INDIAN SCHOOL MUSCAT

FIRST TERM EXAMINATION

SEPTEMBER 2018

CLASS XI

Marking Scheme – COMPUTER SCIENCE [THEORY]

SET C

Q.NO.	Answers	Marks
1a.	**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
b.	Explanation **of Bluetooth - 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.	**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
e.	**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
f.	**Any 2 characteristics - ½ mark each**	1
g.	Ports are used to connect external devices to the computer. **– 1 mark** Infra Red Port Explanation **- 1 mark**	2
h.	i) note on Blu Ray Disc **- 1 mark** ii) note on Hard Disks- **1 mark**	2
2a.	Iostream.h consists of - • declaration of standard stream input/output facilities. • It also consists of procedures that predefine a set of operations for handling reading and writing of built-in data types. - **1 mark**	1
b.	The multiple use of input or output operators(“>>” or “<<“) in one statement is called cascading of I/O operators. **- 1 mark** cin>>a>>b; cout<<“Sum= ”<<s; **- 1 mark** (any example)	2
c.	**Keywords**- These are the words reserved by programming language for special purpose and convey a special meaning to the compiler. eg. break, if, int, float etc. - **1 mark** **Identifiers**- They are the fundamental building blocks of a program and are used for naming different parts of the program like variables, objects, classes etc. - **1 mark**	2
3a.	Yes, as the ASCII value of character A is 65 and only that will be stored in the memory locations for	1

	both the statements. - **1 mark**	
b.	Various ways to declare a variable: i) Uninitialized variable e.g. int val; **- ½ mark** ii) Initializing a variable- A variable with a declared first value is said to be an initialized variable. eg. int val =10; **- ½ mark** iii) Dynamic initialization- A variable can be initialized at run time using expressions and this way of initializing is known as dynamic initialization. e.g. int val =(b*c) –p; - **1 mark**	2
c.	i) **Data type modifiers** -A modifier is used before the data type to alter the meaning of the base type to fit various situations more precisely. e.g. short, long. - **1 mark** ii) **Reference variable** - A reference is an alternative name for an object. It provides an alias for a previously defined variable. - **1 mark**	2
4a.	**Implicit type conversion**- Conversion performed by the compiler whenever differing data types are inter-mixed in an expression. **– ½ mark** **Explicit Type Conversion**-(Type casting) Conversion of an operand to a specific type explicitly by the user in the program is known as Type casting. e.g. (int)(a+b/2) - **½ mark**	1
b.	**(amount>30000)?tax=5000:tax=2500 – 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 val having value 80 and the result of (b) will be 0(false) **– ½ mark each**	2
d.	i) salary >= 30000 && salary < 35000 **– 1 mark** ii) (x%2 ==0) && x> 50 **– 1 mark**	2
e.	**i) A=9** **B=7** **½ mark for each line** **ii) b=56** **c=46** **½ mark for each line**	2
f.	**i) sqrt(atan(x)-cos(a)+exp(e)) – 1 mark** **ii) –b+sqrt(pow(b,2)-4*a*c)/2*a - 1 mark**	2
5a.	**exit -controlled loop** -it evaluates test expression at the bottom of the loop after executing its loop body statements. This means do while loop always executes at least once. **– ½ mark** do-while loops are exit controlled loop , **– ½ mark**	1
b.	goto statement can transfer the control anywhere in the program. **– ½ mark** Any example **– ½ mark**	1
c.	If a case statement does not include a break statement then the control continues right on the next case until either break is encountered or end of switch is reached. This situation is called “fall-through”. **– 1 mark** Any example **– 1 mark**	2
d.	int x=5,sum=0; **- ½ mark** while(x<25) **- ½ mark** { sum+=x; x+=5; } **- ½ mark** cout<<”sum= “<<sum; **- ½ mark**	2
e.	**1 4 7 10** **1 4 7 10** **1 mark for each line**	2

f.	void main( ) {int n1=5; do { n2=*n1; **n2*=n1 ½ mark ; n2 should be declared ½ m**ark cout<n2; **cout<<n2; ½ mark** } while(n1<10); } **while(n1<10); ½ m**ark	2
g.	char gr; cin >> gr; switch(gr) { case 'A': cout<<"Grade A "; case 'B': cout<<" Grade B "; case 'C': cout<<" Grade C "; default: cout<<" Fail"; } **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 integer and displaying **- 2 marks**	3
b.	for Declaration & input statements **- 1 mark** for correct logic and displaying the 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 and proper termination of loop **- 2 marks**	3
7a.	for declaration & input statements **-1 mark** for correct logic to find Bonus **-2 ½ mark** 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 find the sum of the series **-2½ marks** for displaying **- ½ mark**	4
d.	for declaration & input statements **-1 mark** for correct logic to check Armstrong Number **-2½ marks** for displaying proper messages **- ½ mark**	4