI 305**

**Time: 2.30 Hours (10:00AM To 12:30PM)**

**Maximum Marks: 60**

**Note: This question paper has two sections : Section A and Section B. Assume missing data, if any.**

**Attempt (i) Section-A: All questions are compulsory.**

**(ii) Section-B: Attempt any FOUR QUESTIONS.**

**Section –A (All questions are compulsory) 4×5=20 Marks**

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| Q1. Explain Anaconda Navigator and its key features.                                                                                                                                                                                                                                                                                                                                                                                                                 | CO1 | BL1,<br>BL2 |
| Q2. Write python code to calculate and display the area of the circle.                                                                                                                                                                                                                                                                                                                                                                                               | CO2 | BL3         |
| Q3. What is a lambda function in Python? Explain its syntax and provide an example to demonstrate its usage.                                                                                                                                                                                                                                                                                                                                                         | CO1 | BL1,<br>BL2 |
| Q4. Consider the following code snippet. Identify the Errors if any and rectify them. Finally, what is the output (considering all the errors are removed)?<br><br>def student_details:<br>student_info = [" Aditi", "1990-657-943", " Computer Science"]<br>print("The list stores the following student details. ")<br>print("Name: ", student_info[0])<br>print("Enrollment Number: ", student_info[1])<br>print("Course: ",student_info[2])<br>student_details{} | CO4 | BL4         |

**Section –B (Attempt any Four questions) 4×10=40 Marks**

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| Q1. What is Keras in the context of deep learning, and how does it support building and training neural networks? Explain its main features and provide an example of program created using Keras. | CO4 | BL3 |
| Q2. Write python code to<br>i) Implement various operations in tuple.<br>ii) Calculate the Electricity Bill.                                                                                       | CO3 | BL3 |

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| Q3. Differentiate between i) Ruby and Python & ii) JavaScript and Python.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CO5  | BL4               |
| Q4. Write different types of Operators in Data Structure of Python and elaborate them in details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CO1  | BL4               |
| Q5. Explain the concept of a Queue data structure. What are different processes of Queue in Python?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CO4  | BL1<br>BL4<br>BL6 |
| <p>Q6. Write the output of the following code snippets::</p> <p>a) <code>string = "Cse, Sest!"</code></p> <p><code>print(string.upper( ))</code></p> <p><code>print(string.lower( ))</code></p> <p><code>print(string.title( ))</code></p> <p>b) <code>str1 = "Jamia"</code></p> <p><code>str2 = "Hamdard"</code></p> <p><code>concatenated = str1 + ", " + str2 + "!"</code></p> <p><code>print(concatenated)</code></p> <p>c) <code>string = "Hello, World!"</code></p> <p><code>substring = "World"</code></p> <p><code>if substring in string:</code></p> <p><code>    print(f'{substring}' found in string!)</code></p> <p><code>else:</code></p> <p><code>    print(f'{substring}' not found.)</code></p> <p>d) <code>sentence = " Python is Best Language"</code></p> <p><code>reversed_words = " ".join(sentence.split( )[::-1])</code></p> <p><code>print(reversed_words)</code></p> | CO 4 | BL5               |