

**Gurdasdevi Institute of Management and Technology (GIMT)**  
**(Affiliated with IKG. Punjab Technical University)**

**ASSIGNMENT**

<b>Course</b>	<b>B.Sc(IT)</b>	<b>Semester</b>	<b>3rd</b>
<b>Mcode</b>	<b>78181</b>	<b>Subject Code</b>	<b>UGCA1915</b>
<b>Subject</b>	<b>Data Structures</b>		

***Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)***

1. Discuss the limitations of Arrays. Write the steps to find out largest element of an array.
2. Explain Inorder, Preorder and Postorder Traversal operation.
3. What is Queue? Write an algorithm to insert an element from a simple Queue.
4. What is Doubly Linked List? Write an algorithm to insert and delete a node in Doubly Linked List.
5. Write an algorithm to sort an array of integers in the descending order using quick sort.
6. Illustrate the concept of breadth-first search traversing of graph.

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<b>Course</b>	<b>B.Sc(IT)</b>	<b>Semester</b>	<b>3rd</b>
<b>Mcode</b>	<b>78343</b>	<b>Subject Code</b>	<b>UGCA1959</b>
<b>Subject</b>	<b>Internet Tools &amp; Applications</b>		

***Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)***

1. Discuss the architecture of Email including message format.
2. Lists some common used HTML commands? Illustrate the HTML structure by taking suitable example.
3. Write the steps of creating the HTML Page. What are the rules of nesting?
4. What are the objectives of chat groups? How the security can be provided in it?
5. Why there is need Hyper Links? How it is used to link contents?
6. Write the steps for use of the URLs into web pages by taking an example.

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<b>Mcode</b>	<b>78180</b>	<b>Subject Code</b>	<b>UGCA1914</b>
<b>Subject</b>	<b>Programming in Python</b>		

***Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)***

1. What is an exception? Illustrate the use of exception handling by writing a function named readposint that uses the input dialog to prompt the user for a positive integer and then checks the input to confirm that it meets the requirements. It should be ab
2. Explain the process of opening, reading and writing files in Python. You are given a file called class\_scores.txt, where each line of the file contains a one-word username and a test score separated by spaces, like below:  
GWashington 83  
JAdams 86 .  
Write
3. Write a detailed note on the four collection data types in the Python programming language: list, tuple, set and dictionary. Write about their features and usage.
4. What is a module? How are modules created and used in Python? List some standard Python modules.
5. What are the various types of operators available in Python? Write a program that generates a random decimal number between 1 and 10 with two decimal places of accuracy. Examples are 1.23, 3.45, 9.80, and 5.00.
6. Explain various mechanisms of passing arguments to functions in Python. Discuss the behaviour of recursive functions with the help of example.

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<b>Course</b>	<b>B.Sc(IT)</b>	<b>Semester</b>	<b>3rd</b>
<b>Mcode</b>	<b>78337</b>	<b>Subject Code</b>	<b>UGCA1921</b>
<b>Subject</b>	<b>Software Engineering</b>		

***Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)***

1. “Specialized process models tend to be applied when a specialized or narrowly defined software engineering approach is chosen.” Comment. Discuss the component based development model in detail. Provide three examples of software projects that would be a
2. Explain the phases of the unified process in detail. Differentiate between validation testing and system testing.
3. What are the basic issues that an SRS must address? Differentiate between functional and non-functional requirements.
4. What do you mean by cohesion in software design? Discuss the structure of SRS. Discuss various levels of cohesion with suitable examples.
5. What are the characteristics of a good software design? Define the three software design complexity measures : structural complexity, data complexity, and system complexity with the help of examples.
6. Write a detailed note on software metrics used to estimate testing effort. What is the software maturity index and what is it used for?