QUIZ 1

2K11 Electronic Engineering (4th Semester)

Course Title: Microprocessors and Microcontroller

Name_____ Total Marks: 30

Roll # _____ Time Allowed: 20 mins

Note:-Erased and overwrite answers will be considered as wrong.

Q1.Answer in Given Spaces (20 Marks)

1) Write the size of following registers. (2)

Register	Size
R1	8-bits
A (accumulator)	……?
DPTR (Data Pointer)	……?

2) Which of the following instruction puts number 23 in Register R1? (1)

(a)	MOV R1, 23	(b)	MOV R1,#23

3) Would assembler give error while assembling following instructions? (3)
Write '**a**' for *an error* '**b**' for *does not give an error*.

Instruction	(a) / (b)
MOV R2,#B2H	
ADD R1,R2	
ADD A,#255H	

4) Pick Instructions and Directives from following statements of code. (4)

Statement	Directive/Instruction
DJNZ R1,#255	
END	
ORG 0	
SJMP Label	

5) Which of the following field in the **list file** shows the value of PC? Underline it. (1)

```
3 0002 7F34 MOV R7,#34H
```

6) The value of the following items when 8051 is **powered up**? (2)

Register	Value (in hex)
PC	
SP	

7) The memory space from 20-2F is called (1)
   a) Scratch pad RAM
   b) Bit-Addressable RAM
   c) Stack
   d) Register bank

8) The default memory space for **stack** is (2)
   a) 00-0F b) 08-0F c) 20-2F d) 30-3F

9) Describe the values of Flag after these instructions. (2)

Instruction	CY	AC	P
MOV A, #38H ADD A, #2FH			
MOV A, #88H ADD A, #93H			

10) How much bytes of data can be stored for the following address ranges of memory. (2)

Address Range	No of Bytes that can be stored?
0000-3FFF	
0000-7FFF	

Q2. Give short answers to following questions. Do not exceed allocated space; you will lose marks if you do. (10 Marks)

1) What is EQU directive? How it is used? (1)

_____

_____

_____

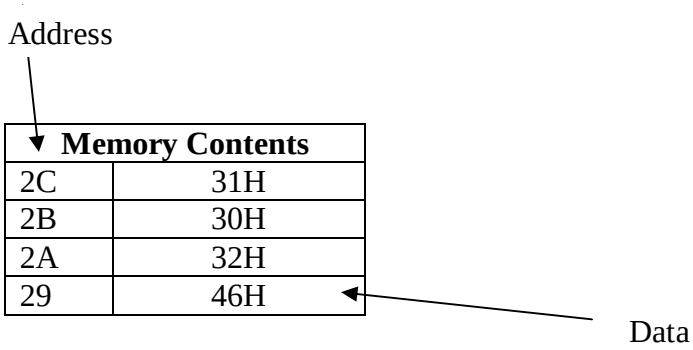
2) Below is the current status of **stack**. Write the code in assembly (3 lines) in such a way that the data is removed from **stack** and 89H is stored in R1, 67H is stored in R3, and FFH is stored in R4. (3)

Location of Stack	Data
0A	FFH
09	67H
08	89H

Your answer. (assembly code)

3) Let's suppose following two instructions are executed and data is moved onto the stack. In which location the data will be moved? (2)

```
MOV SP, 2B
PUSH 1
```



Your answer: the data will be moved in memory location ☐

4) What's wrong about the following code? Spot the mistake. (2)

```
SETB PSW.3
MOV R0, #27
PUSH 0
POP 1
END
```

Answer:_____
_____

5) What's wrong about the following code spot the mistake. (2)

```
MOV P1, #55H
ACALL Delay
MOV P1, #0AA
ACALL Delay
;_____Delay subroutine is written here
Delay:
MOV R0, #255
PUSH 0
Here: DJNZ R0, Here
RET
```

Answer:_____
_____