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INDIAN SCHOOL MUSCAT HALF YEARLY EXAMINATION 2022 COMPUTER SCIENCE(CODE-083)



CLASS: XI

DATE: 21-11-2022

TIME ALLOTTED

: 3 HRS.

MAXIMUM MARKS : 70

GENERAL INSTRUCTIONS:

- 1. This question paper contains five sections, Section A to E.
- 2. All questions are compulsory.
- 3. Section A have 18 questions carrying 01 mark each.
- 4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
- 5. Section C has 05 Short Answer type questions carrying 03 marks each.
- 6. Section D has 03 Long Answer type questions carrying 05 marks each.
- 7. Section E has 02 questions carrying 04 marks each.
- 8. All programming questions are to be answered using Python Language only.

Q.NO.			CTION- A		Marks
1.	Which of the followin (a) "Hello"	g is a valid string in p (b) "Hello'		[Hello]	1
2.	mode.	te a complete progran	n with many lines of code a	nd save in	1
	(a) Script	(b) Interactive	(c) GUI	(d) CMD	
3.	What is the size of the (a) 8	string constant "Rith (b) 7	na\'s"? (c) 6	(d) 5	1
4.	The extension of Pyth (a) .pyth	non file is (b) .python	(c) .py	(d) .p	1
5.	Fill in the blank: A variable pointing to different type is called		ype, can be made to point to	o a value/object of	i i
	(a) dynamic typing	(b) static typing	(c) identifier	(d) keyword	
6.	Which of the following	g is/are character set?	?		1
		Pa	ge 1 of 5		

	(a) Alphabets (b) Digits	(c) White spaces	(d) All of these	
7.	These operators are used to make a dec (a) Logical (b) Arithmetic	cision on two conditi (c) Relational	ons. (d) Assignment	1
8.	Fill in the blank: The operator is us (a) / (b) //	sed to find the remai	nder of a division. (d) **	1
9.	Which function is used to generate a set (a) len() (b) range()	equence of numbers (c) lim()	overtime? (d) limit()	1
10.	These statements enable a program wit (a) Sequence (b) Compound	th a cyclic flow of log (c) Single	gic. (d) Iterative	1
11.	Which index is used to represent last cl (a) -1 (b) 1	haracter of a string o	f length 5 characters? (d) 3	: 1
12.	'while' loops are called as (a) exit control loops (b) entry cont	rol loops (c) Both	(a) and (b) (d) None of these	1
13.	Find the appropriate loop for the condition (a) for i in range (0, 51,1): (c) for i in range (0, 50,1):	tion when a for loop (b) for i in range ((d) for i in range (1, 50,1):	1
14.	Identify this working memory, right from shutdown this memory is in use to store (a) ROM (b) RAM			1
15.	Which among the following is an imposite with the different units attached to contact (a) Memory (b) Input unit			1
16.	Fill in the blank: is a program which acts as (a) Operating System (b) Packages	s an interface betwee (c) Utilities	n hardware and user. (d) Software libraries	1
	Q17 and 18 are ASSERTION AND RE	EASONING based q	uestions. Mark the correct choice	
	 (a) Both A and R are true and R is the (b) Both A and R are true and R is not (c) A is True but R is False (d) A is false but R is True 	. -		
17.	Assertion (A):- Python has one special Reasoning (R):- None also indicates at NULL.			1

Assertion (A):- Keywords are the reserved words and have special meaning for python 18. interpreter. Reasoning (R):- Keywords can be used as variable names. **SECTION-B** Find the errors (if any) in the following code. Rewrite the correct code and underline the 19. 2 corrections made. w = 90;while(w>60] Print(w) w = w - 5020. Write any 4 advantages of python language. 2 What do you mean by user defined functions in python? 21. (a) Write the output of the following code: 1+1=2x, x = 100,200y,y = x + 100, x + 200print(x,y)(b) Write the output of the following code: x,y,z = 10,20,30z,y,x = x+1,z+10,y-10print(x,y,z)22. What do you mean by hardware? Give two examples. 2 23. Write the corresponding python expression for the following mathematical expressions. 1+1=2(b) $10 - ye^{5y} + 25y$ What do you mean by utility software? Give two examples of utility software's. 24. 2 What is the difference between an interpreter and compiler? Write a program in python to accept the radius of a circle and find its area and display the 25. 2 area. OR Write a program in python to accept the length and breadth of a rectangle find its area and display the area. **SECTION-C** 26. Explain about RAM and ROM. 3 Write a program in python to accept the two integers find its LCM and GCD and display it. 27. 3 OR

Write a program in python to input a year in 4-digit form and print whether it is a leap year or not.

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3

28. Write the output of the following code:

str= "World Cup 2022"

print(str[0:6])

print(str[-1:-4])

print(str[-3:-1])

print(str[0::3])

print(str[::-1])

print(str[:-2])

- 29. What do you mean by syntax error, semantic error and logical error? Explain each with an example.
- 30. Explain about the string methods len(), isalpha() and capitalize().

 OR

What is the difference between a break and continue statements in python? Explain.

SECTION-D

- 31. (a) Write a program in python to print the first 10 numbers of the Fibonacci series. 2+3=5
 - (b) Write a program to accept the value of 'x' and find the sum of the following series and display the sum.

$$\frac{x}{1!} - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!}$$

- 32. (a) Write a program in python to accept a string and check and display whether it is palindrome or not.
 - (b) Write a program to accept the value of 'x' and number to terms of the following series and find the sum and display it. $1 + x + x^2 + x^3 + x^4 + \dots$
- 33. (a) Write a program in python to print the following pattern. 3+2=5

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(b) Write a program in python to accept an integer and check and display whether it is perfect number or not. Eg: 6 = 1+2+3 (factors of the number other than the number itself)

OR

(a) Write a program in python to print the following pattern.

A B C D

A B C

A B

A

(b) Write a program in python to accept an integer find its factorial and display it.

SECTION-E

- Write a program in python to accept a string and count and display the number of vowels and consonants in the string.
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- Write a program in python to accept a number and check and display whether it is an Armstrong number or not.

****END OF THE QUESTION PAPER****



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- 7. Section E has 02 questions carrying 04 marks each.
- 8. All programming questions are to be answered using Python Language only.

Q.NO. 1.	Fill in the blank:	SEC	ΓΙΟΝ- A		Marks	
	A variable pointing to a value of a certain type, can be made to point to a value/object of different type is called					
	(a) dynamic typing	(b) static typing	(c) identifier	(d) keyword		
2.	The extension of Py (a) .pyth	thon file is (b) .python	(c) .py	(d) .p	1	
3.	Which of the follow (a) Alphabets	ving is/are character set? (b) Digits (d	e) White spaces (d)	All of these	1	
4.	Fill in the blank: In python one can v mode. (a) Script	vrite a complete program (b) Interactive	with many lines of code an	d save in	1	
5.	Which of the follow (a) "Hello"	ving is a valid string in py (b) "Hello"		Hello]	1	
6.	What is the size of t (a) 8	the string constant "Rithat (b) 7	\'s"? (c) 6	(d) 5	1	

7.	Which function is used to generate a sequence of numbers overtime? (a) len() (b) range() (c) lim() (d) limit()	1
8.	These statements enable a program with a cyclic flow of logic. (a) Sequence (b) Compound (c) Single (d) Iterative	1
9.	These operators are used to make a decision on two conditions. (a) Logical (b) Arithmetic (c) Relational (d) Assignment	1
10.	Fill in the blank: The operator is used to find the remainder of a division. (a) / (b) // (c) % (d) **	1
11.	Find the appropriate loop for the condition when a for loop is to be repeated 50 times. (a) for i in range (0, 51,1): (b) for i in range (1, 50,1): (c) for i in range (0, 50,1): (d) for i in range (0, 1,50):	1
12.	Identify this working memory, right from the booting of computer till the computer is shutdown this memory is in use to store all the operation done by the computer. (a) ROM (b) RAM (c) Hard disk (d) EPROM	1
13.	Fill in the blank: is a program which acts as an interface between hardware and user. (a) Operating System (b) Packages (c) Utilities (d) Software libraries	1
14.	'while' loops are called as (a) exit control loops (b) entry control loops (c) Both (a) and (b) (d) None of these	1
15.	Which among the following is an important circuitry in a computer system that coordinates with the different units attached to computer system? (a) Memory (b) Input unit (c) Control unit (d) Output unit	1
16.	Which index is used to represent last character of a string of length 5 characters? (a) -1 (b) 1 (c) 0 (d) 3	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):- Keywords are the reserved words and have special meaning for python interpreter. Reasoning (R):- Keywords can be used as variable names.	1
	(1-7). The motion of the control of the contr	

18.	Assertion (A):- Python has one special literal, which is None. Reasoning (R):- None also indicates absence of value. In other languages it is knows as NULL.	1.
19.	SECTION-B Write the corresponding python expression for the following mathematical expressions.	1+1=2
	(a) $\frac{-b + \sqrt{b^2 - 4ac}}{2a}$	
	(b) $10 - ye^{5y} + 25y$	
20.	What do you mean by hardware? Give two examples.	2
21.	Write a program in python to accept the radius of a circle and find its area and display the area.	2
	OR Write a program in python to accept the length and breadth of a rectangle find its area and display the area.	
22.	Write any 4 advantages of python language. OR	2
	What do you mean by user defined functions in python?	
23.	Find the errors (if any) in the following code. Rewrite the correct code and underline the corrections made. $k = 500$ For i range(1:5): print(k, End = "") $k = k$ -50	2
24.	What do you mean by utility software? Give two examples of utility software's. OR	2
	What is the difference between an interpreter and compiler?	
25.	(a) Write the output of the following code: x, x = 100,200 y,y = x + 100, x + 200 print(x,y)	1+1=2
	(b) Write the output of the following code: x,y,z = 10,20,30	
	z,y,x = x+1,z+10,y-10 print(x,y,z)	
26.	SECTION-C What do you mean by syntax error, semantic error and logical error? Explain each with an example.	3
27.	Write a program in python to accept the two integers find its LCM and GCD and display it.	3

OR

Write a program in python to input a year in 4-digit form and print whether it is a leap year or not.

28. Explain about the string methods index(), isalnum() and title().

3

What do you mean by Loop.. else statement? Explain.

29. Write the output of the following code: str="World Cup 2022"

3

print(str[0:6])

print(str[-1:-4])

print(str[-3:-1])

print(str[0::3])

print(str[::-1])

print(str[:-2])

30. Explain about RAM and ROM. 3

SECTION-D

31. (a) Write a program in python to print the first 10 numbers of the Fibonacci series.

2+3=5

(b) Write a program to accept the value of 'x' and find the sum of the following series and display the sum.

$$\frac{x}{1!} - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!}$$

32. (a) Write a program in python to accept a string and check and display whether it is palindrome or not.

2+3=5

(b) Write a program to accept the value of 'x' and number to terms of the following series and find the sum and display it.

$$1 + x + x^2 + x^3 + x^4 + \dots$$

33. (a) Write a program in python to print the following pattern.

3+2=5

A

B C

DEF

GHIJ

(b) Write a program in python to accept an integer and find the sum of the factors of that integer and display it Eg: Factors of 4 are 1,2 and 4(sum=7).

(a) Write a program in python to print the following pattern.

1 2 3 4

1 2 3

1 2

1

(b) Write a program in python to accept three integers and find and display the largest of the three.

SECTION-E

- Write a program in python to accept a number and check and display whether it is an Armstrong number or not.
- Write a program in python to accept a string and count and display the number of upper case and lower case letters in it.

****END OF THE QUESTION PAPER****



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Q.NO. 1.		represent last character b) 1 (c)	of a string of length 5	characters?	Mark 1
2.	with the different units	wing is an important cir attached to computer s	ystem?		1
	(a) Memory	(b) Input unit	(c) Control unit	(d) Output unit	
3.	'while' loops are called (a) exit control loops		s (c) Both (a) and (b)	(d) None of these	1
4.	Fill in the blank: is a progra (a) Operating System	am which acts as an inte (b) Packages		re and user. (d) Software libraries	1
5.	shutdown this memory	nemory, right from the b is in use to store all the (b) RAM (c)	operation done by the		1
6.	Find the appropriate lo (a) for i in range (0, 51 (c) for i in range (0, 50		en a for loop is to be re or i in range (1, 50,1): or i in range (0, 1,50):	epeated 50 times.	1
		Page	1 of 5		

7.	What is the size of (a) 8	of the string constant "Ri (b) 7	tha\'s"? (c)	6	(d) 5	1
8.	These operators a (a) Logical	are used to make a decisi (b) Arithmetic	on on two condition (c) Relational	ons. (d) Assign	nment	1
9.	These statements (a) Sequence	enable a program with a (b) Compound	a cyclic flow of log (c) Single	gic. (d) Iterativ	e	1
10.	Fill in the blank: The (a) /	operator is used	to find the remai	nder of a divis (d) **	ion.	1
11.	Which function i (a) len()	s used to generate a sequ (b) range()	nence of numbers (c) lim()	overtime? (d) limit()	1
12.	Which of the foll (a) "Hello"	owing is a valid string in (b) "Hello"	n python? (c) 'Hello"	(d) [H	ello]	1
13.	Fill in the blank: In python one car mode. (a) Script	n write a complete progr (b) Interactive		es of code and	save in	1
14.	Which of the foll (a) Alphabets	owing is/are character so (b) Digits	et? (c) White spaces	s (d) Al	l of these	1
15.	The extension of (a) .pyth	Python file is (b) .python	(c)	.py	(d) .p	1
16.	different type is (a) dynamic typi Q17 and 18 are A as (a) Both A and R	ASSERTION AND REAL are true and R is the column are true and R is not the R is False	g (c) in SONING based quarter trect explanation f	identifier uestions. Mark for A	(d) keyword	1
17.	Assertion (A):- I	Keywords are the reserventerpreter. Keywords can be used a		special mean	ng for python	1

18.	Assertion (A):- Python has one special literal, which is None. Reasoning (R):- None also indicates absence of value. In other languages it is knows as NULL.	1
	SECTION-B	
19.	(a) Write the output of the following code: x, x = 100,200 y,y = x + 100, x + 200 print(x,y)	1+1=2
	(b) Write the output of the following code:	
	x,y,z = 10,20,30	
	z,y,x = x+1,z+10,y-10 print(x,y,z)	
20.	What do you mean by utility software? Give two examples of utility software's. OR	2
	What is the difference between an interpreter and compiler?	
21.	Find the errors (if any) in the following code. Rewrite the correct code and underline the corrections made.	2
	k = 500	
	For i range(1 : 5) : print(k, End = "") k = k -50	
22	White pay Androute are of with an language	·
22.	Write any 4 advantages of python language. OR	2
	What do you mean by user defined functions in python?	
23.	Write a program in python to accept the radius of a circle and find its area and display the area.	2
	OR Write a program in python to accept the length and breadth of a rectangle find its area and display the area.	
24.	What do you mean by application software? Give two examples of customized software.	2
25.	Write the corresponding python expression for the following mathematical expressions. (a) $\frac{-b+\sqrt{b^2-4ac}}{2a}$	1+1=2
	a a a	
	(b) $10 - ye^{5y} + 25y$	
26.	SECTION-C Explain about the string methods index(), isalnum() and title(). OR	3
	What do you mean by Loop else statement? Explain.	

- 27. Explain about disk defragmenter and backup utility software's. 3
- 28. What do you mean by syntax error, semantic error and logical error? Explain each with an example.
- 29. Write the output of the following code:

str= "World Cup 2022"

print(str[0:6])

print(str[-1:-4])

print(str[-3:-1])

print(str[0::3])

print(str[::-1])

print(str[:-2])

30. Write a program in python to accept the two integers find its LCM and GCD and display it.

Write a program in python to input a year in 4-digit form and print whether it is a leap year or not.

SECTION-D

- 31. (a) Write a program in python to accept a string and check and display whether it is palindrome or not.
 - (b) Write a program to accept the value of 'x' and number to terms of the following series and find the sum and display it.

 $1 + x + x^2 + x^3 + x^4 + \dots$

32. (a) Write a program in python to print the first 10 numbers of the Fibonacci series.

(b) Write a program to accept the value of 'x' and find the sum of the following series and display the sum.

$$\frac{x}{1!} - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!}$$

33. (a) Write a program in python to print the following pattern.

3+2=5

2+3=5

3

3

A

 $\mathbf{B} \cdot \mathbf{B}$

C C C

DDDD

(b) Write a program in python to accept an integer and check and display whether it is a prime number or not and display.

OR

(a) Write a program in python to print the following pattern.

* * * *

* * *

* *

*

(b) Write a program in python to accept an integer and check and display whether the number is divisible by 5 and 11 or not.

SECTION-E

- Write a program in python to accept a number and check and display whether it is an Armstrong number or not.
 - 4

4

Write a program in python to accept a string and count and display the number of digits and lower case letters in it.

****END OF THE QUESTION PAPER****

