

DIRECTORATE OF EDUCATION GNCT OF DELHI

CLASS XI

SESSION 2026-27

COMPUTER SCIENCE

CODE NO. 083

MID TERM

PRACTICE QUESTION PAPER

TIME ALLOWED: 3 HRS.

MAXIMUM MARKS: 70

General Instructions:

- **This question paper contains 37 questions.**
- **All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.**
- **The paper is divided into five sections: A, B, C, D and E.**
- **Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.**
- **Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.**
- **Section C consists of 3 questions (29 to 31). Each question carries 3 Marks.**
- **Section D consists of 4 questions (32 to 35). Each question carries 4 Marks.**
- **Section E consists of 2 questions (36 to 37). Each question carries 5 Marks.**
- **All programming questions are to be answered using Python language only.**
- **In the case of MCQs, the text of the correct option should also be written.**

Q. No.	QUESTION	MARKS
SECTION A		
1	Which logic gate gives output 1 when the two input values are different? (A). AND Gate (B). OR Gate (C). XOR Gate (D). NAND Gate	1
2	The decimal equivalent of $(11011)_2$ is: (A). 23 (B). 29 (C). 25 (D). 27	1
3	Convert the hexadecimal number $(2F)_{16}$ into its decimal equivalent.	1
4	Which of the following is a non-volatile memory? (A). RAM (B). Cache (C). ROM (D). Register	1
5	Which unit of the CPU directs and coordinates the operations of other components? (A). ALU (B). Control Unit (C). Register (D). Cache	1
6	Which of the following is an example of application software? (A). Linux (B). Windows (C). MS Word (D). Device Driver	1
7	Which of the following is a valid Python variable name? (A). 2number (B). student-name (C). student_25 (D). for	1
8	Which Python operator is used for finding the quotient without the decimal part? (A). / (B). // (C). % (D). **	1
9	What is the output of the following python expression? <code>print(5 + 3 ** 2 ** 2 - 45 / 5)</code> (A). 90 (B). 80.0 (C). 70 (D). 77.0	1
10	Which of the following values is of type float in Python? (A). 25 (B). 25.0 (C). "25.0" (D). True	1

Q. No.	QUESTION	MARKS
11	What is the value of len("Computer")? (A). 7 (B). 8 (C). 9 (D). 10	1
12	Which of the following creates a tuple containing exactly one element 8? (A). (8) (B). [8] (C). (8,) (D). {8}	1
13	Which error is raised when Python tries to use a variable name that has not been defined? (A). NameError (B). ValueError (C). IndexError (D). ZeroDivisionError	1
14	Which of the following best describes pseudocode? (A). Machine-language instructions (B). Language-independent description of an algorithm (C). A Python library (D). A hardware diagram	1
15	State True or False: A flowchart may use a parallelogram symbol to represent input/output operations.	1
16	Which flowchart symbol is normally used for a processing/calculation step? (A). Rectangle (B). Diamond (C). Oval (D). Parallelogram	1
17	Which property of an algorithm means that every step must be clearly and precisely stated? (A). Finiteness (B). Definiteness (C). Portability (D). Compilation	1
18	What is the value of the expression 3 ** 2 ** 2 in Python? (A). 81 (B). 729 (C). 512 (D). 36	1
19	What will be displayed? a = 5 b = a a = 15 print(a, b) (A). 5 5 (B). 15 15 (C). 15 5 (D). 5 15	1
20	Assertion (A): The expression 10 > 5 and 3 < 1 evaluates to False. Reason (R): The and operator returns True only when both operands/conditions are True. (A). Both A and R are true, and R is the correct explanation of A.	1

Q. No.	QUESTION	MARKS
	(B). Both A and R are true, but R is not the correct explanation of A. (C). A is false, but R is true. (D). A is true, but R is false.	
21	Assertion (A): A Python list can store values of different data types. Reason (R): A list is a heterogeneous sequence and its elements need not all have the same type. (A). Both A and R are true, and R is the correct explanation of A. (B). Both A and R are true, but R is not the correct explanation of A. (C). A is false, but R is true. (D). A is true, but R is false.	1
SECTION B		
22	(A) Convert the following numbers as directed: (i) Convert $(2A7)_{10}$ to hexadecimal. (ii) Convert $(101101)_2$ to octal. OR (B) A three-input OR gate has inputs X, Y and Z. (i) Write its Boolean expression. (ii) State the output when $X = 1$, $Y = 0$ and $Z = 1$.	2
23	The following code is intended to display whether an entered number is divisible by 3, but it contains errors. Rewrite it after correcting all errors. <pre>n = int(input("Enter number: ")) if n % 3 = 0 print("Divisible by 3") else: print("Not divisible by 3")</pre>	2
24	(A) Answer the following: (i) Name one open-source operating system. (ii) Name the software category to which a compiler belongs. OR (B) A user enters data using a microphone and obtains a printed report. (i) Classify the microphone as an input/output device. (ii) Classify the printer as an input/output device.	2
25	What is the exact output of the following code? <pre>x = 14 if x % 5 == 4: x = x + 6 else: x = x - 4 print(x)</pre>	2
26	(A) Write the output: <pre>for n in range(9, 2, -2): print(n, end=" ")</pre> OR (B) Write the output:	2

Q. No.	QUESTION	MARKS
	<pre> x = 2 while x < 20: print(x, end=" ") x = x * 2 </pre>	
27	(A) For range(12, 2, -3): (i) Write all values generated. (ii) State the number of iterations. OR (B) Write a Python for loop to display the squares of integers from 1 to 5.	2
28	Answer the following: (A) Which built-in function returns the number of elements in a list? (B) What is the output of: print(int("45") + 5) ?	2
SECTION C		
29	State True or False: (i) 1 KB is commonly treated as 1024 bytes in binary-based memory-capacity calculations. (ii) RAM is a type of volatile memory. (iii) ROM loses its stored data when the computer is switched off.	3
30	Fill in the blanks by selecting the three appropriate terms from the options. Two options are extra. (i) A collection of 8 bits is called a _____. (ii) Blu-ray Disc is an example of _____ storage. (iii) The memory located closest to the CPU and used for very fast temporary storage is _____. Options: Byte, Magnetic, Optical, Register, Terabyte	3
31	(A) State True or False: (i) Python is case-sensitive. (ii) The operator // performs true division. (iii) A while loop may execute zero times if its condition is initially False. OR (B) Write a Python program to accept an integer and display "Multiple of 5", "Multiple of 3" or "Neither". If it is divisible by both 3 and 5, display "Multiple of 5" first.	3
SECTION D		
32	Fill in the blanks by selecting four appropriate terms from the options given below. Three options are extra. A student starts a computer. The firmware begins the startup process, the operating system is loaded into main memory, the user types through a keyboard, and a document is saved permanently on an SSD. (A) The firmware traditionally associated with startup is called _____. (B) The operating system is loaded into _____ for execution. (C) The keyboard is an _____ device. (D) The SSD is classified as _____ storage. Options: BIOS, RAM, Output, Input, Secondary, ALU, Cache	4
33	Answer the following: (a) Write a Python list literal containing 5, 10 and 15. (b) Write a dictionary literal with keys "city" and "pin" storing "Delhi" and 110001.	4

Q. No.	QUESTION	MARKS
	(c) What is the output of: <code>print("PYTHON"[1:4])</code> ? (d) What is the value of: 7 in [3, 5, 7, 9] ?	
34	(A) Study the code and answer: <pre>total = 0 for x in range(1, 10): if x == 3: continue if x == 7: break total += x</pre> (i) Which value of x causes continue? (ii) Which value of x causes break? (iii) List the values of x that are added to total. (iv) State the final value of total. OR (B) Write a Python program using a loop to accept a positive integer N and display all even numbers from 2 up to N (inclusive).	4
35	A store gives discount based on the total purchase amount as follows: Below ₹3,000: 0% ₹3,000 to ₹6,000 inclusive: 7% More than ₹6,000 to ₹12,000 inclusive: 12% Above ₹12,000: 18% Write a Python program to accept the purchase amount, calculate the discount amount and display the final amount payable after applying discount.	4
SECTION E		
36	Write a Python program using nested loops to display the following pattern: <pre>* ** *** **** *****</pre>	5
37	(A) State True or False: (i) The expression <code>5 / 2</code> evaluates to 2.5 in Python. (ii) The expression <code>5 // 2</code> evaluates to 2. (iii) The statement <code>break</code> can terminate the nearest enclosing loop. (iv) A dictionary is indexed only by consecutive integer positions. (v) The expression <code>not True</code> evaluates to False. OR (B) Write a Python program using a while loop to accept a positive integer and display the number of digits present in it. For example, input 50824 should display 5.	5