

1.	State True or False: The Python interpreter handles logical errors during code execution.	(1)
2.	Identify the output of the following code snippet: <pre> text = "PYTHONPROGRAM" text=text.replace('PY','#') print(text) </pre> (A) #THONPROGRAM (B) ##THON#ROGRAM (C) #THON#ROGRAM (D) #YTHON#ROGRAM	(1)
3.	Which of the following expressions evaluates to False? (A) not(True) and False (B) True or False (C) not(False and True) (D) True and not(False)	(1)
4.	What is the output of the expression? <code>country='International'</code> <pre> print(country.split("n")) </pre> (A) ('l', 'ter', 'atio', 'al') (B) ['l', 'ter', 'atio', 'al'] (C) ['l', 'n', 'ter', 'n', 'atio', 'n', 'al'] (D) Error	(1)
5.	What will be the output of the following code snippet? <pre> message= "World Peace" print(message[-2::-2]) </pre>	(1)
6.	What will be the output of the following code? <pre> tuple1 = (1, 2, 3) tuple2 = tuple1 tuple1 += (4,) print(tuple1 == tuple2) </pre> (A) True (B) False (C) tuple1 (D) Error	(1)

7.	If my_dict is a dictionary as defined below, then which of the following statements will raise an exception? <pre>my_dict = {'apple': 10, 'banana': 20, 'orange': 30}</pre> (A) my_dict.get('orange') (B) print(my_dict['apple', 'banana']) (C) my_dict['apple']=20 (D) print(str(my_dict))	(1)
8.	What does the list.remove(x) method do in Python? (A) Removes the element at index x from the list (B) Removes the first occurrence of value x from the list (C) Removes all occurrences of value x from the list (D) Removes the last occurrence of value x from the list	(1)
9.	If a table which has one Primary key and two alternate keys. How many Candidate keys will this table have? (A) 1 (B) 2 (C) 3 (D) 4	(1)
10.	Write the missing statement to complete the following code: <pre>file = open("example.txt", "r") data = file.read(100) _____ #Move the file pointer to the beginning of the file next_data = file.read(50) file.close()</pre>	(1)
11.	State whether the following statement is True or False: The finally block in Python is executed only if no exception occurs in the try block.	(1)

12.	What will be the output of the following code? <pre> c = 10 def add(): global c c = c + 2 print(c,end='#') add() c=15 print(c,end='%')</pre> (A) 12%15# (B) 15#12% (C) 12#15% (D) 12%15#	(1)
13.	Which SQL command can change the degree of an existing relation?	(1)
14.	What will be the output of the query? <pre> SELECT * FROM products WHERE product_name LIKE 'App%';</pre> (A) Details of all products whose names start with 'App' (B) Details of all products whose names end with 'App' (C) Names of all products whose names start with 'App' (D) Names of all products whose names end with 'App'	(1)
15.	In which datatype the value stored is padded with spaces to fit the specified length. (A) DATE (B) VARCHAR (C) FLOAT (D) CHAR	(1)
16.	Which aggregate function can be used to find the cardinality of a table? (A) sum() (B) count() (C) avg() (D) max()	(1)

17.	Which protocol is used to transfer files over the Internet? (A) HTTP (B) FTP (C) PPP (D) HTTPS	(1)
18.	Which network device is used to connect two networks that use different protocols? (A) Modem (B) Gateway (C) Switch (D) Repeater	(1)
19.	Which switching technique breaks data into smaller packets for transmission, allowing multiple packets to share the same network resources.	(1)
	Q20 and Q21 are Assertion(A) and Reason(R) based questions. Mark the correct choice as: (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	
20.	Assertion (A): Positional arguments in Python functions must be passed in the exact order in which they are defined in the function signature. Reasoning (R): This is because Python functions automatically assign default values to positional arguments.	(1)
21.	Assertion (A): A SELECT command in SQL can have both WHERE and HAVING clauses. Reasoning (R): WHERE and HAVING clauses are used to check conditions, therefore, these can be used interchangeably.	(1)

1.	False (1 mark for correct answer)	(1)
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2.	(A) #THONPROGRAM (1 mark for correct answer)	(1)
3.	(A) not (True) and False (1 mark for correct answer)	(1)
4.	(B) ['l', 'ter', 'atio', 'al'] (1 mark for correct answer)	(1)
5.	ce lo (1 mark for correct answer)	(1)
6.	(B) False (1 mark for correct answer)	(1)
7.	(B) print(my_dict['apple', 'banana']) (1 mark for correct answer)	(1)
8.	(B) Removes the first occurrence of value x from the list (1 mark for correct answer)	(1)
9.	(C) 3 (1 mark for correct answer)	(1)
10.	file.seek(0) (OR file.seek(0,0)) (1 mark for correct answer)	(1)
11.	False (1 mark for correct answer)	(1)
12.	(C) 12#15% (1 mark for correct answer)	(1)
13.	Alter (or Alter Table) (1 mark for correct answer)	(1)
14.	(A) Details of all products whose names start with 'App' (1 mark for correct answer)	(1)
15.	(D) CHAR (1 mark for correct answer)	(1)

16.	(B) count() (1 mark for correct answer)	(1)
17.	(B) FTP (1 mark for correct answer)	(1)
18.	(B) Gateway (1 mark for correct answer)	(1)
19.	(B) Packet Switching (1 mark for correct answer)	(1)
20.	(C) A is True but R is False. (1 mark for correct answer)	(1)
21.	(C) A is True but R is False. (1 mark for correct answer)	(1)

1	State True or False: “In a Python program, if a <code>break</code> statement is given in a nested loop, it terminates the execution of all loops in one go.”	1
2	In a table in MYSQL database, an attribute A of datatype <code>varchar(20)</code> has the value “Keshav”. The attribute B of datatype <code>char(20)</code> has value “Meenakshi”. How many characters are occupied by attribute A and attribute B? a. 20,6 c. 9,6 b. 6,20 d. 6,9	1
3	What will be the output of the following statement: <code>print(3-2**2**3+99/11)</code> a. 244 c. -244.0 b. 244.0 d. Error	1
4	Select the correct output of the code:	1

	<pre>s = "Python is fun" l = s.split() s_new = "-".join([l[0].upper(), l[1], l[2].capitalize()]) print(s_new)</pre> Options: a. PYTHON-IS-Fun b. PYTHON-is-Fun c. Python-is-fun d. PYTHON-Is -Fun	
5	In MYSQL database, if a table, Alpha has degree 5 and cardinality 3, and another table, Beta has degree 3 and cardinality 5, what will be the degree and cardinality of the Cartesian product of Alpha and Beta? a. 5,3 b. 8,15 c. 3,5 d. 15,8	1
6	Riya wants to transfer pictures from her mobile phone to her laptop. She uses Bluetooth Technology to connect two devices. Which type of network will be formed in this case? a. PAN b. LAN c. MAN d. WAN	1
7	Which of the following will delete key-value pair for key = “Red” from a dictionary D1? a. delete D1("Red") b. del D1["Red"] c. del.D1["Red"] d. D1.del["Red"]	1

8	Consider the statements given below and then choose the correct output from the given options: <pre>pride="#G20 Presidency" print(pride[-2:2:-2])</pre>	1
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	Options: a. ndsr b. ceieP0 c. ceieP d. yndsr	
9	Which of the following statement(s) would give an error during execution of the following code? <pre>tup = (20,30,40,50,80,79) print(tup) #Statement 1 print(tup[3]+50) #Statement 2 print(max(tup)) #Statement 3 tup[4]=80 #Statement 4</pre> Options: a. Statement 1 b. Statement 2 c. Statement 3 d. Statement 4	1

10	What possible outputs(s) will be obtained when the following code is executed? <pre>import random myNumber=random.randint(0,3) COLOR=["YELLOW","WHITE","BLACK","RED"] for I in range(1,myNumber): print(COLOR[I],end="*") print()</pre> Options: a.	1
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	RED* WHITE* BLACK* b. WHITE* BLACK* c. WHITE* WHITE* BLACK* BLACK* d. YELLOW* WHITE*WHITE* BLACK* BLACK* BLACK*	
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11	Fill in the blank: The modem at the sender's computer end acts as a _____. a. Model b. Modulator c. Demodulator d. Convertor	1
12	Consider the code given below: <pre> b=100 def test(a): _____ # missing statement b=b+a print(a,b) test(10) print(b) </pre>	1

	Which of the following statements should be given in the blank for #Missing Statement, if the output produced is 110? Options: a. global a b. global b=100 c. global b d. global a=100	
13	State whether the following statement is True or False: An exception may be raised even if the program is syntactically correct.	1

14	Which of the following statements is FALSE about keys in a relational database? a. Any candidate key is eligible to become a primary key. b. A primary key uniquely identifies the tuples in a relation. c. A candidate key that is not a primary key is a foreign key. d. A foreign key is an attribute whose value is derived from the primary key of another relation.	1
15	Fill in the blank: In case of _____ switching, before a communication starts, a dedicated path is identified between the sender and the receiver.	1
16	Which of the following functions changes the position of file pointer and returns its new position? a. <code>flush()</code> b. <code>tell()</code> c. <code>seek()</code> d. <code>offset()</code>	1
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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	

1	False	1
2	Option b 6,20	1
3	Option c -244.0	1

4	PYTHON-is-Fun	1
5	Option b 8,15	1
6	Option a PAN	1
7	Option b del D1["Red"]	1
8	Option b	1
	ceieP0	
9	Option d Statement 4	1
10	Option b WHITE* BLACK*	1
11	Option b Modulator	1
12	Option c global b	1

13	True	1	
14	Option c A candidate key that is not a primary key is a foreign key.	1	
15	Circuit	1	
16	Option c <code>seek()</code>	1	
17	Option d A is false but R is True	1	
18	Option b Both A and R are true but R is not the correct explanation for A	1 mark for correct answer	1

KENDRIYA VIDYALAYA SANGATHAN AGRA REGION
FIRST PRE BOARD EXAMINATION (2023-24)

CLASS : XII
SUBJECT : COMPUTER SCIENCE (083)

TIME : 03 HOURS
MAXIMUM MARKS : 70

General instructions:

1. Please check this question paper contains 35 questions.
2. The paper is divided into 4 Sections- A, B, C, D and E.
3. Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.
4. Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.
5. Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.
6. Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.
7. Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.
8. All programming questions are to be answered using Python Language only.

SECTION A		
Q1	What will be the evaluation of python expression – $2*2**3**2+2$ a) 130 b) 1026 c) 258 d) 68	1
Q2	Which of the following is not a valid identifier in python? a) Def b) false c) True d) print	1
Q3	Given a string s = 'Happy Diwali', what will be the value of string slice s[::-2]? a) <u>ia</u> i pa b) HpyDwl c) lwDypH d) <u>ia</u> iypH	1
Q4	Which among the following is/are mutable data types in python? a) <u>list</u> b) tuple c) string d) boolean	1
Q5	Which python statement will delete all elements of a dictionary named d? a) d.delete(all) b) d.delete() c) <u>d.clear()</u> d) d.empty()	1
Q6	The return type of the print() function is: a) string b) integer c) list d) <u>None</u>	1
Q7	Consider a tuple t = (10, 15, [20, 25], 30, 35). Identify the statement that will result in an error. a) print(t[2]) b) t[2][0] = 200 c) <u>t[3] = 300</u> d) print(len(t))	1
Q8	Which of the following symbols is not an operator in python? a) // b) * c) ~ d) <u>\$</u>	1
Q9	Which of the following transmission media does not use electric signals to carry data? a) Twisted Pair Cable b) <u>Optical Fiber</u> c) Co-axial cable d) None of the above	1

Q10	Which of the following connector is used for Ethernet cables in a LAN? a) RJ11 <u>b) RJ45</u> c) ETH0 d) F Connector	1
Q11	Which two of the following queries are not valid in MySQL? <u>a)</u> select gender, count(*) from students having age > 15; b) select gender, count(*) from students where age > 15 group by gender; c) select gender, sum(age) from students group by gender having sum(age) > 25; d) select gender, max(age) from students group by gender order by max(age);	1
Q12	Which of the following is not a DDL command in SQL? a) ALTER <u>b) UPDATE</u> c) DROP d) CREATE	1
Q13	If a MySQL table named A has 5 columns and 6 rows and another table B has 3 columns and 4 rows, then what will be the degree and cardinality of the cartesian product of A and B? a) 15, 24 b) 8, 10 <u>c) 8, 24</u> d) 5, 24	1
Q14	Which of the following is the unit used to measure data transfer rate of a computer network? a) mps b) bps c) Hertz (Hz) d) None of these	1
Q15	Which of the following keyword is used along with try block to handle exceptions. a) catch b) handle c) follow d) except	1
Q16	Which of the following are not correct ways of opening a text file in python? a) F = open('story.txt', 'read') b) with open('story.txt') as F: c) F = open('story.txt', 'a+') d) Open(F) = 'story.txt'	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as 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		
Q17	Answer with (a) to (d) given above. Assertion (A): A function definition can have zero parameters/formal arguments. Reasoning (R): Parenthesis are not mandatory to call a function with zero arguments.	1

Q18	Answer with (a) to (d) given above. Assertion (A): Number of arguments passed to a function may not match the number of parameters in the function definition. Reasoning (R): Function parameters can have default values.	1
SECTION B		
Q19	a) Expand the following abbreviations: i) VoIP ii) XML b) Name one protocol that can be used to access a computer remotely. OR Compare twisted pair cable and fiber optic cable based on – speed, cost, electromagnetic interference and distance.	2
Q20	Sameer has written a python program to count the occurrences of elements of a list using a dictionary. But the code has some syntax and logical errors. Re-write the code after removing all such errors and underline your corrections. <pre> L = [1,2,1,1,2,1,2,3,5,4,1,2,5,4,4,5] D = {} foreach x in L: if x in D: D[x]=+1 Else: D(x)=1 </pre>	2
Q21	Write a function modifyList(L,n) in Python, which accepts a list L of numbers and n is a numeric value. Function should: • Add 5 to all the values divisible by n • Subtract 5 from all values not divisible by n • Display the modified list Example: If L= [10,11,13,15,20,2] and n=5 then the function should print [15,6,8,20,25,-3] OR Write a user defined function palindrome(s) – which takes a string 's' as argument and returns True if it is a palindrome and False if it is not. (A palindrome is a word, phrase, or sequence that reads the same backwards as forwards – example: madam)	2

Q1	b) 1026	1
Q2	c) True	1
Q3	a) iai pa	1
Q4	a) list	1
Q5	c) d.clear()	1
Q6	d) None	1
Q7	c) t[3] = 300	1
Q8	d) \$	1
Q9	b) Optic Fiber	1
Q10	b) RJ45	1
Q11	a) select gender, count(*) from students having age >15;	1
Q12	b) UPDATE	1
Q13	c) 8, 24	1
Q14	b) bps	1
Q15	d) except	1
Q16	a) F = open('story.txt', 'read') d) Open(F) = 'story.txt'	1
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as 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	
Q17	c) A is True but R is False	1
Q18	a) Both A and R are true and R is the correct explanation for A	1

1	Which of the following is a keyword in Python? a) true b) For c) pre-board d) False	1
2	What will be the output for the following Python statement? print(20//3*2+(35//7.0)) a) 17.0 b) 17 c) 8.5 d) 8	1
3	In MYSQL database, if a table, BOOK has degree 8 and cardinality 7, and another table, SALE has degree 4 and cardinality 7, what will be the degree and cardinality of the Cartesian product of BOOK and SALE ? a) 32 , 49 b) 12, 49 c) 12 ,14 d) 32,14	1
4	What is “ C “ stands in TCP/IP ? a) Common b) Centre c)Control d) Coordinate	1
5	What is printed by the following statements? ANIMAL={"dog":10,"tiger":5,"elephant":15,"Cow":3} print("Tiger" not in ANIMAL) a) True b)False c)Error d) None	1
6	Consider the following statements and choose the correct output from the given options : EXAM="COMPUTER SCIENCE" print(EXAM[:12:-2]) a) EN b) CI c)SCIENCE d) ENCE	1
7	What will be the output of the following code ? Tuple1=(10,) Tuple2=Tuple1*2 print(Tuple2) a) 20 b) (20,) c) (10,10) d) Error	1
8	Fill in the blanks: The SQL keyword ----- is used in SQL expression to select records based on patterns	1

9	What possible outcome will be produced when the following code is executed? <pre>import random value=random.randint(0,3) fruit=["APPLE","ORANGE","MANGO","GRAPE"] for i in range(value): print(fruit[i],end='##') print()</pre> a) APPLE## b) APPLE# ORANGE## c) APPLE## ORANGE## d) ORANGE## MANGO## APPLE##	1
10	Select the network device from the following, which connects, networks with different protocols a) Bridge b) Gateway c) Hub d) Router	1
11	State whether the following statement is TRUE or FALSE : The value of the expression $4/3*(2-1)$ and $4/(3*(2-1))$ is the same	1
12	In the relational models , cardinality actually refers to ----- a) Number of tuples b) Number of attributes c) Number of tables d) Number of constraints	1
13	Data structure STACK is also known as ----- list a) First In First Out b) First In Last Out c) Last In First Out d) Last In Last Out	1
14	Which function is used to write a list of strings in a file? a) writeline() b) writelines() c) write() d) writeall()	1
15	Which of the following is NOT a guided communication medium? a) Twisted pair cable b) Microwave c) Coaxial cable d) Optical fibre	1
16	Which of the following function header is correct? a) def fun(a=1,b): b) def fun(a=1,b,c=2): c) def fun(a=1,b=1,c=2): d) def fun(a=1,b=1,c=2,d):	1
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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	

17	Assertion (A): In SQL, the aggregate function avg() calculates the average value on a set of values and produces a single result. Reason (R): The aggregate functions are used to perform some fundamental arithmetic tasks such as min(), max(), sum() etc	1
18	Assertion(A): Python overwrites an existing file or creates a non-existing file when we open a file with 'w' mode. Reason(R): a+ mode is used only for writing operations	1
SECTION - A		
1	Which of the following is a keyword in Python ? a) true b) For c) pre-board d) False	1
2	What will be the output for the following Python statement ? print(20//3*2+(35//7.0)) a) 17.0 b) 17 c) 8.5 d) 8	1
3	In MYSQL database, if a table, BOOK has degree 8 and cardinality 7, and another table, SALE has degree 4 and cardinality 7, what will be the degree and cardinality of the Cartesian product of BOOK and SALE ? b) 32 , 49 b) 12, 49 c) 12 ,14 d) 32,14	1
4	What is " C " stands in TCP/IP ? a) Common b) Centre c)Control d) Coordinate	1
5	What is printed by the following statements ? ANIMAL={"dog":10,"tiger":5,"elephant":15,"Cow":3} print("Tiger" not in ANIMAL) a) True b)False c)Error d) None	1
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7	What will be the output of the following code ? Tuple1=(10,) Tuple2=Tuple1*2 print(Tuple2) a) 20 b) (20,) c) (10,10) d) Error	1
8	Fill in the blanks : The SQL keyword ----- is used in SQL expression to select records based on patterns LIKE	1

9	What possible outcome will be produced when the following code is executed <pre>? import random value=random.randint(0,3) fruit=["APPLE","ORANGE","MANGO","GRAPE"] for i in range(value): print(fruit[i],end='##') print()</pre> a) APPLE## b) APPLE# ORANGE## c) APPLE## ORANGE## d) ORANGE## MANGO## APPLE##	1
10	Select the network device from the following ,which connects , networks with different protocols a) Bridge b)Gateway c)Hub d) Router	1
11	State whether the following statement is TRUE or FALSE : The value of the expression $4/3*(2-1)$ and $4/(3*(2-1))$ is the same TRUE	1
12	In the relational models , cardinality actually refers to ----- a) Number of tuples b) Number of attributes c) Number of tables d) Number of constraints	1
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16	Which of the following function headers is correct ? a) def fun(a=1,b): b) def fun(a=1,b,c=2): c) def fun(a=1,b=1,c=2): d) def fun(a=1,b=1,c=2,d):	1
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17	Assertion (A): In SQL, the aggregate function avg() calculates the average value on a set of values and produces a single result. Reason (R): The aggregate functions are used to perform some fundamental arithmetic tasks such as min(), max(), sum() etc (b) Both A and R are true and R is not the correct explanation for A .	1
18	Assertion(A): Python overwrites an existing file or creates a non-existing file when we open a file with 'w' mode. Reason(R): a+ mode is used only for writing operations (c) A is True but R is False	1

सं Q. No.	/ Question	अंक / Marks
1.	State True or False “break keyword skips remaining part of an iteration in a loop and compiler goes to starting of the loop and executes again”	1
2.	Find the valid keyword from the following? a) Student-Name b) False c) 3rdName d) P_no	1
3.	What will be the output for the following Python statement? X={'Sunil':190, 'Raju':10, 'Karambir':72, 'Jeevan':115} print('Jeevan' in X, 190 in X, sep="##") (a) True#False (b) True#True (c) False#True (d) False#False	1
4.	Consider the given expression: True and False or not True Which of the following will be correct output if the given expression is evaluated? (a) True (b) False (b) (c) NONE (d) NULL	1
5.	Select the correct output of the code: a = "Python! is amazing!" a = a.split('!') b = a[0] + "." + a[1] + "." + a[2] print (b) (a) Python!. is amazing!. (b) Python. is amazing. (c) Python. ! is amazing.! (d) will show error	1
6.	Which of the following mode in file opening statement overwrite the existing content? (a) a+ (b) r+ (c) w+ (d) None of the above	1
7.	The attribute which have properties to be as referential key is known as. (a) foreign key (b) alternate key (c) candidate key (d) Both (a) and (c)	1
8.	Which command is used to change some values in existing rows? (a) CHANGE (b) MODIFY (b) (c) ALTER (d) UPDATE	1

9.	Which of the following statement(s) would give an error after executing the following code? Q="Humanity is the best quality" # Statement1 print(Q) # Statement2 Q="Indeed." # Statement3 Q[0]='#' # Statement4 Q=Q+"It is." # Statement5 (a) Statement 3 (b) Statement 4 (c)Statement 5 (d)Statement 4 and 5	1
10.	p=150 def fn(q): _____ #missing statement p=p+q fn(50) print(p) Which of the following statements should be given in the blank for #missing statement if the output produced is 200 (a) global p=150 (b) global p (c) p=150 (d) global q	1
11.	Which function is used to split a line of string in list of words? (a)split() (b) splt() (c) split_line() (d) all of these	1
12.	What possible output(s) will be obtained when the following code is executed import random k=random.randint(1,3) fruits=['mango', 'banana', 'grapes', 'water melon', 'papaya'] for j in range(k): print(j, end="**") (a) mango*banana*grapes (b) banana*grapes (c) banana*grapes*watermelon (d) mango*grapes*papaya	1
13.	Fill in the blank: _____is a communication protocol responsible for sending emails. (a) TCP (b) SMTP (c) PPP (d)HTTP	1
14.	What will be the ouput when following expression be evaluated in Python? print(21.5 // 4 + (8 + 3.0)) (a) 16 (b)14.0 (c) 15 (d) 15.5	1
15.	Which of the following functions other than close() writes the buffer data to file (a) push() (b) write() (c) writeBuffer() (d) flush()	1
16.	To get counting of the returned rows, you may use..... (a) cursor.rowcount (b) cursor.count (c) cursor.countrecords() (d) cursor.manyrecords()	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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		

17.	Assertion (A):- If the arguments in function call statement are provided in the form: parameter=argument, it is called keyword arguments. Reasoning (R):- During a function call, the argument list first contain keyword argument(s) followed by positional argument(s).	1
18.	Assertion (A): CSV (Comma Separated Values) is a file format for data storage with one record on each line and each field is separated by comma. Reason (R): The format is used to share data between cross platform as text editors are available on all platforms.	1

SECTION-A		
QN.	Answer of Question	
1.	False	1
2.	False	1
3.	True#False	1
4.	False	1
5.	(b)Python. is amazing.	1
6.	(c) w+	1
7.	(a) foreign key	1
8.	(d) UPDATE	1
9.	(b) Statement 4	1
10	(b) global p	1
11	(a) split()	1
12	(a) mango*banana*grapes	1
13	(b) SMTP	1
14	Ans. (a) 16	1
15	(d) flush()	1
16	(a) cursor.rowcount	1
17	Ans. (c) A is True but R is False	1
18	Ans: (a) Both A and R are true and R is the correct explanation A for	1

1.	State True or False “ continue keyword is not a jump statement in a loop.”	1
2.	Fill in the blank: ____command is used to remove a column from a table in SQL. (a)update (b)remove (c) alter (d)drop	1
3.	Given the following dictionaries dict_stud = {"rno" : "53", "name" : 'Rajveer Singh'} dict_mark = {"Accts" : 87, "English" : 65} Which statement will merge the contents of both dictionaries in dict_stud? (a) dict_stud + dict_mark (b) dict_stud.add(dict_mark) (c) dict_stud.merge(dict_mark) (d) dict_stud.update(dict_mark)	1

4.	print(True or not True and False) Choose one option from the following that will be the correct output after executing the above python expression. a) False b) True c) or d) not	1
5.	Which of the following commands will delete the rows of table? (a) DROP command (b) DELETE Command (c) REMOVE Command (d) ALTER Command	1
6.	Fill in the blank: _____ is the first page that normally view at a website. (a) First Page (b) Master Page (c) Home Page (d) Login Page	1
7.	When a Python function does not have return statement then what it returns? (a) int (b) float (c) None (d) Give Error	1
8.	Select the correct output of the code: <pre>>>> a= "Year 2022 at All the best" >>> a = a.split('2') >>> a = a[0] + ". " + a[1] + ". " + a[3]</pre>	1

	<pre>>>> print (a)</pre> (a) Year . 0. at All the best (b) Year 0. at All the best (c) Year . 022. at All the best (d) Year . 0. at all the best	
9.	Which of the following statement(s) would give an error after executing the following code? <pre>S="Welcome to class XII" # Statement 1 print(S) # Statement 2 S="Thank you" # Statement 3 S[0]='@' # Statement 4 S=S+"Thank you" # Statement 5</pre> (a) Statement 3 (b) Statement 4 (c) Statement 5 (d) Statement 4 and 5	1
10.	What will the following expression be evaluated to in Python? <pre>print(2**3**2)</pre> a) 64 b) 256 c) 512 d) 32	1
11.	Which is the smallest network? a) WAN (b) LAN c) MAN (d) PAN	1

12.	Write the possible outputs(s) when this code is executed? <pre>import random n=random.randint(0,3) color=["Y","W","B","R"] for i in range (1,n): print(color[i], end="*") print()</pre> a) R * b) W* W* B* B* c) W* W* d) Y* B* B* W* W* B* B* B*	1
13.	Which Python approach is used for object serialization in handling of Binary File? (a) Pickling (b) Un-pickling (c) Merging (d) None of these	1
14.	Fill in the blank: _____Keyword is used to obtain Non-duplicated values in a SELECT query. (a) ALL (b) DISTINCT (c) SET (d) HAVING	1
15.	Fill in the blank: _____ is the way of connecting the networking devices.	1
16.	Which of the following is not valid cursor function while performing database operations using python. Here Mycur is the cursor object? (a) Mycur.fetch() (b) Mycur.fetchone() (c) Mycur.fetchmany(n) (d) Mycur.fetchall()	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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		
17.	Assertion (A): A variable declared as global inside a function is visible with changes made to it outside the function.	1

	Reasoning (R): All variables declared outside are not visible inside a function till they are redeclared with global keyword.	
18.	Assertion (A): A binary file in python is used to store collection objects like lists and dictionaries that can be later retrieved in their original form using pickle module. Reasoning (R): A binary files are just like normal text files and can be read using a text editor like notepad.	1
QN.	Answer of Question	
1.	Ans. False	1
2.	Ans. (c) alter	1
3.	Ans: (d) dict_student.update(dict_marks)	1
4.	Ans. (b) True	1

5.	Ans. (b) DELETE Command	1
6.	Ans: (c) HomePage	1
7.	Ans. (c) None	1
8.	Ans. (a) Year . 0. at All the best	1
9.	Ans. (b) Statement 4	1
10.	Ans. (c) 512	1
11.	Ans: (d) PAN	1
12.	Ans. (b) W* B*	1
13.	Ans. (a) Pickling	1
14.	Ans. (b) DISTNICT	1
15.	Ans. Topology	1
16.	Ans. (a) Mycur.fetch()	1
17.	Ans. (c) A is True but R is False	1
18.	Ans. (c) A is True but R is False	1

1	State True or False: "Lexical unit is the smallest unit of any programming language"	1
2	Fill in the blank: ____command is used to remove the tuple from the table in SQL. (a) update (b) remove (c) alter (d) delete	1
3	What will be the output of the following statement: print ((30.0 // 4 + (8 + 3.0)) a. 14.75 b. 18.0 c. -18.0 d. Error	1
4	Select the correct output of the code: >>> Str= "BHASHA SANGAM @ 75" >>> S=Str.partition(" ") >>> print(S) a. (@ 75' BHASHA', ' ', 'SANGAM,) b. ('BHASHA', ' @', 'SANGAM , 75') c. (' ', ' ', 'BHASHA SANGAM @ 75') d. ('BHASHA', ' ', 'SANGAM @ 75')	1

9	Which of the following statement(s) would give an error after executing the following code? <pre> S="Welcome to KVS RO JAIPUR " # Statement 1 print(S) # Statement 2 S="Thank you" # Statement 3 S[0]= '\$' # Statement 4 S=S+"Thank you" # Statement 5 </pre> (a) Statement 3 (b) Statement 4 (c) Statement 5 (d) Statement 4 and 5	1
10	What possible outputs(s) will be obtained when the following code is executed? <pre> import random Signal=['Stop','Wait','Go'] for K in range (2,0,-1): R=random.randrange(K) print(Signal[R], end='#') options: </pre> a. Stop#Go# b. Wait#Stop# c. Go#Stop# d. Go#Wait#	1
11	Fill in the blank: is a communication methodology designed to deliver emails over Internet protocol. a. VIOP b. SMTP c. PPP d. HTTP	1

12	Consider the code given below and find correct output: <pre>x=5 def function1(): global x y=x+x*2 print(y,end=",") x=7 function1() print(x)</pre> Output: a. 21 , 7 b. 15 , 5 c. 21 , 5 - d 15, 7	1
----	---	---

13	State whether the following statement is True or False: Exception handling can be done for both user-defined and built-in exceptions.	1
14	Which of the following statements is FALSE in reference to MySQL? a. It is an RDBMS. b. It is case sensitive. c. It is an open source. d. It is ideal for both small and large applications.	1
15	Fill in the blank: In case of _____ switching, each information or message to be transmitted between sender and receiver is broken down into smaller pieces.	1
16	Which method is used to move the file pointer to a specified position? a.tellg() b.tell() c.seek() d.seekg()	1
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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	
17	Assertion(A): Access mode 'a' opens a file for appending. Reasoning(R): The file pointer is at the end of the file if the file exists.	1
18	Assertion(A): A function is block of organized and reusable code that is used to perform a single, related action. Reasoning(R): Function provides better modularity for your application and a high degree of code reusability.	1

1	True		1
2	Option d delete		1
3	Option b 18		1
4	Option d (‘BHASA’, ‘ ‘, ‘SANGAM@75’)		1
5	Option b 15,50		1
6	Option a PAN		1
7	Option a r g b		1
8	Option b 2@tr		1
9	Option b Statement 4	1 mark for correct answer	1
10	Option b Wait#Stop#	1 mark for correct answer	1
11	Option b SMTP	1 mark for correct answer	1

12	Option a 21 7	1 mark for correct answer	1
13	True	1 mark for correct answer	1
14	Option b It is case sensitive	1 mark for correct answer	1
15	Packet	1 mark for correct answer	1
16	Option c seek()	1 mark for correct answer	1
17	Option a Both A and R are true but R is the correct explanation for A	1 mark for correct answer	1
18	Option a Both A and R are true but R is the correct explanation for A	1 mark for correct answer	1

1.	State True or False “Dictionaries in python are mutable.”	1
2.	Which of the following is an invalid identifier a)myname b)p9tv c)def d)_new	1
3.	Which one of the following is the function to get list of keys from a dictionary dict in python? a . dict.getkeys() b . dict.getvalues() c . dict.keys() d . None Of These	1
4.	Consider the given expression: True OR NOT False AND True Which of the following will be correct output if the given expression is evaluated? (a) True (b) False (c) NONE (d) NULL	1
5.	Select the correct output of the code: Str="I will Succeed" lis=str.split(" ") print(lis[-1]) (a) I (b) will (c) Succeed (d) "I will Succeed"	1

6.	Which of the following methods will give the current position of the file pointer? (a)seek() (b)tell() (c)getloc() (d) None of the above	1
7.	Fill in the blank: _____ Command is used to change the structure of the table in SQL. (a)update (b)remove (c)alter (d)drop	1
8.	Which of the following commands will delete the row of the table from MYSQL database? (a) DELETE (b) DROPTABLE (c) REMOVETABLE (d) ALERTTABLE	1
9.	Which of the following statement(s) would give an error after executing the following code? T=(8,9,7,6) print(T) T=(7,9,7,6) T[1]=8 T=T+(1,2,3) # Statement 1 # Statement2 # Statement3 # Statement4 # Statement5 (a) Statement3 (b) Statement4 (c) Statement5 (d) Statement 4 and5	1
10.	Fill in the blank: _____ is an attribute or set of attributes eligible to become primary key. (a) PrimaryKey (b) ForeignKey (c) CandidateKey	1

	(d) Alternate Key	
11.	The default mode of opening a file in pyhton (a) append (b) read (c) write (d) both b and c	1

12.	Which of the following can be used as command to get the structure of a table in mysql (a) DESCRIBE (b) UNIQUE (c) DISTINCT (d) NULL	1
13.	Fill in the blank: _____ Is the protocol used for server to server mail transfer? (a)VoIP (b)SMTP (c)PPP (d)HTTP	1
14.	What will the following expression be evaluated to in Python? print(2**3**2//8) (a)64.0 (b)64 (c)8 (d)None Of These	1
15.	Which clause is used to apply conditions with GROUP BY (a) WHERE (b) HAVING (c) LIKE (d) None Of These	1
16.	Which function is used to establish connection between python and SQL database? (a) connection (b) connect (c) getconnection (d) getconnect	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (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		
17.	Assertion (A):-Functions in a program increases the modularity and readability of the program Reasoning (R):-Usage of Functions increases the execution speed of the program	1
18.	Assertion (A): If a file is opened in binary mode its contents are viewed as a sequence of bytes. Reason (R): A text file also can be opened in binary mode	1

1.	State True or False “Dictionaries in python are mutable.” Ans:True	1
2.	Which of the following is an invalid identifier a)myname b)p9tv c)def d)_new Ans:c def	1
3.	Which one of the following is the function to get list of keys from a dictionary dict in python? a . dict.getkeys() b . dict.getvalues() c . dict.keys() d . None Of These Ans: c dict.keys()	1
4.	Consider the given expression: True OR NOT False AND True Which of the following will be correct output if the given expression is evaluated? (a) True (b) False (c) NONE (d) NULL Ans:A True	1
5.	Select the correct output of the code: Str=”I will Succeed”	1

	<pre>lis=str.split(" ") print(lis[-1])</pre> (a) I (b) will (c) Succeed (d) "I will Succeed" ANS:c Succeed	
6.	Which of the following methods will give the current position of the file pointer? (a)seek() (b)tell() (c)getloc() (d) None of the above ANS:b tell()	1
7.	Fill in the blank: _____command is used to change the structure of the table in SQL. (a)update (b)remove (c)alter (d)drop ANS: c alter	1
8.	Which of the following commands will delete the contents of the table from MYSQL database? (a) DELETE (b) DROPTABLE (c) REMOVETABLE (d) ALERTTABLE ANS:a DELETE	1
9.	Which of the following statement(s) would give an error after executing the following code? <pre>T=(8,9,7,6) print(T) T=(7,9,7,6) T[1]=8 T=T+(1,2,3)</pre> # Statement 1 # Statement2 # Statement3 # Statement4 # Statement5 (a) Statement3 (b) Statement4 (c) Statement5 (d) Statement 4 and5 ANS:b statement 4	1

10.	Fill in the blank: _____ is an attribute or set of attributes eligible to become primary key. (a) PrimaryKey (b) ForeignKey (c) CandidateKey (d) Alternate Key ANS:c candidate key	1
11.	The default mode of opening a file in python (a) append (b) read (c) write (d) both b and c ANS:b read	1
12.	Which of the following can be used as command to get the structure of a table in MySQL (a) DESCRIBE (b) UNIQUE (c) DISTINCT (d) NULL ANS:a DESCRIBE	1
13.	Fill in the blank: _____ Is the protocol used for server to server mail transfer? (a)VoIP (b)SMTP (c)PPP (d)HTTP ANS:b SMTP	1
14.	What will the following expression be evaluated to in Python? print(2**3**2//8) (a)64.0 (b)64 (c)8 (d)None Of These ANS: b 64	1
15.	Which clause is used to apply conditions with GROUP BY (a) WHERE (b) HAVING (c) LIKE (d) None Of These ANS:b HAVING	1

1.	Assign a tuple containing an Integer?	(1)
2.	Which of the following data type in Python supports concatenation? a) int b) float c) bool d) str	(1)
3.	What will be output of the following code: d1={1:2,3:4,5:6} d2=d1.popitem() print(d2) a){1:2} b){5:6} c)(1,2) d)(5,6)	(1)
4.	The correct output of the given expression is: True and not False or False (a)False (b)True (c)None (d) Null	(1)
5.	Fill in the blank: _____ Command is used to add a new column in a table in SQL. a)update b)remove c)alter d)drop	(1)
6.	Consider the Python statement: f.seek(10, 1) Choose the correct statement from the following: (a) File pointer will move10 byte in forward direction from beginning of the file (b) File pointer will move 10 byte in forwarddirection from end of the file (c) File pointer will move 10 byte inforwarddirection from current location (d) File pointer will move 10 byte in backward direction from current location	(1)
7.	Choose correct SQL query which is expected to delete all rows of a table emp without deleting its structure. a) DELETE TABLE; b) DROP TABLE emp; c) REMOVE TABL emp; d) DELETE FROM emp;	(1)
8.	Which of the following is NOT a DML Command? (a)Insert (b)Update (c)Drop (d)Delete	(1)
9.	Select the correct output to the code: a="Year2022atallthe best" a=a.split('a') b=a[0]+"-"+a[1]+"-"+a[3] print (b) a) Year-0-atAllthebest b) Ye-r2022-llthe best c) Year-022-at Allthebest d) Year-0-atallthebest	(1)

10.	Which of the following statement(s) would give an error during execution? S="Lucknow is the Capital of UP " #Statement1 print(S) #Statement2 S[4]='\$' #Statement3 S="Thankyou" #Statement4 S=S+"Thankyou" #Statement5 (a)Statement3 (b)Statement4 (c)Statement5 (d)Statement4and5	
11.	Which of the following function returns a list datatype? a) d=f.read() b) d=f.read(10) c) d=f.readline() d)d=f.readlines()	(1)
12.	Select the correct statement,with reference to SQL: a) Aggregate functions ignore NULL b) Aggregate functions consider NULL as zero or False c) Aggregate functions treat NULL as a blank string d) NULL can be written as 'NULL' also.	(1)
13.	Fill in the blank: The _____ is a mail protocol used to retrieve mail from a remote server to a local email client. (a)VoIP (b) FTP (c)POP3 (d)HTTP	(1)
14.	What will be the value of y when following expression be evaluated in Python? x=10.0 y=(x<100.0) and x>=10 (a)110 (b)False (c)Error (d)True	(1)
15.	All aggregate functions except _____ignore null values in their input collection. (a) Count(attribute) (b) Count(*) (c) Avg (d) Sum	(1)
16.	Which of the following method is used to create a connection between the MySQL database and Python? a) (a) connector () (b) connect () (c) con () (d)cont()	(1)
17.	Assertion (A):-The default arguments can be skipped in the function call. Reason (R):-The function argument will take the default values even if the values are supplied in the function call	(1)
18.	Assertion(A):A tuple can be concatenated to a list,but a list cannot be concatenated to a tuple. Reason(R):Lists are mutable and tuples are immutable in Python.	(1)

General Instructions :

- (i) This question paper contains five sections, Section A to E.
- (ii) All questions are compulsory.
- (iii) Section A have 18 questions carrying 1 mark each.
- (iv) Section B has 7 Very Short Answer type questions carrying 2 marks each.
- (v) Section C has 5 Short Answer type questions carrying 3 marks each.
- (vi) Section D has 3 Long Answer type questions carrying 5 marks each.
- (vii) Section E has 2 questions carrying 4 marks each. One internal choice is given in Q. 34 and 35, against Part (iii) only.
- (viii) All programming questions are to be answered using Python Language only.

SECTION - A

1. State True or False.
"Identifiers are names used to identify a variable, function in a program". 1
2. Which of the following is a valid keyword in Python ? 1
(a) false (b) return
(c) non_local (d) none
3. Given the following Tuple 1
Tup= (10, 20, 30, 50)
Which of the following statements will result in an error ?
(a) print(Tup[0]) (b) Tup.insert (2, 3)
(c) print(Tup[1:2]) (d) print(len(Tup))
4. Consider the given expression :
5<10 and 12>7 or not 7>4
Which of the following will be the correct output, if the given expression is evaluated ? 1
(a) True (b) False
(c) NONE (d) NULL
5. Select the correct output of the code : 1
S= "Amrit Mahotsav @ 75"
A=S.partition (" ")
print (a)
(a) ('Amrit Mahotsav', '@', '75')
(b) ['Amrit', 'Mahotsav', '@', '75']
(c) ('Amrit', 'Mahotsav @ 75')
(d) ('Amrit', '', 'Mahotsav @ 75')



6. Which of the following mode keeps the file offset position at the end of the file ? 1
- (a) r+ (b) r
(c) w (d) a
7. Fill in the blank. 1
 _____ function is used to arrange the elements of a list in ascending order.
 (a) sort() (b) arrange()
 (c) ascending() (d) asort()
8. Which of the following operators will return either True or False ? 1
- (a) += (b) !=
(c) = (d) *=
9. Which of the following statement(s) would give an error after executing the following code ? 1
- ```

Stud={"Murugan":100, "Mithu":95} # Statement 1
print (Stud[95]) # Statement 2
Stud ["Murugan"]=99 # Statement 3
print(Stud.pop()) # Statement 4
print(Stud) # Statement 5

```
- (a) Statement 2 (b) Statement 3  
(c) Statement 4 (d) Statements 2 and 4
10. Fill in the blank. 1  
 \_\_\_\_\_ is a number of tuples in a relation.  
 (a) Attribute (b) Degree  
 (c) Domain (d) Cardinality
11. The syntax of seek( ) is : 1  
 file\_object.seek(offset[,reference\_point])  
 What is the default value of reference\_point ?  
 (a) 0 (b) 1  
 (c) 2 (d) 3
12. Fill in the blank : 1  
 \_\_\_\_\_ clause is used with SELECT statement to display data in a sorted form with respect to a specified column.  
 (a) WHERE (b) ORDER BY  
 (c) HAVING (d) DISTINCT



13. Fill in the blank :

1

\_\_\_\_\_ is used for point-to-point communication or unicast communication such as radar and satellite.

- (a) INFRARED WAVES (b) BLUETOOTH  
(c) MICROWAVES (d) RADIOWAVES

14. What will the following expression be evaluated to in Python ?

1

```
print(4+3*5/3-5%2)
```

- (a) 8.5 (b) 8.0  
(c) 10.2 (d) 10.0

15. Which function returns the sum of all elements of a list ?

1

- (a) count() (b) sum()  
(c) total() (d) add()

16. fetchall() method fetches all rows in a result set and returns a :

1

- (a) Tuple of lists (b) List of tuples  
(c) List of strings (d) Tuple of strings

Q. 17 and 18 are ASSERTION (A) and REASONING (R) based questions.  
Mark the correct choice as

- (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.

17. **Assertion (A) :** To use a function from a particular module, we need to import the module.

1

**Reason (R) :** import statement can be written anywhere in the program, before using a function from that module.

18. **Assertion (A) :** A stack is a LIFO structure.

1

**Reason (R) :** Any new element pushed into the stack always gets positioned at the index after the last existing element in the stack.



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## SECTION-A

1 M x 18 Qs = 18 M

- |         |       |       |
|---------|-------|-------|
| 1. True | 7. A  | 13. C |
| 2. B    | 8. B  | 14. B |
| 3. B    | 9. D  | 15. B |
| 4. A    | 10. D | 16. B |
| 5. D    | 11. A | 17. A |
| 6. D    | 12. B | 18. A |

## SECTION-B

2 M x 7 Qs = 14 M

```

A19) def max-num(L):
 max = L[0] # Error 1
 for a in L:
 if a > max: # Error 2
 max = a # Error 3
 return max

```

A20) @ Difference wired & wireless transmission 1 M  
 Example: LAN → wifi 1 M

OR  
 (b) http://www.cbse.nic.in/welcome.htm 1 M

Example URL (Uniform Resource Locator)  
 cbse.nic.in → Domain Name  
 Difference in words 1 M



|   |                                                                                                                                                                                                                                                                                                     |   |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1 | <p>Which of the following is an invalid identifier to be used in Python?</p> <p>a. per%marks<br/>b. _for<br/>c. While<br/>d. true</p>                                                                                                                                                               | 1 |
| 2 | <p>What is the correct way to add an element to the end of a list in Python?</p> <p>a. list.add(element)<br/>b. list.append(element)<br/>c. list.insert(element)<br/>d. list.extend(element)</p>                                                                                                    | 1 |
| 3 | <p>What will be the output of<br/>print("Welcome To My Blog"[2:6] + "Welcome To My Blog"[5:9])</p> <p>a. Lcomme<br/>b. lcomme T<br/>c. lcomme To<br/>d. lcomme</p>                                                                                                                                  | 1 |
| 4 | <p>Which of the following statements is false?</p> <p>a. A try-except block can have more than one except statement<br/>b. One block of except statement cannot handle multiple exceptions<br/>c. The finally block is always executed<br/>d. When 1 == "1" is executed, no exception is raised</p> | 1 |
| 5 | <p>Which of the following statement(s) would give an error during the execution of the following code?</p> <pre>R = {'pno':52,'pname':'Virat', 'expert':['Badminton','Tennis'], 'score':(77,44)} print(R) #Statement 1</pre>                                                                        | 1 |

|           |                                                                                                                                                                                                                                                                                                                                                                                                         |   |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|           | R['expert'][0]='Cricket'                   #Statement 2<br>R['score'][0]=50                        #Statement 3 R['pno']=50<br>#Statement 4<br><br><b>a.</b> Statement 1<br><b>b.</b> Statement 2<br><b>c.</b> Statement 3<br><b>d.</b> Statement 4                                                                                                                                                     |   |
| <b>6</b>  | Which pickle module method is used to write a Python object to a binary file?<br><br><b>a.</b> save()<br><b>b.</b> serialize()<br><b>c.</b> store()<br><b>d.</b> dump()                                                                                                                                                                                                                                 | 1 |
| <b>7</b>  | Given the following dictionaries<br>dict_student = {"rno" : "53", "name" : 'Rajveer Singh'}<br>dict_marks = {"Accts" : 87, "English" : 65}<br><br>Which statement will append the contents of dict_marks in dict_student?<br><br><b>a.</b> dict_student + dict_marks<br><b>b.</b> dict_student.add(dict_marks)<br><b>c.</b> dict_student.merge(dict_marks)<br><b>d.</b> dict_student.update(dict_marks) | 1 |
| <b>8</b>  | Which of the following is not a component of the math module in Python?<br><br><b>a.</b> ceil()<br><b>b.</b> mean()<br><b>c.</b> fabs()<br><b>d.</b> pi                                                                                                                                                                                                                                                 | 1 |
| <b>9</b>  | What will be the output of the following code?<br>L=["One , Two", "Three", "Four"] print(len(L)/2*len(L[0]))<br><br><b>a.</b> 6.5<br><b>b.</b> 13<br><b>c.</b> 13.5<br><b>d.</b> 6.0                                                                                                                                                                                                                    | 1 |
| <b>10</b> | Expand the following terms:<br>(i) PPP<br>(ii) VoIP                                                                                                                                                                                                                                                                                                                                                     | 1 |

|    |                                                                                                                                                                                                                                                                                                                        |   |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 11 | <p>Which SQL operator performs pattern matching?</p> <p><b>a.</b> BETWEEN operator<br/> <b>b.</b> LIKE operator<br/> <b>c.</b> EXISTS operator<br/> <b>d.</b> =</p>                                                                                                                                                    | 1 |
| 12 | <p>Which Python function is used for displaying only one result set from SQL table in a database?</p> <p><b>a.</b> fetch1()<br/> <b>b.</b> fetchno()<br/> <b>c.</b> fetchall()<br/> <b>d.</b> fetchone()</p>                                                                                                           | 1 |
| 13 | <p>Which of the following file opening mode in Python, generates an error if the file does not exist?</p> <p><b>a.</b> a<br/> <b>b.</b> r<br/> <b>c.</b> w<br/> <b>d.</b> w+</p>                                                                                                                                       | 1 |
| 14 | <p>The correct syntax of seek() is:</p> <p><b>a.</b> file_object.seek(offset [, reference_point])<br/> <b>b.</b> seek(offset [, reference_point])<br/> <b>c.</b> seek(offset, file_object)<br/> <b>d.</b> seek.file_object(offset)</p>                                                                                 | 1 |
| 15 | <p>Which of the following statements is false?</p> <p><b>a.</b> SMTP and POP protocols are used in email communication.<br/> <b>b.</b> URL of a page is not always the same as its domain name.<br/> <b>c.</b> HTTPS is safer than HTTP.<br/> <b>d.</b> Interlinking of collection of webpages is called Internet.</p> | 1 |
| 16 | <p>Fill in the blank:<br/> _____ protocol provides access to services hosted on a remote computer.</p> <p><b>a.</b> FTP<br/> <b>b.</b> PPP<br/> <b>c.</b> Telnet<br/> <b>d.</b> SMTP</p>                                                                                                                               | 1 |
|    | <p>Q17 and 18 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<br/> (b) Both A and R are true and R is not the correct explanation for A<br/> (c) A is True but R is False<br/> (d) A is false but R is True</p>        |   |

|    |                                                                                                                                                                                                                                                                                                                         |   |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 17 | <p><b>Assertion (A):</b> For changes made to a variable defined within a function to be visible outside the function, it should be declared as global.</p> <p><b>Reasoning (R):</b> Variables defined within a function are local to that function by default, unless explicitly specified with the global keyword.</p> | 1 |
| 18 | <p><b>Assertion (A):</b> A binary file in python is used to store collection objects like lists and dictionaries that can be later retrieved in their original form using pickle module.</p>                                                                                                                            | 1 |
|    | <p><b>Reasoning (A):</b> Binary files are just like normal text files and can be read using a text editor like Notepad.</p>                                                                                                                                                                                             |   |

|    |                                                                      |   |
|----|----------------------------------------------------------------------|---|
| 1  | a. per%marks                                                         | 1 |
| 2  | b. list.append(element)                                              | 1 |
| 3  | b. lcomme T                                                          | 1 |
| 4  | b. One block of except statement cannot handle multiple exceptions   | 1 |
| 5  | c. Statement 3                                                       | 1 |
| 6  | d. dump                                                              | 1 |
| 7  | d. dict_student.update(dict_marks)                                   | 1 |
| 8  | b. mean()                                                            | 1 |
| 9  | c. 13.5                                                              | 1 |
| 10 | PPP – Point to Point Protocol<br>VoIP - Voice Over Internet Protocol | 1 |
| 11 | b. LIKE operator                                                     | 1 |
| 12 | d. fetchone                                                          | 1 |
| 13 | b. r                                                                 | 1 |
| 14 | a. file_object.seek(offset [, reference_point])                      | 1 |
| 15 | d. Interlinking of collection of webpages is called Internet.        | 1 |
| 16 | c. TelNet                                                            | 1 |
| 17 | a. Both A and R are true and R is the correct explanation for A      | 1 |
| 18 | c. A is True but R is False                                          | 1 |

## General Instructions :

- (i) Please check this question paper contains 35 questions.
- (ii) The paper is divided into 5 Sections – A, B, C, D and E.
- (iii) **Section A**, consists of 18 questions (1 to 18). Each question carries 1 mark.
- (iv) **Section B**, consists of 7 questions (19 to 25). Each question carries 2 marks.
- (v) **Section C**, consists of 5 questions (26 to 30). Each question carries 3 marks.
- (vi) **Section D**, consists of 2 questions (31 to 32). Each question carries 4 marks.
- (vii) **Section E**, consists of 3 questions (33 to 35). Each question carries 5 marks.
- (viii) All programming questions are to be answered using Python Language only.

### SECTION – A

1. State True or False : 1  
While defining a function in Python, the positional parameters in the function header must always be written after the default parameters.
2. The **SELECT** statement when combined with \_\_\_\_\_ clause, returns records without repetition. 1  
(a) **DISTINCT** (b) **DESCRIBE**  
(c) **UNIQUE** (d) **NULL**
3. What will be the output of the following statement : 1  
`print (16*5/4*2/5-8)`  
(a) **-3.33** (b) **6.0**  
(c) **0.0** (d) **-13.33**
4. What possible output from the given options is expected to be displayed when the following Python code is executed ? 1  
`import random`  
`Signal = ['RED', 'YELLOW', 'GREEN']`  
`for K in range(2, 0, -1) :`  
`R = random.randrange(K)`  
`print (Signal[R], end = '#')`  
(a) **YELLOW # RED #** (b) **RED # GREEN #**  
(c) **GREEN # RED #** (d) **YELLOW # GREEN #**

5. In SQL, the aggregate function which will display the cardinality of the table is \_\_\_\_\_. 1
- (a) `sum()` (b) `count(*)`  
(c) `avg()` (d) `sum(*)`
6. Which protocol out of the following is used to send and receive emails over a computer network? 1
- (a) `PPP` (b) `HTTP`  
(c) `FTP` (d) `SMTP`
7. Identify the invalid Python statement from the following : 1
- (a) `d = dict()` (b) `e = {}`  
(c) `f = []` (d) `g = dict{}`
8. Consider the statements given below and then choose the correct output from the given options : 1
- `myStr="MISSISSIPPI"`  
`print(myStr[:4]+"#"+myStr[-5:])`
- (a) `MISSI#SIPPI` (b) `MISS#SIPPI`  
(c) `MISS#IPPIS` (d) `MISSI#IPPIS`
9. Identify the statement from the following which will raise an error : 1
- (a) `print("A"*3)` (b) `print(5*3)`  
(c) `print("15" + 3)` (d) `print("15" + "13")`
10. Select the correct output of the following code : 1
- `event="G20 Presidency@2023"`  
`L=event.split(' ')`  
`print(L[::-2])`
- (a) `'G20'` (b) `['Presidency@2023']`  
(c) `['G20']` (d) `'Presidency@2023'`

11. Which of the following options is the correct unit of measurement for network bandwidth ? 1

- (a) KB (b) Bit  
(c) Hz (d) Km

12. Observe the given Python code carefully : 1

```
a=20
def convert(a):
 b=20
 a=a+b
```

```
convert(10)
print(a)
```

Select the correct output from the given options :

- (a) 10 (b) 20  
(c) 30 (d) Error

13. State whether the following statement is True or False : 1

While handling exceptions in Python, name of the exception has to be compulsorily added with **except** clause.

14. Which of the following is not a DDL command in SQL ? 1

- (a) DROP (b) CREATE  
(c) UPDATE (d) ALTER

15. Fill in the blank : 1

\_\_\_\_\_ is a set of rules that needs to be followed by the communicating parties in order to have a successful and reliable data communication over a network.

16. Consider the following Python statement :

**F=open('CONTENT.TXT')**

Which of the following is an invalid statement in Python ?

(a) **F.seek(1,0)**

(b) **F.seek(0,1)**

(c) **F.seek(0,-1)**

(d) **F.seek(0,2)**

Q. 17 and 18 are ASSERTION (A) and REASONING (R) based questions.  
Mark the correct choice as

(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.

17. **Assertion (A) :** CSV file is a human readable text file where each line has a number of fields, separated by comma or some other delimiter.

**Reason (R) :** **writerow()** method is used to write a single row in a CSV file.

18. **Assertion (A) :** The expression **"HELLO".sort()** in Python will give an error.

**Reason (R) :** **sort()** does not exist as a method/function for strings in Python.

### SECTION - B

19. (A) (i) Expand the following terms :

1 + 1 = 2

**XML, PPP**

(ii) Give one difference between circuit switching and packet switching.

OR

(B) (i) Define the term web hosting.

(ii) Name any two web browsers.

2191

5

P.T.O.

### **General Instructions :**

*Please read the instructions carefully.*

- *This question paper has 5 Sections : Sections A, B, C, D, E.*
- *All questions are compulsory. However, an internal choice of approximately 30% is provided.*
- *Section A has 18 questions carrying 1 mark each.*
- *Section B has 7 Very Short Answer (VSA) type questions carrying 2 marks each.*
- *Section C has 5 Short Answer (SA) type questions carrying 3 marks each.*
- *Section D has 2 Long Answer (LA) type question carrying 4 marks.*
- *Section E has 3 Source-based / Case-based / Passage-based questions carrying 5 marks each.*

### **SECTION A**

**18×1=18**

1. State True or False :  
"In Python, tuple is a mutable data type". 1
2. The primary key is selected from the set of \_\_\_\_\_. 1  
(A) composite keys (B) alternate keys  
(C) candidate keys (D) foreign keys
3. What will be the output of the following statement ? 1  
`print(6+5/4**2//5+8)`  
(A) -14.0 (B) 14.0  
(C) 14 (D) -14
4. Select the correct output of the code : 1  
`s = "text#next"`  
`print(s.strip("t"))`  
(A) `ext#nex` (B) `ex#nex`  
(C) `text#nex` (D) `ext#next`

5. In SQL, which command will be used to add a new record in a table ? 1
- (A) UPDATE  
(B) ADD  
(C) INSERT  
(D) ALTER TABLE
6. 'L' in HTML stands for : 1
- (A) Large (B) Language  
(C) Long (D) Laser
7. Identify the valid Python identifier from the following : 1
- (A) 2user (B) user@2  
(C) user\_2 (D) user 2
8. Consider the statements given below and then choose the correct output from the given options : 1
- ```
Game="World Cup 2023"  
print(Game[-6::-1])
```
- (A) CdrW (B) ce o
(C) puC dlroW (D) Error
9. Predict the output of the following Python statements : 1
- ```
>>>import statistics as s
>>>s.mode ([10, 20, 10, 30, 10, 20, 30])
```
- (A) 30  
(B) 20  
(C) 10  
(D) 18.57

10. Which of the following output will never be obtained when the given code is executed? 1

```
import random
Shuffle = random.randrange(10)+1
Draw = 10*random.randrange(5)
print ("Shuffle", Shuffle, end="#")
print ("Draw", Draw)
```

- (A) Shuffle 1 # Draw 0  
(B) Shuffle 10 # Draw 10  
(C) Shuffle 10 # Draw 0  
(D) Shuffle 11 # Draw 50

11. Ethernet card is also known as : 1

- (A) LIC (B) MIC  
(C) NIC (D) OIC

12. What will be the output of the given code ? 1

```
a=10
def convert(b=20):
 a=30
 c=a+b
 print(a,c)
convert(30)
print(a)
```

13. For the following Python statement : 1

**N = (25)**

What shall be the type of N ?

- (A) Integer  
(B) String  
(C) Tuple  
(D) List

14. Mr. Ravi is creating a field that contains alphanumeric values and fixed lengths. Which MySQL data type should he choose for the same ? 1

- (A) VARCHAR
- (B) CHAR
- (C) LONG
- (D) NUMBER

15. Fill in the blank : 1

The full form of WWW is \_\_\_\_\_.

16. \_\_\_\_\_ files are stored in a computer in a sequence of bytes. 1

- (A) Text
- (B) Binary
- (C) CSV
- (D) Notepad

Questions No.17 and 18 are Assertion and Reason type questions. Each question consists of two statements, namely, Assertion (A) and Reason (R). Select the most suitable option considering the Assertion and Reason.

17. Assertion (A) : Global variables are accessible in the whole program. 1

Reason (R) : Local variables are accessible only within a function or block in which it is declared.

- (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
- (B) Both Assertion (A) and Reason (R) are true, but Reason (R) is **not** the correct explanation of Assertion (A).
- (C) Assertion (A) is true, but Reason (R) is false.
- (D) Assertion (A) is false, but Reason (R) is true.

18. Assertion (A) : If numeric data are to be written to a text file, the data needs to be converted into a string before writing to the file. 1

Reason (R) : write() method takes a string as an argument and writes it to the text file.

- (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).  
(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is **not** the correct explanation of Assertion (A).  
(C) Assertion (A) is true, but Reason (R) is false.  
(D) Assertion (A) is false, but Reason (R) is true.

### SECTION B

7×2=14

19. (a) (i) Expand the following terms :  
URL, XML

1+1=2

- (ii) Give one difference between HTTP and FTP.

OR

- (b) (i) Define the term IP address with respect to network.

- (ii) What is the main purpose of a Router ?

1+1=2

20. Observe the following code carefully and rewrite it after removing all syntactical errors. Underline all the corrections made. 2

```
def lfunc() :
```

```
 a=input("Enter a number")
```

```
 if a>=33
```

```
 print("Promoted to next class")
```

```
 ELSE:
```

```
 print("Repeat")
```