Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER VIII- EXAMINATION –WINTER-2023

Subject Code:4480606   **Date: 14/12/2023**
Subject Name: Advanced Python
Time: 02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:

    1. **Attempt all questions.**
    2. **Make Suitable assumptions wherever necessary.**
    3. **Figures to the right indicate full marks.**
    4. **Use of simple calculators and non-programmable scientific calculators are permitted.**

Q.1 **(a)** Explain the following terms with respect to python: **07**
      1) Data Scrubbing
      2) Multithreading
      3) WSGI
      4) fetchall()
      5) urlopen()
      6) acquire()
      7) re.search()

    (b) 1) Explain the following regular expression methods with suitable **07**
        examples. re.split(), re.match(), re.sub() (03)
      2) Write a program in python to do the following using regular expression
        (04)
          a. match string staring with an upper case "S"
          b. match password that contains at least one alphabet, one number and one special case letter
          c. account number having 16 digits and starts with 12 or 13
          d. any pairs of numbers

Q.2 **(a)** What do you mean by virtual machine? How Python virtual machine execute code using multithreading? Explain with example. **07**

    (b) Write a python program to read a CSV file having columns student_id, student_name, student_class, student_grade. Split the data using split() and display the content in HTML format. **07**

OR

    (b) Write the difference between json.dumps() and json.dump(). Explain indent, skipkeys and sort_key parameters of json.dumps(). **07**

Q.3 **(a)** How is connect() used to access database? Explain execute( ), executemany( ), fetchone( ), fetchall( ) and fetchmany( ) cursor object methods with example. **07**

    (b) What do you mean by web crawlers. Write a python program to crawl any web page and find the most frequent words. **07**

OR

Q.3 **(a)** List 3 steps for creating extension in python. Discuss the process of wrapping code in boilerplate. **07**

	(b)	What do you mean by thread? Explain the usage of thread module in python and explain release() and locked().	**07**
Q.4	**(a)**	What is the role of urlparse? Discuss urlparse( ), urlunparse( ) and urljoin( ) methods of urlparse with example.	**07**
	(b)	What is WSGI? How to create WSGI applications in python.	**07**

OR

Q.4	**(a)**	List the various methods of urllib module. Explain any three functions of urllib with suitable example.	**07**
	(b)	What are the different web components? How you can differentiate BaseHTTPRequestHandler, SimpleHTTPRequestHandler and CGIHTTPRequestHandler.	**07**

Q.5	**(a)**	What is web framework? Discuss the steps to create backend admin application in Django.	**07**
	(b)	What do you mean by predictive modeling in python? Explain n-cross fold validation.	**07**

OR

Q.5	**(a)**	What is the importance of development server in Django? Discuss the basic steps to create "Welcome Page" in Django.	**07**
	(b)	What are the things notice about new dataset and why? Explain the python modules used for data analysis and visualization.	**07**

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