

SET	A
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INDIAN SCHOOL MUSCAT
 HALF YEARLY EXAMINATION 2023
COMPUTER SCIENCE(083)

CLASS:XI

Max.Marks: 70

MARKING SCHEME			
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP
A		SECTION-A	
	1.	(c) 2Two	1
	2.	(c) #	1
	3.	(b) 1	1
	4.	(c) 9,8,7,6,5,4	1
	5.	(b) 7	1
	6.	b) 49	1
	7.	(b) $(\text{math.cos}(x) / \text{math.tan}(x)) + 2*x$	1
	8.	(d) False	1
	9.	(b) 'abc' + 3	1
	10.	(c) 18 8	1
	11.	(c) Scanner	1
	12.	(c) UNICODE	1
	13.	20 PB = <u>20*1024*1024</u> GB	1
	14.	(a) Operating System	1
	15.	(d) Disk Defragmenter	1
	16.	Software Libraries	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
	SECTION-B	
19.	<p><u>OUTPUT:</u> CBSE 202 CEX 3202 MAXE ESBC</p> <p style="text-align: right;">(½ Mark for each line)</p>	2
20.	<p><u>CORRECTED CODE:</u></p> <pre> Total=300 # Error 1 for VAL in range(0>Total): #Error2 if VAL%4==0: #Error 3 print (VAL*4) elif VAL%5==0: print (VAL+3) else: #Error4 print(VAL+10) </pre> <p style="text-align: right;">(½ Mark for each error)</p>	2
21.	<p>Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark</p>	2
22.	<p>Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark</p>	2
23.	<p>Random Access Memory(RAM)-it is the working memory of the computer. Holds the data temporarily. Volatile memory.</p> <p>Read Only memory (ROM) –used to store instructions given by manufacturer holds instructions to check basic hardware operations, non volatile, data stored permanently. (1 Mark each)</p>	2
24.	<p>CU -Control and guides the interpretation of all the data and information. It coordinates the different units attached to computer system.</p> <p>ALU Perform all the arithmetical and logical operations. Arithmetic operations like +, -, *, / and Logical operation like comparison or decision making like: >, <, =, >=, <=, <></p> <p style="text-align: right;">(1 Mark each)</p>	2

25.	Convert the following: (a) $(2543)_{10} = (9EF)_{16}$ – (1 Mark) (b) $(651)_8 = (425)_{10}$ – (1 Mark)	2
	SECTION-C	
26.	<u>break</u> statement in python is used to terminate the containing loop for any given condition. Program resumes from the statement immediately after the loop. Any example. (explanation 1 Mark -example ½ Mark) <u>continue</u> statement in python is used to skip the statements below continue statement inside loop and forces the loop to continue with next value. Any example. (explanation 1 Mark -example ½ Mark)	3
27.	<u>Syntax error</u> occurs when rule of a programming language is violated. Eg: Print(“Welcome”) – This is an error ‘p’ should be small letter in print() statement in python. <u>Runtime error</u> occurs during the execution of program. It occurs due to some wrong operation, input, etc. the most common runtime error is “divide by zero”. E.g.: print(n1/n2) ,if n2 is 0 <u>Logical error</u> occurs when we get unpredicted/wrong output from the program. E.g: if you give Area = 2*3.14 *r (The formula is wrong) (1 Mark each)	3
28.	Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	3
29.	<u>OUTPUT:</u> Bye 10 12 (1 Mark each line)	3
30.	<u>Assembler</u> - It translates an assembly language program into machine language. <u>Interpreter</u> - It converts High Level Language program into machine language line by line simultaneously executes the converted line. <u>Compiler</u> - It converts High Level program into machine language in one go. (1 Mark each)	3
	SECTION-D	
31.	(a) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark	2+3=5

		(b) Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	
32.		(a) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (b) Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	2+3=5
33.		(a) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (b) num = int(input("Enter an integer:")) sum=0 for i in range(1,num): # To provide range if num%i ==0: # to check the factors sum= sum + i if num == sum : #To check the condition for perfect number print(num, " is a perfect number") else: print(num, " is not a perfect number") (1 Mark each)	2+3=5
		SECTION-E	
34.		Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4
35.		Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark OR Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4

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		SET	B
MARKING SCHEME			
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP
B		SECTION-A	
	1.	(c) False	1
	2.	(c) #	1
	3.	(c) alphabet	1
	4.	(a) 8,7,6,5	1
	5.	(d) 9	1
	6.	(c) 6	1
	7.	(b) $(\text{math.cos}(x) / \text{math.tan}(x)) + 2*x$	1
	8.	(d) False	1
	9.	(c) 'abc' + 5	1
	10.	(d) 25 11	1
	11.	Software Libraries	1
	12.	(c) UNICODE	1
	13.	10 TB = <u>$10*1024*1024*1024$</u> KB	1
	14.	(a) Operating System	1
	15.	(d) Microsoft Windows	1

16.	(c) Scanner	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
SECTION-B		
19.	<u>OUTPUT:</u> TERM 202 TMX 3202 MAXE MRET <p style="text-align: right;">(½ Mark for each line)</p>	2
20.	CORRECTED CODE: <pre> NUM=60 # Error 1 for VAL in range(0,NUM): #Error2 if VAL%7==0: #Error 3 print (VAL*4) elif VAL%10==0: print (VAL+3) else: #Error4 print(VAL+10) </pre> <p style="text-align: right;">(½ Mark for each error)</p>	2
21.	Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark	2
22.	Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark	2
23.	Utilities are those application programs that assist the computer by performing housekeeping functions like backing up disks, or scanning/cleaning viruses or arranging information etc. e.g.: Text editor, Backup utility , Compression utility, Disk Defragmenter, Antivirus software. <p style="text-align: right;">(1 Mark explanation 1 Mark examples)</p>	2
24.	Random Access Memory(RAM)-it is the working memory of the computer. Holds the data temporarily. Volatile memory. Read Only memory (ROM) –used to store instructions given by manufacturer holds instructions to check basic hardware operations, non volatile, data stored permanently. <p style="text-align: right;">(1 Mark each)</p>	2

25.	Convert the following: (c) $(3619)_{10} = (E23)_{16}$ – (1 Mark) (d) $(11011101)_2 = (221)_{10}$ – (1 Mark)	2
SECTION-C		
26.	<u>Assembler</u> - It translates an assembly language program into machine language. <u>Interpreter</u> - It converts High Level Language program into machine language line by line simultaneously executes the converted line. <u>Compiler</u> - It converts High Level program into machine language in one go. (1 Mark each)	3
27.	<u>Syntax error</u> occurs when rule of a programming language is violated. Eg: Print(“Welcome”) – This is an error ‘p’ should be small letter in print() statement in python. <u>Runtime error</u> occurs during the execution of program. It occurs due to some wrong operation, input, etc. the most common runtime error is “divide by zero”. E.g.: print(n1/n2) ,if n2 is 0 <u>Logical error</u> occurs when we get unpredicted/wrong output from the program. E.g: if you give Area = 2*3.14 *r (The formula is wrong) (1 Mark each)	3
28.	Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	3
29.	<u>OUTPUT</u> : End 20 10 (1 Mark each line)	3
30.	<u>break</u> statement in python is used to terminate the containing loop for any given condition. Program resumes from the statement immediately after the loop. Any example. (explanation 1 Mark -example ½ Mark) <u>continue</u> statement in python is used to skip the statements below continue statement inside loop and forces the loop to continue with next value. Any example. (explanation 1 Mark -example ½ Mark)	3
SECTION-D		
31.	(c) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (c) Input – ½ Mark	2+3=5

		Correct Logic 2-Marks Print – ½ Mark	
32.	(a) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (d) Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	2+3=5	
33.	(b) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (b) num = int(input("Enter an integer:")) sum=0 for i in range(1,num): # To provide range if num%i ==0: # to check the factors sum= sum + i if num == sum: #To check the condition for perfect number print(num, " is a perfect number") else: print(num, " is not a perfect number") (1 Mark each)	2+3=5	
SECTION-E			
34.	Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4	
35.	Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark OR Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4	

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		SET	C
MARKING SCHEME			
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP
C		SECTION-A	
	1.	(c) Avg_Marks	1
	2.	(a) 8	1
	3.	(b) 1	1
	4.	(b) 11,9,7,5	1
	5.	(c) #	1
	6.	(d) 12	1
	7.	(b) $(\text{math.cos}(x) / \text{math.tan}(x)) + 2*x$	1
	8.	(c) False	1
	9.	(b) 'abc' + 6	1
	10.	(a) 17 7	1
	11.	(c) Control unit	1
	12.	(c) UNICODE	1
	13.	12 GB = <u>12*1024*1024 KB</u>	1
	14.	(a) Operating System	1
	15.	(d) Disk Defragmenter	1

16.	Software Libraries	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
SECTION-B		
19.	<u>OUTPUT:</u> BOAR 202 BRE 3202 MAXE DRAOB (½ Mark for each line)	2
20.	<u>CORRECTED CODE:</u> <u>N=60</u> # Error 1 for VAL in range(0,N): #Error2 if VAL%4==0: print (VAL*4) elif VAL%5==0: #Error 3 print (VAL+3) <u>else:</u> #Error4 print(VAL+10) (½ Mark for each error)	2
21.	Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark	2
22.	Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark	2
23.	Primary or main memory stores information(data and instruction) Secondary Memory-stores the data permanently for future retrieval. (1 Mark each)	2
24.	An application software is the set of programs necessary to carry out operations for a specific application. e.g: Tally, business software . (1 Mark explanation 1 Mark examples)	2
25.	Convert the following: (e) $(7CA)_{16} = (1994)_{10}$ – (1 Mark) (f) $(359)_{10} = (547)_8$ – (1 Mark)	2
SECTION-C		

26.	<p><u>break</u> statement in python is used to terminate the containing loop for any given condition. Program resumes from the statement immediately after the loop. Any example. (explanation 1 Mark -example ½ Mark)</p> <p><u>continue</u> statement in python is used to skip the statements below continue statement inside loop and forces the loop to continue with next value. Any example. (explanation 1 Mark -example ½ Mark)</p>	3
27.	<p><u>Syntax error</u> occurs when rule of a programming language is violated. e.g. Print(“Welcome”) – This is an error ‘p’ should be small letter in print() statement in python.</p> <p><u>Runtime error</u> occurs during the execution of program. It occurs due to some wrong operation, input, etc. the most common runtime error is “divide by zero”. e.g. print(n1/n2), if n2 is 0.</p> <p><u>Logical error</u> occurs when we get unpredicted/wrong output from the program. e.g. if you give Area = 2*3.14 *r (The formula is wrong) (1 Mark each)</p>	3
28.	<p>Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark</p>	3
29.	<p>OUTPUT: SIGN OUT 20 14 (1 Mark each line)</p>	3
30.	<p><u>Assembler</u>- It translates an assembly language program into machine language.</p> <p><u>Interpreter</u>- It converts High Level Language program into machine language line by line simultaneously executes the converted line.</p> <p><u>Compiler</u>- It converts High Level program into machine language in one go. (1 Mark each)</p>	3
	SECTION-D	
31.	<p>(e) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark</p> <p>(d) Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark</p>	2+3=5
32.	<p>(a) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark</p>	2+3=5

		(f) Input – ½ Mark Correct Logic 2-Marks Print – ½ Mark	
33.		(c) Input – ½ Mark Correct Logic 1-Mark Print – ½ Mark (b) num = int(input("Enter an integer:")) sum=0 for i in range(1,num): # To provide range if num%i ==0: # to check the factors sum= sum + i if num == sum : #To check the condition for perfect number print(num, " is a perfect number") else: print(num, " is not a perfect number") (1 Mark each)	2+3=5
		SECTION-E	
34.		Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4
35.		Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark OR Input – ½ Mark Correct Logic 3 -Marks Print – ½ Mark	4