ZIAUDDIN UNIVERSITY EXAMINATION BOARD

Total Time 3 hours
Total Marks: 100

Class: XII   **MODEL PAPER EXAMINATION 2026**
Time Allowed: 20 minutes   **SUBJECT: COMPUTER SCIENCE**
Q1:   **SECTION "A"**   Marks: 16

Note: Attempt **ALL** questions from this section. Each question carries **ONE** mark.

1. The symbol used for C preprocessor directive is _____.
   A. #   B. &   C. @   D. %
2. Which statement suspends the control structure?
   A. Continue   B. Break   C. Getch ()   D. Default
3. Comparison operators are called _____.
   A. Comparators   B. Comparables   C. Relations   D. Relational
4. _____ returns a value after performing its specific task.
   A. Function procedure   B. Sub procedure   C. Sub block   D. Structure
5. Which of these is a loop in VB?
   A. IF-Then   B. For-Next   C. Select–Case   D. GOTO
6. In MS-Access, _____ is used to present data in printed form.
   A. Form   B. Query   C. Report   D. Table
7. A function can return only _____.
   A. One value   B. Two values   C. Three values   D. Six values
8. A key field must contain _____.
   A. Default values   B. Null values   C. Duplicate values   D. Unique values
9. Data must be sequential in a _____ model.
   A. Network database   B. Hierarchical data base   C. Relational   D. Flat
10. What is the result of the library function sqrt(1024)?
    A. 512   B. 32   C. 256   D. 64
11. In data base, the columns are called _____.
    A. Tuples   B. Attributes   C. Keys   D. Table
12. If a= -5, the statement a+=5 returns _____.
    A. -15   B. 0   C. 10   D. -5
13. The escape sequence is used with _____.
    A. Tab   B. Backspace   C. End of string   D. New line
14. Which function is used to clear the screen?
    A. Clear   B. CLRSER   C. CLRSR   D. CLSO
15. C program can be converted into machine language through _____.
    A. An editor   B. A Compiler   C. An operating system   D. A Linker

(Practical Based Assessment)   **Marks: 24**

Q2: Attempt **ALL** questions.

1. You are developing a search feature for a digital library app. The app stores book IDs in a sorted list. The user wants to check if Book ID "4567" exists in the following list:

   `[1234, 2310, 3155, 4567, 5620, 6789, 7512]`

   A. Briefly explain the concept of binary search.   [2 marks]
   B. Show the steps taken to find "4567" using binary search. Write down the list section checked
      at each step.   [4 marks]
   C. Why is binary search more efficient than linear search for large sorted datasets?   [2 marks]
   D. What condition must be met for binary search to work correctly?   [1 mark]

2. You are managing student exam data using Python.

   ```python
   results = {
       "Areeba": [85, 91, 78],
       "Zayan": [72, 88, 90]
   }
   ```

   These represent marks in the subjects: Math, Physics, Computer.

   A. Identify the data structures used and explain the benefit of storing a list as a
      dictionary value.   [2 marks]
   B. Write code to update Zayan's Computer marks to 95.   [2 marks]
   C. Add a new student "Hira" with scores [89, 94, 90]. Show the updated dictionary.   [2 marks]
   D. What will `print(results["Areeba"][1])` output?   [1 mark]

3. You run a simulation 1000 times to test whether a coin is fair. You count how many times the number of heads is greater than 60% of the tosses. This occurs 150 times.
   a. What is the null hypothesis in this simulation context? [2 marks]
   b. Estimate the P-value based on the simulation results. [2 marks]
   c. Interpret this P-value in terms of likelihood of rejecting the null hypothesis. [2 marks]
   d. Why do we run simulations instead of doing a single experiment? [2 marks]

END OF SECTION A

Class: XII   **MODEL PAPER EXAMINATION 2026**
Time: 2 hours 40 minutes   **SUBJECT: COMPUTER SCIENCE SECTION "B" AND SECTION "C"**   **Total Marks 60**
SECTION "B" SHORT ANSWER QUESTIONS   **30 Marks**

Note: Attempt any **TEN** parts questions from this section. All questions carry equal marks.

Q3. Outline the steps required to run a Visual Basic project.

Q4. What is an error in programming? Describe its main types with examples.

Q5. Explain why C is considered a case-sensitive language. Provide an example to illustrate.

Q6. Write a program that uses nested loops to display the following pattern:

+++++

++++

+++

++

+

Q7. Define the term "escape sequence" in programming and describe any four escape sequences with examples.

Q8. How does source code differ from object code?

Q9. Differentiate between actual parameters and formal parameters in the context of function calls.

Q10. Explain what data redundancy is and why it can be an issue in databases.

Q11. What are library functions in programming? List any four commonly used library functions.

Q12. Identify the main objects in MS Access and briefly explain each.

Q13. What are logical operators? Provide an example demonstrating their use.

Q14. Explain the difference between a primary key and a secondary key in database management.

Q15. What is a function in programming? Discuss the advantages of using functions in code.

Q16. Write a program that generates the following output using any loop structure:

2	4
3	6
4	8
5	10

Q17. Define one of the following terms and describe its purpose:
   A. DBMS   B. Data Dictionary

Q18. What is a key field? Explain the role of a foreign key in a database.

Q19. What is an address operator in programming? Give an example of how it is used.

Q20. Explain the concept of escape sequences in programming, and provide examples of four commonly used escape sequences.

SECTION "C"   DETAILED ANSWER QUESTIONS   **30 Marks**

Note: Attempt any **TWO** questions. Each question carries equal marks. Your answer should not exceed 300 words.

Q21a. What is a function and what are the advantages of using a function? (7)
Q21b. Explain any 3 types of database models? (8)
Q22a. What is an operator? (7)
Q22b. Explain the basic type of operators in C? (8)
Q23a. What is MDI? State its advantages. (7)
Q23b. Why is the C programming language used over other programming languages? (8)
   Explain any six of its features.

END OF PAPER