ZIAUDDIN UNIVERSITY
EXAMINATION BOARD

Higher Secondary School Certificate
(HSSC)

Examination syllabus

Computer Science
XII

Based on Provincial Revised Curriculum (Sindh)

You can approach us:

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PREFACE

The Ziauddin University Examination Board (ZUEB) was established under **Sindh ACT XLI 2018**, with the primary objective of enhancing the quality of education in Sindh. ZUEB is responsible for administering examinations for the **Secondary School Certificate (SSC)** and **Higher Secondary School Certificate (HSSC)** in alignment with the most recent revisions to the **National Curriculum**, as outlined by the **Directorate of Curriculum Assessment and Research (DCAR), Sindh**. Through its ordinance, ZUEB is mandated to provide examination services for both English, Urdu, and Sindhi medium candidates from private schools across Sindh. This examination syllabus reflects ZUEB's dedication to achieving the educational goals set by the provincial authorities.

In collaboration with subject professors, ZUEB has developed a comprehensive syllabus for each subject. It is important to distinguish between the syllabus and the curriculum. The syllabus serves as a guide for both teachers and students, outlining the key areas of focus within the subject. It provides students with a clear understanding of what is expected of them in their studies and helps them prepare effectively for their exams.

This examination syllabus incorporates all cognitive outcomes derived from the **Provincial Curriculum Statement**, ensuring that assessments are both valid and reliable. While the focus is primarily on the cognitive domain, significant emphasis is placed on the application of knowledge and understanding.

The syllabus is made available to all stakeholders via the ZUEB website to assist affiliated schools in planning their teaching. It is crucial to note that the syllabus, rather than the prescribed textbook, forms the foundation of ZUEB examinations. Additionally, this syllabus supports the development of learning materials for both students and teachers. ZUEB remains committed to supporting students undertaking the SSC and HSSC courses by facilitating their learning outcomes through this detailed syllabus document.

To further assist in the learning process, ZUEB provides a dedicated **e-resource tab** on its website, offering both text-based and video content on various subjects. These 15-20 minute instructional videos, created around key subject concepts, allow students to learn at their own pace and convenience. The videos can be used as a reinforcement tool to revisit lessons already taught or as pre-lesson material. This initiative is an ongoing effort, and new videos will continue to be uploaded.

We encourage all students and educators to make the most of these resources for a more enriched and flexible learning experience.

Sincerely,
Shahbaz Nasim
Head – Measurement & Testing
Ziauddin University Examination Board

Reviewed by:
Sana Anwer Ali
Manager Sciences
Ziauddin University Examination Board
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Rationale For The Reviewed Provincial Curriculum

The process of revising the National Curriculum 2006 began in August 2004, when the newly elected government of Pakistan initiated education reforms across the country. These reforms included the introduction of a new National Education Policy, a National Education Census, and a revision of curricula (Ministry of Education, 2009).

In practice, the overhaul of the secondary school curriculum began in 2006, leading to a review of the scheme of studies for classes I to XII and the revision of curricula for 25 compulsory subjects.

The 18th Amendment to the Constitution of Pakistan, enacted in 2010, significantly altered the federal- provincial relationship by abolishing the "concurrent legislative list." This amendment granted provinces greater legislative and financial autonomy in sectors such as education and health. The most notable implication of the 18th Amendment for education was the transfer of responsibility for curriculum development, syllabus planning, policy formation, and educational standards to the provinces, marking a significant step forward for education.

In Sindh, the School Education Department tasked a Curriculum Review Team with revising the National Curriculum 2006 for all subjects. The goal was to create a curriculum better suited to the needs of students and teachers while aligning with the principles of the 18th Amendment. Subject-specific curriculum review committees were established to critically examine and align the curriculum's content, both contextually and textually, ensuring coherence across various subjects. The Bureau of Curriculum (BoC) played a crucial role in organizing workshops and meetings in Hyderabad to facilitate the completion of this task. The support of numerous educationists, researchers, and teachers was invaluable in successfully revising the curriculum.

The Ziauddin University Examination Board (ZUEB) SSC and HSSC syllabi are developed in accordance with the Sindh Revised Curriculum. To date, textbooks for various subjects have been developed based on the revised curriculum.

ZIAUDDIN UNIVERSITY EXAMINATION BOARD
SLOs CATEGORIZATION
XII - COMPUTER SCIENCE
Detailed Syllabus

UNIT 1: CONCEPT OF COMPUTER PROGRAMMING

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to:	**K**	**U**	**A**
1.1	System Development Life Cycle (SDLC)	• define system; • Describe objectives of SDLC; • Describe the steps/ phases in SDLC; • Describe the responsibilities of the following personnel: a. management team b. system analyst c. project manager d. programmer e. software tester f. customer	*	* * *	
1.2	Phases of Software Development Life Cycle	• Describe the following Phases of System/Software • Development Life Cycle(SDLC) • Planning and Requirement Analysis: − Problem Identification − Planning − Feasibility − Analysis • Software Requirement Engineering − Requirement Gathering ▪ Functional Requirement ▪ Non-Functional Requirement − Content and structure of the Specification (SRS) • Designing the product Architecture − Design (Algorithm, Flow Charts) • Developing or Implementation − Coding and program development • Testing − Bugs and Errors • Deployment In the Market and Maintenance − SLA (Service Level Agreements)	*	* * * * *	

1.3	OOPS Concepts	• Discuss the concept/ principles of Object Oriented Programming.
		  • Encapsulation
		  • Inheritance
		  • Polymorphism
		• Explain class and object
				*	*

UNIT 2: ALGORITHM AND FLOWCHARTS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
2.1	Algorithm & Pseudocode	• Know about the rules of writing algorithm.	*		
		• Write Algorithm of the program with plain English language.			*
		• Know about the rules of writing pseudocode.	*		
		• Write pseudocode of the program with plain English language.			*

2.2	Flowcharts	• Flowchart symbols
		  ○ Terminal Symbol
		  ○ Input/Ouput Symbol
		  ○ Process Symbol
		  ○ Flowlines
		  ○ Decision Symbol
		  ○ On-Page Connector Symbol
		  ○ Off-Page Connector Symbol
		  ○ Pre-defined Process Symbol
		  ○ Annotations Symbol
				*	

		• Categories of Flowcharts
		  ○ Control Structures
		  ○ Selection Structures
				*	

		• Types of Flowchart
		  ○ Sequential Flowchart
		  ○ Branch(Jump) Flowchart
		  ○ Loop Flowchart
		  ○ Nested Loop Flowchart
				*	

		• Flowcharting Rules	*		

UNIT 3: AN OVERVIEW OF 'C' LANGUAGE

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
3.1	Integrated Development Environment	• Demonstrate proficiency in utilizing an integrated development environment (IDE) to effectively write, test, and debug code. • Employ various features and tools provided by the IDE to enhance productivity and efficiency in software development. • Analyze and select appropriate IDE settings, plugins, and extensions to customize the development environment according to specific project requirements. • Effectively navigate and utilize the different components and features of an IDE, including code editors, integrated compilers, debuggers, version control systems, and integrated documentation. • Adapt to different IDEs and explore new IDEs based on specific programming languages, platforms, or project requirements		* * * * *	
3.2	The Basic Structure of C program	• Identify the key components of a C program, including the main function and header files. • Describe the purpose and syntax of the main function in a C program. • Explain the significance of header files and their role in program compilation. • Analyze the sequence of execution in a C program, including the flow of control and the order of statements. • Recognize and understand the use of variables and data types within a C program. • Discuss the importance of comments and their role in documenting code. • Demonstrate the ability to write a simple C program following the basic structure guidelines	*	* * * * * *	*
3.3	Escape Sequences	• Write a program to print text using the following escape sequences: a. alert – \a b. backspace – \b c. newline – \n d. carriage return – \r e. tab – \t f. display backslash – \\ g. display single quotation marks – \'			*

UNIT 4: C FUNDAMENTALS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
4.1	Programming Basics	• Define program, programming language, header files and reserved words;	*		
		• Explain the basic structure of a basic C program including pre-processor directives, main function, body of program;		*	
		• Define statement terminator and comments in C programming;	*		
		• Use single-line and multiple-line comments in a C program;			*
4.2	Constants and Variables in C Programming	• Differentiate among C data types;		*	
		• Differentiate between variable and constant;		*	
		• Write valid variable names on the basis of variables naming rules;			*
		• Determine the data types of variables depending upon the values they will store;			*
		• Write a C program in which variables are declared with different data types;			*
		• Write a program to show the implicit and explicit type casting of variables;			*
		• Differentiate local and global variables;		*	

UNIT 5: OPERATORS AND EXPRESSIONS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
5.1	Operators in C Programming	• Differentiate between operator and operand		*	
		• List the names and symbols of arithmetic operators used in C programming;	*		
		• Write a program using arithmetic operators;			*
		• Define assignment operator;	*		
		• Write a simple program using arithmetic assignment operators;			*
		• Write a program using increment and decrement operators with the postfix and prefix scenario;			*
		• List the names and symbols of relational operators;	*		
		• Write a program using relational operators;			*
		• Write a program using logical operators;			*
		• Compare unary, binary and ternary operators;		*	
		• Write a program to show the order of precedence of arithmetic operators in a C program;			*
		• Define compound expression with reference to C programming;	*		
		• Write a C program that uses compound expression.			*

UNIT 6: INPUT AND OUTPUT STATEMENTS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
6.1	Unformatted I/O Functions	• Identify and differentiate between formatted and unformatted I/O functions in C. • Understand the purpose and usage of unformatted I/O functions for reading and writing raw binary data. • Demonstrate the ability to use the unformatted I/O functions, such as `getche()`, `getch()`, `getc()`, `putc()`, etc., to perform file I/O operations. • Explain the parameters and return values of commonly used unformatted I/O functions. • Understand the concept of file pointers and their role in unformatted I/O operations. • Comprehend the significance of error handling and the use of return values to detect errors during unformatted I/O operations. • Discuss the advantages and limitations of unformatted I/O functions compared to formatted I/O functions in specific scenarios. • Analyze and interpret code examples that utilize unformatted I/O functions to read from or write to binary files. • Apply best practices for error checking, file handling, and memory management when working with unformatted I/O functions.	*	* * * * * *	* *
6.2	Formatted I/O Functions	• Understand the purpose and benefits of formatted I/O functions in C. • Demonstrate knowledge of the basic syntax and usage of printf() function for formatted output. • Apply formatting options such as specifiers, flags, width, precision, and modifiers to control the output format. • Utilize scanf() function for formatted input to read data from the user or a file. • Understand the use of conversion specifiers and format specifiers to handle different data types during input. • Recognize and handle potential errors or unexpected behavior that can occur when using formatted I/O functions. • Demonstrate the ability to write C code that uses formatted I/O functions to read input data, process it, and produce formatted output.		* * * * *	* * *

UNIT 7: SELECTION CONTROL STRUCTURES

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
7.1	Selection Statements in C Programming	• Describe if, if-else and else-if statements; • Write a program for each if, if-else and else-if statements; • Write a program using nested if statement; • Explain the use of switch statements; • Write a program using switch statement; • Compare if, if-else, else-if and switch statement; • Describe the role of default and break keywords; • Describe the role of exit and return functions; • Rewrite a program having if/ if-else/ else-if statement using switch statement;		* * * * *	 * * * * *

UNIT 8: ITERATION CONTROL STRUCTURES

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
8.1	Repetition (Loop) in C Programming	• list the types of loops available in C programming; • Write a C program that uses for loop; • Write a C program that uses while loop; • Write a C program that uses do while loop; • Differentiate between: a. for and while loop b. while and do while loop; • Write a C program in which break statement is used; • Write a C program in which continue statement is used; • Write a C program in which exit( ) function is used; • Write a program using nested for loop.	*	 * 	 * * * * * * *

UNIT 9: FUNCTIONS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
9.1	Introduction to Function in C Programming	• Differentiate between predefined and user defined functions; • Describe advantages of user defined functions; • Describe the signature of the functions, i.e. function name, arguments and returning data type; • Explain the process of creating a user defined function, i.e. function declaration, function definition and function call;		* * * *	
		• Write a program involving a user defined function; • Differentiate among the variable types, i.e. local, global, and static; • Differentiate between the formal and actual parameters; • Differentiate between local and global functions; • Define inline function;	 *	 * * *	*
9.2	Passing Arguments and Returning Values	• Write a program to invoke a user defined function and pass arguments by constants, value and reference; • Define default argument; • Describe the purpose of return statement;	 *	 *	*

UNIT 10: DATA FILES

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**

10.1	File Handling	• Define file handling
		• Differentiate the binary and text file
		• Write code to open the file
		• Explain modes of opening file (read, write, append)
		• Define the concept of
		  • BOF
		  • EOF
		• Define streams
		  • Single character I/O
		  • String I/O
		  • Binary I/O
		• Write simple programs to create and read data files
			
			*
			
			*
			*
			
			*
			
				*
				
					*
					
					*

UNIT 11: DATA MANAGEMENT SYSTEMS

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
11.1	Introduction to Database	• Define database; • Describe advantages of database management system over traditional file management system; • Define the role of Database Administrator (DBA); • Compare the types of database models, i.e. hierarchical database, network database, relational database, object oriented database, object relational database; • Define Structured Query Language (SQL); • Differentiate among the types of SQL languages, i.e. Data definition Language (DDL), Data Manipulation Language (DML) and Data Control Language (DCL);	* * * *	 * * * *	
11.2	Basic Database Terminologies	• Define the following terms related to relational database: a. field/ attribute/ column b. record/ tuple/ row c. table d. file e. view f. data type g. key; • Define the data types available in a relational database, i.e. character, integer, real number, Boolean data, date and time; • Differentiate among primary key, candidate key, alternate key, secondary key and foreign key;	* *	 *	

UNIT 12: BASICS OF MS ACCESS 2000

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
12.1	Introduction	• Describe features of MS-Access database management system; • Define database objects such as table, query, form and report; • Create and save a database;	*	*	*

12.2	Working with Tables	• Create tables in design view and using wizard; • Assign 4 appropriate data types to the fields in a table; • Set primary key in database table; • Create relationship among tables using primary and foreign key; • Modify tables and relationships; • Sort records in a database table; • Add records in a table; • Add records in a related table; • Modify records in a table; • Delete records in a table; • Navigate through records in a table; • Apply data validation on a field;			* * * * * * * * * * * * *

UNIT 13: ADVANCED MS ACCESS 2000

S. no.	Content and Scope	Learning Outcomes/Skills	Cognitive Level		
		Students will be able to	**K**	**U**	**A**
13.1	Working With Forms	• Create form using wizard; • Create form in design view; • Create form for related tables; • Identify different form views; • Navigate through records in a form; • Add a record using form; • Delete a record using form; • Modify a record using form;	*		* * * * * * *

13.2	Queries in Design View	• Create query using query wizard; • Create SELECT query using query design; • Create UPDATE query using query design; • Create DELETE query using query design; • Create APPEND query using query design;			* * * * *
13.3	SQL Queries	• Write the simple SQL (DML) queries to perform the following: a. insert, delete and update records in table b. select records from table using SELECT statement c. filter records using WHERE statement d. sort records using ORDER BY statement e. group the results using GROUP BY statement f. select records having matching values in both tables using INNER JOIN statement; • Write the simple SQL (DDL) queries to perform the following: a. create table b. add primary key c. alter table b. drop table;			* *

13.4	Generating Reports	• Create report using report wizard; • Create a report using a query; • Describe different layouts of reports; • View and print reports.		* * *	* * *

Ziauddin University Examination Board
Scheme of Assessment

Maximum marks: 100

Section "A"

Multiple Choice Questions (MCQs) **(15 x 1 = 15)**
Attempt 15 MCQs. Each MCQ carries equal marks.

Practical based Assessments (PBAs) **(25 x 1 = 25)**
Attempt 25 MCQs. Each MCQ carries equal marks.

Section "B"

Short Answer Questions **(10 x 3 = 30)**
Attempt any 10 out of 15 questions. Each question carries equal marks.

Section "C"

Detailed Answer Questions **(2 x 15 = 30)**
Attempt any 2 (with sub-parts) out of 3 questions.
Each question has 2 sub parts of 8 and 7 marks respectively.

Ziauddin University Examination Board
Computer Science
Table of Specification [TOS]

S.No	Domains	Weightage in evaluation 100%	MCQs 1 mark each	PBAs 1 mark each	Short Answers 3 marks each	Detailed Answers 15 marks each
1	Concept of Computer Programming	5%	1	0	1	1
2	Algorithm and Flowcharts	5%	1	0	2	0
3	An Overview of C Language	7%	1	1	1	1
4	C Fundamentals	7%	1	1	1	1
5	Operators and Expressions	11%	1	4	1	1
6	Input and Output Statements	8%	1	3	1	0
7	Selection Control Structures	10%	2	3	1	0
8	Iteration Control Structures	11%	2	4	1	0
9	Functions	10%	1	3	1	1
10	Data Files	5%	1	0	2	0
11	Data Management Systems	3%	1	0	1	0
12	Basics of MS Access 2000	10%	1	3	1	1
13	Advanced MS Access 2000	8%	1	3	1	0
Total # of Questions asked			**15**	**25**	**15**	**6 (with 2 sub parts each of 8 and 7 marks)**
Total # of Questions to be attempted			**15**	**25**	**10**	**2**
Maximum marks attainable			**15 marks**	**25 marks**	**30 marks**	**30 marks**

DEFINITIONS OF COGNITIVE LEVELS

Remember

Remembering is the act of retrieving knowledge and can be used to produce things like definitions or lists. The student must be able to recall or recognise information and concepts. The teacher must present information about a subject to the student, ask questions that require the student to recall that information and provide written or verbal assessment that can be answered by remembering the information learnt.

Question Stems

- Can you name all the …?
- Describe what happens when …?
- How is (are) …?
- How would you define …?
- How would you identify …?
- How would you outline …?
- How would you recognise…?
- List the … in order.
- What do you remember about …?
- What does it mean?
- What happened after?
- What is (are) …?
- What is the best one?
- What would you choose …?
- When did …?
- Where is (are) …?
- Which one …?
- Who spoke to …?
- Who was …?
- Why did …?

Understand

The next level in the taxonomic structure is Understanding, which is defined as the construction of meaning and relationships. Here the student must understand the main idea of material heard, viewed, or read and interpret or summarise the ideas in their own words. The teacher must ask questions that the student can answer in their own words by identifying the main idea.

Question Stems

- Can you clarify…?
- Can you illustrate …?
- Condense this paragraph.
- Contrast …
- Does everyone think in the way that … does?
- Elaborate on …
- Explain why …
- Give an example
- How can you describe...?
- How would you clarify the meaning...?
- How would you compare …?
- How would you differentiate between …?
- How would you describe…?
- How would you generalise…?
- How would you identify …?
- Is it valid that …?
- Is this the same as …?
- Outline …
- Select the best definition...
- State in your own words...
- This represents …
- What are they saying?
- What can you infer from …?
- What can you say about …?
- What could have happened next?
- What did you observe?

	• What does this mean? • What expectations are there? • What information can you infer from…? • What is the main idea of …? • What restrictions would you add? • What seems likely? • What seems to be …? • What would happen if …? • What might happen if …? • Which are the facts? • Which statements support …?
Apply The third level in Bloom's taxonomy, Applying, marks a fundamental shift from the pre-Bloom's learning era because it involves remembering what has been learnt, having a good understanding of the knowledge, and applying it to real-world exercises, challenges or situations. Students must apply an abstract idea in a concrete case to solve a problem or relate it to prior experience. The teacher must provide opportunities for students to use theories and problem-solving techniques in new situations and review and check their work. Assessment questions should be provided that allow students to define and solve problems. **Question Stems** • Can you group by characteristics such as …? • Choose the best statements that apply... • Clarify why … • Do you know of another instance where …? • Draw a story map... • Explain why a character acted in the way that he did... • From the information given, can you develop a set of instructions about …? • How would you develop …? • How would you change …? • How would you demonstrate…?	**Analyse** Analysing is the cognitive level where students can take the knowledge they have remembered, understood and applied, then delve into that knowledge to make associations, discernments or comparisons. Students should break down a concept or idea into parts and show relationships between these parts. Teachers must give students time to examine concepts and their requisite elements. Students are required to explain why they chose a solution. **Question Stems** • Can you distinguish between …? • Can you explain what must have happened when …? • Determine the point of view, bias, values, or intent underlying the presented material... • Discuss the pros and cons of … • How can you classify … according to …? • How can you compare the different parts? • How can you sort the different parts…? • How is … connected to …? • How is … similar to …? • How would you categorise…? • How would you explain...?

• How would you develop? • How would you explain …? • How would you modify …? • How would you present…? • How would you solve … ? • Identify the results of … • Illustrate the … • Judge the effects of … What would result …? • Predict what would happen if … • Tell how much change there would be if … • Tell what would happen if … • What actions would you take to perform …? • What do you think could have happened next? • What examples can you find that ? • What other way would you choose to …? • What questions would you ask of …? • What was the main idea …? • What would the result be if …? • Which factors would you change if …? • Who do you think…? • Why does this work? • Write a brief outline … • Write in your own words …	• What could the ending have been if ... had taken place? • State the point of view of … • What are some of the problems of …? • What assumptions …? • What can you infer about…? • What can you point out about ? • What conclusions …? • What do you see as other possible outcomes? • What does the author assume? • What explanation do you have for …? • What ideas justify the conclusion? • What ideas validate…? • What is the analysis of …? • What is the function of …? • What is the problem with …? • What motive is there? • What persuasive technique is used? • What statement is relevant? • What was the turning point? • What were some of the motives behind …? • What's fact? Opinion? • What's the main idea? • What's the relationship between? • Which events could not have happened? • Why did … changes occur? • Why do you think ?

BLOOM'S TAXONOMY WITH EXAMPLES

If you are a teacher looking for ways to engage your students in learning, this LIST of questions might be interesting for your classroom practice. Bloom's Taxonomy question stems can help elicit higher-order thinking skills and promote critical thinking among learners at different taxonomy levels. These question stems can also encourage students to think about their knowledge through reflection before answering questions.

ACTION WORDS FOR COGNITIVE LEVELS

Knowledge	Understand	Apply	Analyze	Evaluate	Create
					
define	explain	solve	analyze	reframe	design
identify	describe	apply	appraise	criticize	compose
describe	interpret	illustrate	judge	evaluate	create
label	paraphrase	modify	support	order	plan
list	summarize	use	compare	compare	combine
name	classify	calculate	decide	classify	formulate
state	compare	change	discriminate	contrast	invent
match	differentiate	choose	recommend	distinguish	hypothesize
recognize	discuss	demonstrate	summarize	infer	substitute
select	distinguish	discover	assess	separate	write
examine	extend	experiment	choose	explain	compile
locate	predict	relate	convince	select	construct
memorize	associate	show	defend	categorize	develop
quote	contrast	sketch	estimate	connect	generalize
recall	convert	complete	grade	differentiate	integrate
reproduce	demonstrate	construct	measure	divide	modify
tabulate	estimate	dramatize	predict	order	organize
tell	express	interpret	rank	prioritize	prepare
Copy	identify	manipulate	score	survey	produce

discover	indicate	paint	select	calculate	rearrange
duplicate	infer	prepare	test	conclude	rewrite
enumerate	relate	teach	argue	correlate	adapt
listen	restate	act	conclude	deduce	anticipate
observe	select	collect	consider	devise	arrange
omit	translate	compute	critique	diagram	assemble
read	ask	explain	debate	dissect	choose
recite	cite	list	distinguish	estimate	collaborate
record	discover	operate	editorialize	evaluate	facilitate
repeat	generalize	practice	justify	experiment	imagine
retell	group	simulate	persuade	focus	intervene
visualize	illustrate	transfer	rate	illustrate	make
	judge	write	weigh	organize	manage
	observe			outline	originate
	order			plan	propose
	report			question	simulate
	represent			test	solve
	research				support
	review				test
	rewrite				validate
	show				

HSSC PART II EXAMINATION
MARKS BREAKUP GRID FOR EXAMINATION 2025

GROUP: PRE-MEDICAL

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
PHYSICS	85	15	100
CHEMISTRY	85	15	100
BIOLOGY	85	15	100
TOTAL	505	45	550

GROUP: PRE-ENGINEERING

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
PHYSICS	85	15	100
CHEMISTRY	85	15	100
MATHEMATICS	100	--	100
TOTAL	520	30	550

GROUP: GENERAL SCIENCE

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
PHYSICS	85	15	100
COMPUTER SCIENCE	75	25	100
MATHEMATICS	100	--	100
TOTAL	510	40	550

GROUP: COMMERCE

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
ECONOMICS	75	-	75
P.O.C	75	-	75
ACCOUNTING	100	--	100
BUSINESS MATHEMATICS	50		50
TOTAL	550	---	550

GROUP: HUMANITIES

(Any Three Electives)

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
COMPUTER SCIENCE	75	25	100
ISLAMIC STUDIES	100		100
MATHEMATICS	100	-	100
SOCIOLOGY	100	--	100
ECONOMICS	100		100
EDUCATION	100		100
CIVICS	100		100
NURSING	85	15	100
TOTAL	550	---	550

GROUP: MEDICAL TECHNOLOGY

SUBJECT	THEORY	PBA	TOTAL
ENGLISH	100	-	100
URDU NORMAL / SINDHI NORMAL	100	-	100
PAKISTAN STUDIES	50	-	50
MICROBIOLOGY	85	15	100
CHEMICAL PATHOLOGY & SEROLOGY	85	15	100
ELEMENTARY CHEMISTRY & CHEMICAL PATHOLOGY	85	15	100
TOTAL	505	45	550