1. Test blueprint Table (Table of Specification)

Key: **Table 2:** In the cells/boxes there are numbers that indicate the number of items that correspond to the levels of domains.

Themes and Share of the themes in %	**Name and Share of the Courses in %**	**Credit hour**	**General objective/Competency**	**Specific objectives /learning outcomes**	**Learning outcomes**								
					Cognitive						**Affective**	**Psychomotor**	**No. of items**
					Remembering	Understanding	Application	Analysis	Evaluation	Creation/Synthesis			
Computer System	Computer Maintenance and Technical Support	4	Identify failures of computer hardware and software and properly apply the procedures of maintenance and repairing of computer system	Students will be able to identify computer components and their cases	2								2
				Students will be able todistinguish types of computer cases/problems				4					4
				Students will be able to apply procedures to maintain and repair the computer system			4						4
System/Software Development	Object-oriented Programming in Java	3	Develop the necessary skills in designing, coding, debugging, and documenting large programs using Java programming languages	Students will be able to explain the basic object-oriented concepts		3							3
				Students will be able to identify the differences between structural and object-oriented programming paradigms				2					2
				Students will be able to use java programming language to code, debug and execute results			3						3
	Advanced Programming	3	Work on more advanced programs written in Java technology and develop applications	Students will be able to work on the object-oriented features of the Java language			2						2
				Students will be able to use arrays and other data collections in Java			2						2
				Students will be able to apply error-handling techniques using Java exception handling			2						2

				Students will be able to create multithreaded programs						2			2
	Even-driven Programming	3	The students will develop the skills in identifying and analyzing and implementing classes using programming languages and apply Rapid Application Development	Students will be able tosolve computer problem using a visual development environment		2							2
				Students will be able to demonstrate knowledge of event-driven programming and systems development.						3			3
				Students will be able to design Graphical User Interfaces (GUI)						3			3
	System Analysis and Design	3	Describe the information systems development life cycles (SDLC) to demonstrate the object-oriented system analysis and design concepts, tools, and techniques	Students will be able to describe the object-oriented technology and modeling principles.	2								2
				Students will be able to recognize systems modeling techniques				2					2
				Students will be able to analyze user requirements using UML of OO techniques.				2					2
				Students will be able toapply skills to create a detailed design using UML of OO techniques			2						2
	IT Project Management	3	Understand a range of standards, techniques and tools developed to support software project management and the production of high-quality software	Students will be able todescribe the issues involved in IT project management and the factors that affect software quality	2								2
				Students will be able to identify range of standards, techniques and tools developed to support IT project management and the production of high-quality software				2					2
				Students will be able to develop IT project plans, supporting software quality plans and risk management plans.						2			2
				Students will be able to apply project management concepts to manage a software development project			2						2
Information and Database Management	Fundamentals of Database System	3	Understands the different database models, distributed database system and they will also design and create databases, tables,	Students will understand the basic principles of database design systems in different database models		4							4
				Students will be able to distinguish database system from file system				2					2

			views, triggers and indices and write SQL queries and database programs.	Students will be able to apply the procedure to develop the database schema						2			2
	Advanced Database System	3	Understands, distributed database system and they write SQL queries and database programs	Students will be able to identify and understand database query processing and optimization		2							2
				Students will be able to apply the basics of transaction management procedure			2						2
				Students will be able to understand and identify the database security technique and procedure				2					2
				Students will be able to analyze and evaluate the different recovery methods when there is a database failure					2				1
				Students will be able to compare and contrast a distributed database system in homogenous and heterogeneous environments				1					1
Mobile Application and Web Programming	Internet programming-I	3	Develop the skills of static websites, in creating client-side web applications for commercial and scientific programs.	Students will be able to describe web protocols,	1								1
				Design and development of static and dynamic web pages						1			1
				Students will be able to illustrate technology and protocols underlying World Wide Web.			2						2
				Students will be able to identify common tools and techniques for developing Web-based applications for client-side.	2								2
				Students will be able to apply knowledge of HTML, CSS and JavaScript for developing Web applications.			2						2

	Internet programming-II	3	Develop the skills of dynamic websites, in creating Server/client-side scripts for commercial and scientific programs and also, they will develop Web Server programming for different applications.	Students will be able to understand server-side scripting		2							2
				Students will be able to develop web-based applications									2
				Students will be able to apply knowledge of HTML, PHP, JSP and Servlets as languages for developing Web applications.			2						2
				Students will be able to create Forms on Websites and Connect Web Pages to databases						2			2
				Students will be able to design web page for e-commerce						2			2
	Mobile Application Development	3	Develop different Mobile applications.	Students will be able to describe the basic components of an Android application.	1								1
				Students will be able to define the lifecycle methods of Android application components.	1								1
				Students will be able to explain the basics of event handling in Android.		2							2
				Students will be able toexpress the basics of graphics and multimedia support in Android.		2							2
				Students will be able to demonstrate basic skills of using an integrated development environment (Android Studio) and Android Software Development Kit (SDK) for implementing simple Android applications.			2						2
Networking and Information Security	Data Communication and Computer Networks	3	Understands data transmission and media, protocols, the concept of layering, recognize the importance of networking standards	Students will be able to understand data transmission and transmission media and protocols		3							3
				Students will identify the seven layers of the OSI model.				3					3
				Students will have a deep knowledge of TCP/IP and OSI model.		2							2

	System & Network Administration	3	They will have the knowledge and understanding of installation and configuration of network operating system, they get familiar with the concepts of network administration and network device installation	Students will be able toapply how to manage a network and its devices			2						2
				Students will be able to create and manage users and groups						2			2
				Students will be able toapply how to manage disks and files			2						2
				Students will be able toapply skills to Backup and restore system and user data			1						1
				Students will be able toapply skills to Remotely administer a network			1						1
	Network device and configuration	3	They will have the ability to apply the procedure of network devices and configuration.	Students will be able to identify Foundry network devices	1								1
				Students will be able to demonstrate advanced knowledge on network device configuration			1						1
				Students will be able to create and configure VLANs						1			1
				Students will be able to apply how to Monitor changes to network devices			1						1
				Students will be able to apply skill to Store and retrieve network events			1						1
				Students will be able to apply skills to Configure and manage router and switch			1						1
				Students will be able to implement and configure network protocols						1			1
				Students will be able toHave skill to Mangling network		1							1
	Information Assurance and	2	The students will properly identify threats, Risks and	Students will be able to identify Threats, Risks and Vulnerabilities in Information System	2								2

	Security		vulnerabilities, data Security Policies or Administration Security, information Systems Security concepts, and designing secure systems.	Students will be able to analyze Data Security Policies/Administration Security and Design secure systems				2					2
				Students will be able to describe Information Systems Security concepts								1	1
Total Number of Items													X