

केंद्रीय विद्यालय संगठन बेंगलुरु संभाग
KENDRIYA VIDYALAYA SANGATHAN BENGALURU REGION
प्रथम प्री-बोर्ड परीक्षा 2025-26
FIRST PRE-BOARD EXAMINATION 2025-26

Class: XII
Subject: COMPUTER SCIENCE(083)

Maximum Marks: 70
Time allowed: 3 Hrs.

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 5 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.

SECTION A (21x 1=21 Marks)

1.	Select the correct output of the code: s= "Best Of LUCK" print(s.capitalize(),s.title(),end="!") a) Best of LUCK Best of luck! b) Best Of Luck Best of luck c) Best of luck Best Of Luck! d) None of the above	1
2.	What will be the output for the following Python statement? D1={'Rahul':295, 'Rithu':15, 'Mishel':64, 'Nihan':120} print('Mishel' in D1, 15 in D1, sep="#") (a) True#False (b) True#True (c) False#True (d) False#False	1
3.	Which of the following clauses cannot go with Alter command? a) ADD b) MODIFY c) CHANGE d) RENAME	1
4.	The correct statement to place the file handle fp1 to the 12th byte from the current position is ? (a) fp1.seek(12) (b) fp1.seek(12, 0) (b) fp1.seek(12, 1) (d) fp1.seek(12, 2)	1
5.	Select the correct output of the code. Str= "INCREDIBLE INDIA @ 2025"	1

	<p>S=Str.partition(" ") print(S)</p> <p>a. (@ 2025' 'INCREDIBLE', ' ', 'INDIA,) b. ('INCREDIBLE', ' @', 'INDIA , 2025') c. (' ', ' ', 'INCREDIBLE INDIA @ 2025') d. ('INCREDIBLE', ' ', 'INDIA @ 2025')</p>	
6.	<p>Which of the following statements is false?</p> <p>a. A try-except block can have more than one except statement b. One block of except statement cannot handle multiple exceptions c. The finally block is always executed d. When 1 == "1" is executed, no exception is raised</p>	1
7	<p>Predict the output of the following code fragment ?</p> <pre>A = 25 def funct(A): A = 50 A +=10 funct (A) A = A +5 print("A is now:" , A)</pre> <p>a) A is now: 50 b) A is now: 25 c) A is now: 30 d) A is now:60</p>	1
8.	<p>Which of the following aggregate functions ignore NULL values?</p> <p>(a) COUNT (b) MAX (c) AVERAGE (d) All of these</p>	1
9.	<p>A _____ in a network is the medium or path through which data is transmitted between devices.</p> <p>a) Baud rate b) Communication channel c) Network d) Bandwidth</p>	1
10.	<p>Which operator performs pattern matching in MYSQL?</p> <p>a) BETWEEN b) LIKE c) EXIST d) None of the above</p>	1
11.	<p>What will be the output of the following code snippet?</p> <pre>a = "10" b = "20" print (int (a + b) + int(a) * int(b))</pre> <p>a) 1220 b) 410 c) 620 d)230</p>	1
12.	<p>Which of the following code snippets will raise an error for s = "Python"?</p> <p>a) print(s[10]) b) print(s[1:10]) c) print (s [-1: -3]) d) print(s[:2])</p>	1
13.	<p>_____ is the unique name that identifies a particular website and represents the name of the server.</p> <p>a)IP address b) Website c) Web browser d) Domain Name</p>	1
14.	<p>What is the output of the expression?</p> <p>St1="abc@pink@city"</p>	1

	<pre>print (St1.split("@"))</pre> <p>a) ("abc", "@", "pink", "@", "city") b) ["abc", "pink", "city"] c) ["abc", "@", "pink", "@", "city"] d) Error</p>																			
15.	<p>Consider The following: t=(12,13,14,16,[2,3]) What changes will be made in t after the execution of the following statement? t.append(4) print(t)</p> <p>(a) (12,13,14,16,[2,3],4) (b) (12,13,14,16,[2,3,4]) (c) (4,12,13,14,16,12,3) (d) It will result in an error</p>	1																		
16.	<p>URL is the abbreviation of</p> <p>a) Uniform Resource Locator b) Universal Resource Location c) Uniform Resource Locator d) Uniform Reliable locator</p>	1																		
17.	<p>What will be the cardinality of the table given below</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ProductID</th> <th>Category</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>788830</td> <td>Headphones</td> <td>Bose QuietComfort</td> </tr> <tr> <td>313096</td> <td>Bluetooth Speakers</td> <td>Polk BOOM</td> </tr> <tr> <td>814976</td> <td>Bluetooth Speakers</td> <td>JBL Clip</td> </tr> <tr> <td>105945</td> <td>Headphones</td> <td>Audio-Technica ATH</td> </tr> <tr> <td>666721</td> <td>Bluetooth Speakers</td> <td>Jamo DS3</td> </tr> </tbody> </table>	ProductID	Category	Name	788830	Headphones	Bose QuietComfort	313096	Bluetooth Speakers	Polk BOOM	814976	Bluetooth Speakers	JBL Clip	105945	Headphones	Audio-Technica ATH	666721	Bluetooth Speakers	Jamo DS3	1
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18.	<p>Which among the following keywords is also an operator?</p> <p>a) True b) is c) for d) break</p>	1																		
19.	<p>The relation between Primary key, Candidate key and Alternate key is :</p> <p>(a) Primary key = Candidate key - Alternate key (b) Candidate key= Primary key - Alternate key (c) Alternate key= Primary key + Candidate key (d) None of the above</p>	1																		
	<p>Q20 and Q21 are Assertion and Reasoning based questions. Mark the correct choice as:</p> <p>(A) Both A and R are true and R is the correct explanation for A (B) Both A and R are true and R is not the correct explanation for A (C) A is True but R is False (D) A is False but R is True (E)</p>																			
20.	<p>ASSERTION : A function with 3 formal parameters must be called with 3 actual parameters. REASONING: Since, all the formal parameters are used to produce the output from the function, the function expects the same number of parameters from the function call.</p>	1																		
21.	<p>ASSERTION : Delete command is used to remove rows or records from table. REASONING : This command is used to remove records along with structure of the table from database</p>	1																		

SECTION B (7 x 2=14 Marks)

22.	Write the method to perform the following. (a) To remove and display an element at a specific index in a list. (b) To get the number of elements in a list	2															
23.	Read the following code and name the exceptions that will arise on executing the code: a) <code>print(int('A'))</code> b) <code>a = 10</code> <code>print(b)</code>	2															
24.	Predict the output of the Python code given below: <code>tuple1 = (11, 22, 33, 44, 55 ,66)</code> <code>list1 =list(tuple1)</code> <code>new_list = []</code> <code>for i in list1:</code> <code> if i%2==0:</code> <code> new_list.append(i)</code> <code>new_tuple = tuple(new_list)</code> <code>print(new_tuple)</code>	2															
25.	Expand the following terms: a) HTTPS b) HTML <p align="center">OR</p> What are topologies? Name any two topologies.	2															
26.	What will be the output of the following queries on the basis of EMP table? <p align="center">Table : EMP</p> <table border="1" data-bbox="336 1061 805 1256"> <thead> <tr> <th>Emp_Id</th> <th>Name</th> <th>Salary</th> </tr> </thead> <tbody> <tr> <td>E01</td> <td>Siya</td> <td>54000</td> </tr> <tr> <td>E02</td> <td>Joy</td> <td>NULL</td> </tr> <tr> <td>E03</td> <td>Allen</td> <td>32000</td> </tr> <tr> <td>E04</td> <td>Neev</td> <td>42000</td> </tr> </tbody> </table> (i) <code>SELECT Salary + 500 FROM Employee WHERE Emp_Id= 'E02';</code> (ii) <code>SELECT Name FROM Employee WHERE Salary > 50000 ;</code>	Emp_Id	Name	Salary	E01	Siya	54000	E02	Joy	NULL	E03	Allen	32000	E04	Neev	42000	2
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27.	What possible outputs(s) will be obtained when the following code is executed.Also specify the maximum values that can be assigned to each of the variables BEGIN and END. <code>import random</code> <code>ARR=[200,300,400,500,600,700]</code> <code>BEGIN=random.randint(1,3)</code> <code>END=random.randint(2,4)</code> <code>for i in range(BEGIN,END+1):</code> <code> print (ARR[i], end="##")</code> (i) 100##400##700# (ii) 300##400##500# (iii) 500##600##700# (iv) 400##500##700#	2															
28.	The code given below accepts a number as an argument and returns the sum of odd digits present in it .Observe the following code carefully and rewrite it after removing all syntax and logical errors. Underline all the corrections made. <code>def oddsum(num):</code> <code> while num>0</code> <code> sum=0</code>	2															

	<pre> rem=num%10 if rem%2=0: sum=sum+rem num=num//10 return sum print(oddsun(12356)) </pre>	
SECTION C (3 x 3=9 Marks)		
29.	<p>Write a function countEU() in Python, which should read each character of a text file IMP.TXT. The function should count and display occurrence of alphabets E and U (including small cases e and u too).</p> <p>e.g. If the file content is as follows :</p> <p>Pinaky has gone to his friend's house. His friend's name is Ravya. Her house is 12 km from Pinaky's house. The countEU function should display the output as E: 8, U: 3</p> <p style="text-align: center;">OR</p> <p>Write a Python program to find the longest word in file "status.txt". If contents of status.txt are :</p> <p>Welcome to your one-step solutions for all your study, practice and assessment need for various competitive and recruitment examinations and school segment. We have been working tirelessly for over a decade to make sure that you have best in class study resources because you deserve SUCCESS AND NOTHING LESS...</p> <p>Output should be : Longest word : examinations</p>	3
30.	<p>Find and write the output of the following Python code:</p> <pre> Numbers = [9, 18, 27,36] for Num in Numbers: for N in range (1, Num%8) : print (N, "#", end="") print() </pre> <p style="text-align: center;">OR</p> <p>Find and write the output of the following Python code:</p> <pre> Data = ["P", 20, "R", 10, "S", 30] Times = 0 Alpha = " " Add = 0 for C in range (1,6,2) : Times = Times + C Alpha = Alpha + Data[C-1]+"\$" Add = Add + Data [C] print (Times, Add, Alpha) </pre>	3
31.	<p>A) Julie has created a dictionary containing names and marks as key value pairs of 6 students. Write a program, with separate user defined functions to perform the following operations:</p> <ul style="list-style-type: none"> • Push the keys (name of the student) of the dictionary into a stack, where the corresponding value (marks) is greater than 75. • Pop and display the content of the stack. <p>For example If the sample content of the dictionary is as follows :</p> <pre>R= ("OM":76, "JAI":45, "BOB":89, "ALI":65, "ANU":90, "TOM":82)</pre> <p>The output from the program should be : TOM ANU BOB OM</p>	3

OR

(B) Write a Python program to input as many numbers and push them to a stack perfectstack[] using a function pushperfect(), only if the number input is a perfect number.(A perfect number is one whose sum of factors other than itself, is equal to the number)

SECTION D (4 x 4=16 Marks)

32.	<p>Consider the Table Student give below :</p> <table border="1"><thead><tr><th>RNo</th><th>Name</th><th>Subject</th><th>Marks</th></tr></thead><tbody><tr><td>1201</td><td>NILESH</td><td>Physics</td><td>85</td></tr><tr><td>1205</td><td>JAYESH</td><td>Chemistry</td><td>91</td></tr><tr><td>1206</td><td>ISHA</td><td>CS</td><td>94</td></tr><tr><td>1207</td><td>NITIN</td><td>Chemistry</td><td>77</td></tr><tr><td>1209</td><td>PRAGYA</td><td>Maths</td><td>84</td></tr></tbody></table> <p>Write the SQL queries for the following :</p> <p>(i) To increase 2 marks in Chemistry subject (ii)To delete the record whose roll Number is 1207 (iii)To display the name and subject of those students who have scored more than 90. (iv)To add a new record with the following details (1215, 'AJAY', 'CS',95)</p>	RNo	Name	Subject	Marks	1201	NILESH	Physics	85	1205	JAYESH	Chemistry	91	1206	ISHA	CS	94	1207	NITIN	Chemistry	77	1209	PRAGYA	Maths	84	4																																									
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33.	<p>Arya owns a boutique.To keep track of sales made, she has created a CSV file named SalesAmount.csv, which stores the details of each sale. The columns of the CSV file are: Item_ID, Item_Name, Qty_Sold and Rate_Per_Unit.</p> <p>Help her to efficiently maintain the data by creating the following user-defined functions:</p> <p>a) Input () – to accept a sales record from the user and add it to the file SalesAmount.csv. b) TotalSales() – to calculate and return the total sales based on the Qty_Sold and Rate_Per_Unit.</p>	4																																																																	
34.	<p>Consider the following tables and write SQL commands for the following statements.</p> <p style="text-align: center;">Table: GARMENT</p> <table border="1"><thead><tr><th>GCODE</th><th>DESCRIPTION</th><th>PRICE</th><th>FCODE</th><th>READYMADE</th></tr></thead><tbody><tr><td>10023</td><td>PENCIL SKIRT</td><td>1150</td><td>F03</td><td>19-DEC-08</td></tr><tr><td>10001</td><td>FORMAL SKRIT</td><td>1250</td><td>F01</td><td>12-JAN-08</td></tr><tr><td>10012</td><td>INFORMAL SKRIT</td><td>1550</td><td>F02</td><td>06-JUN-08</td></tr><tr><td>10024</td><td>BABY TOP</td><td>750</td><td>F03</td><td>07-APR-07</td></tr><tr><td>10090</td><td>TULIP SKIRT</td><td>850</td><td>F02</td><td>31-MAR-07</td></tr><tr><td>10019</td><td>EVENING GOWN</td><td>850</td><td>F03</td><td>06-JUN-08</td></tr><tr><td>10009</td><td>INFORMAL PANT</td><td>1500</td><td>F02</td><td>20-OCT-08</td></tr><tr><td>10007</td><td>FORMAL PANT</td><td>1350</td><td>F01</td><td>09-MAR-08</td></tr><tr><td>10020</td><td>FROCK</td><td>850</td><td>F04</td><td>09-SEP-07</td></tr><tr><td>10089</td><td>SLACKS</td><td>750</td><td>F03</td><td>20-OCT-08</td></tr></tbody></table> <p style="text-align: center;">Table: FABRIC</p> <table border="1"><thead><tr><th>FCODE</th><th>TYPE</th></tr></thead><tbody><tr><td>F04</td><td>POLYSTER</td></tr><tr><td>F02</td><td>COTTON</td></tr><tr><td>F03</td><td>SILK</td></tr><tr><td>F01</td><td>TERELENE</td></tr></tbody></table>	GCODE	DESCRIPTION	PRICE	FCODE	READYMADE	10023	PENCIL SKIRT	1150	F03	19-DEC-08	10001	FORMAL SKRIT	1250	F01	12-JAN-08	10012	INFORMAL SKRIT	1550	F02	06-JUN-08	10024	BABY TOP	750	F03	07-APR-07	10090	TULIP SKIRT	850	F02	31-MAR-07	10019	EVENING GOWN	850	F03	06-JUN-08	10009	INFORMAL PANT	1500	F02	20-OCT-08	10007	FORMAL PANT	1350	F01	09-MAR-08	10020	FROCK	850	F04	09-SEP-07	10089	SLACKS	750	F03	20-OCT-08	FCODE	TYPE	F04	POLYSTER	F02	COTTON	F03	SILK	F01	TERELENE	4
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	<p>i) To display FCODE and DESCRIPTION of each garments in descending order of FCODE.</p> <p>ii) To display the details of all the garments which have READYDATE from 08-DEC-07 upto 16-JUN-08 (both dates inclusive)</p> <p>iii) To display total price of Garments table based on each fabric code ;</p> <p>iv) Display the price of the costliest garment.</p> <p style="text-align: center;">OR</p> <p>To display the details of those garments which belong to FORMAL SKRIT, FORMAL SKRIT or FROCK</p>	
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35.	<p>Write a code in Python to delete the record of a student whose roll no is 25 and is in Class 11. The table structure is as follows:</p> <p>RNo Name Class Perc</p> <p>Consider the following details to establish Python-MySQL connectivity:</p> <p>Database : Student Table : Education Host : localhost UserId : root Password : cbse</p>	4
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SECTION E (2 x 5=10 Marks)

36.	<p>Garuda consultants are setting up a secured network for their office campus at Faridabad for their day-to-day office and web based activities. They are planning to have connectivity between 3 buildings and the head office situated in Kolkata.</p> <p>Answer the questions (a) to (e) after going through the building positions in the campus and other details, which are given below:</p> <p>Distance between various buildings</p> <table border="1" style="margin-left: 40px;"> <tr> <td>Building RAVI to Building JAMUNA</td> <td>120 m</td> </tr> <tr> <td>Building RAVI to Building GANGA</td> <td>50 m</td> </tr> <tr> <td>Building GANGA to Building JAMUNA</td> <td>65 m</td> </tr> <tr> <td>Faridabad Campus to Head Office</td> <td>1460 km</td> </tr> </table> <p>Number of computers</p> <table border="1" style="margin-left: 40px;"> <tr> <td>Building RAVI</td> <td>25</td> </tr> <tr> <td>Building JAMUNA</td> <td>150</td> </tr> <tr> <td>Building GANGA</td> <td>51</td> </tr> <tr> <td>Head Office</td> <td>10</td> </tr> </table> <p>(a) Suggest the most suitable place (i.e. block) to house the server of this organisation. Also, give a reason to justify your suggested location.</p> <p>(b) Suggest a cable layout of connections between the building inside the campus.</p> <p>(c) Suggest the placement of the following devices with justification: (i) Switch (ii) Repeater</p> <p>(d) The organisation is planning to provide a high speed link with its head office situated in the Kolkata using a wired connection. Which of the following cable will be most suitable for this job? (i) Optical fibre (ii) Co-axial cable (iii) Ethernet cable</p> <p>(e) (i) Consultancy is planning to connect its office in Faridabad which is more than</p>	Building RAVI to Building JAMUNA	120 m	Building RAVI to Building GANGA	50 m	Building GANGA to Building JAMUNA	65 m	Faridabad Campus to Head Office	1460 km	Building RAVI	25	Building JAMUNA	150	Building GANGA	51	Head Office	10	5
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	<p>10 km from Head office. Which type of network will be formed?</p> <p style="text-align: center;">OR</p> <p>(i) What is the benefit in using Optical fibre cable to connect to the head office?</p>	
37.	<p>A binary file "Hotel.dat" exists storing details of hotel customers as per following structure:</p> <p style="text-align: center;">RoomId CustomerName Days</p> <p>Mr. Vijay the developer of the hotel maintains the details of customers. Help him to write a program in Python for adding and displaying records from the binary file using following functions:</p> <p>(i) Reserve() - To add data of customers to the binary file.</p> <p>(ii) ShowReservations() -To open the file "Hotel.dat" and display all the records.</p> <p>(iii) List any two advantages of Binary files over Text files.</p>	5