INDIAN SCHOOL MUSCAT

FIRST TERM EXAMINATION

SEPTEMBER 2018

CLASS XI

Marking Scheme – COMPUTER SCIENCE [THEORY]

SET A

Q.NO.	Answers	Marks
1a.	**RAM- refers to** Random Access Memory- it is also called read-write memory where both read and write operations can take place. But the RAM is a volatile memory, its contents are lost when power is turned off. **- ½ mark** **ROM- refers to** Read Only memory where only read operations can take place. ROM is a non-volatile memory **- ½ mark**	1
b.	**Parallel ports** can send or receive a byte at a time. These 8 bits are transmitted parallel to each other. Parallel ports come in the form of 25-pin female connector, These are used to connect printer, scanner etc. **1 mark**	1
c.	**CISC-** complex instruction set computer refers to computers designed with a full set of computer instructions that were intended to provide needed capabilities in the most efficient way**. -½ mark** **RISC-** Reduced instruction set computer – is a microprocessor that is designed to perform a smaller number of types of computer instructions so that it can operate at a higher speed MIPS. Each instruction type that a computer must perform require additional transistors/circuit, a large list of instructions tends to make microprocessor more complicated and slow**. - ½ mark**	1
d.	Explanation **of Bluetooth - 1 mark**	1
e.	**Cache memory** is a special high-speed storage mechanism that stores the most recently accessed data. **-½ mark** It makes CPU run faster if the required data is found in cache. **-½ mark**	1
f.	Any 2 characteristics **- ½ mark each**	1
g.	i) Infra-Red Port Explanation **- 1 mark** ii) PS-2 Port Explanation **- 1 mark**	2
h.	i) note on DVD's **- 1 mark** ii) note on Hard Disks **- 1 mark**	2
2a.	'\a' - size - 1 byte - ½ mark "\a" - size 2 bytes - ½ mark	1
b.	**Syntax errors –** occurs when rules of programming language are misused ie when grammatical rule of C++ is violated. **½ mark Example - ½ mark** **Logical error-** which causes a program to produce incorrect or undesired output . **– ½ mark Example - ½ mark**	2
c.	**i**) **Keywords**- These are the words reserved by programming language for special purpose and convey a special meaning to the compiler. **½ mark** eg. break, if, int, float etc. **– Example - ½ mark** **ii) Escape sequence –** Non graphic characters that cannot be typed directly from keyboard eg. tabs, carriage return etc. these can be represented by using escape sequence. - **½ mark Example – '\t' Horizontal tab - ½ mark (any one)**	2
3a.	**A reference variable** is an alias name for a previously defined variable. **-½ mark**	1

	Usage of it is that the same data object can be referred by two names and these names can be used interchangeably**. - ½ mark**	
b.	Output: **6666** **36.4219** **1 mark each line**	2
c.	**Fundamental data types –** that are not composed of any other datatype**. ½ mark Example – any one ½ mark** **Derived data type-** that are composed of fundamental data types**. ½ mark Example – any one – ½ mark**	2
4a.	**Type casting** operators allow you to convert a data item of a given type to another data type according to the requirement. It is explicit conversion by the programmer. **– ½ mark Example – any one – ½ mark**	1
b.	**(income>20000)?tax=3000:tax=1500 – 1 mark**	1
c.	i)The expression (a) is an assignment expression and the expression (b) is a relational expression that tests for equality. **– ½ mark each** ii) The result of (a) will be Avg having value 70 and the result of (b) will be 0(false) **– ½ mark each**	2
d.	i) z %2 !=0 && z<0 **– 1 mark** ii) donation>=3000 && donation<=4000 || guest=2 **– 1 mark**	2
e.	**i) 24 6** **½ mark each for correct answer** **ii) w= 56** **y= 46** **½ mark for each line**	2
f.	**i) sqrt(p*x)/5*pow(m,7)+3*y-atan(x) – 1 mark** ii) **fabs(exp(2*x)-cos(x)) – 1 mark**	2
5a.	**limitation** -switch can only test for equality(any) **- ½ mark** **advantage** -switch statement is more efficient than if in a situation that supports the nature of switch operation. **- ½ mark**	1
b.	**Infinite loop** can be used to create an endless loop. Can be created by omitting the test expression**. - ½ mark** for(i=25; ;++i) or any **example - ½ mark**	1
c.	**break statement-** skips the rest of the loop and jumps over to the statement following the loop. **– 1 mark** **continue statement** skips the rest of the loop statements and causes the next iteration of the loop. **– 1 mark**	2
d.	**int x=5; - ½ mark** **while(x<20) - ½ mark** **{cout<<x<<endl;** **x+=2; - ½ mark** **} - ½ mark** **cout<<"end of loop";**	2
e.	**1 3 5 7** **1 3 5 7** **1 mark for each correct line**	2
f.	#include<iostream.h>	2

	void main() {int num=4; do { ans=*num; **ans*=num ½ mark ; ans should be declared ½ mark** cout<ans; **cout<<ans; ½ m**ark } while(num<10) } **while(num<10); ½ mark**	

g.	void main( )
	{char ch;
	cin >> ch;
	switch(ch)
	{
	case 'R':
	cout<<"Colour is Red ";
	case 'W':
	cout<<" Colour is White ";
	default:
	cout<<"Colour is other than Red and White ";
	}
	Proper use of switch - ½ mark case -1 mark default- ½ mark brackets - ½ mark
		2

6.a.	for Declaration & input statements **- 1 mark** for correct logic to find the smallest and displaying **- 2 marks**	3
b.	for Declaration & input statements **- 1 mark** for correct logic and displaying Fibonacci series **- 2 marks**	3
c.	Header file, declarations **-1 mark** Correct nested loop & output statement with endl at correct place **-2 marks**	3
d.	for Declaration & input statements **- 1 mark** for correct logic and displaying LCM **- 1 mark** for correct logic and displaying GCD **- 1 mark**	3
7a.	for declaration & input statements **-1 mark** for correct logic to calculate Commission **-2½ marks** for displaying **- ½ mark**	4
b.	menu **- 1 mark** correct logic for choice 1 **- 1 mark** correct logic for choice 2 **- 1 mark** correct logic for choice 3 and continuation **- 1 mark**	4
c.	for declaration & input statements **-1 mark** for correct logic – to check Palindrome **-2½ marks** for displaying **- ½ mark**	4
d.	for declaration & input statements **-1 mark** for correct logic to find the sum of series **-2½ marks** for displaying **- ½ mark**	4