BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
Hyderabad Campus, Second Semester 2014-2015

CS/ ECE /EEE/ INSTR F241 Microprocessor Programming & Interfacing

Lab Quiz (Closed Book)

Date: 17/04/15 **Day: Friday** **Time : 12.00 – 12.30 PM**
Max Marks : 20

Answer all the questions**.**

1. MOV BL, -12 instruction will copy _____ (In Binary) in BL register. (-12 is in decimal) [2]
2. Memory to memory moves are not allowed except with _____ instructions. [1]
3. _____ instruction converts the data in AL into a number stored at memory location addressed by BX plus AL. [2]
4. A special return instruction _____ must be used to return from an interrupt service routine. [1]
5. If AL=7EH and BL=80H then the following instruction will do the branch at label NEXT.

   CMP AL, BL [1]

   JG NEXT

   _____ (True/False)
6. If AX = 23C5H, BX = 0015H, CX=1234H, DX = 0012H , then after executing DIV BX instruction, What will be the contents of all registers ? [3]

   AX= _____H, BX= _____H,

   CX= _____H, DX= _____H,
7. The only change that need to make in the experiment of stepper motor , to change the direction of rotation of the motor can be_____ [2]

   (A) Connect stepper motor to another port of 8255.

   (B) Replace ROL instruction with ROR in the code.

   (C) Change the delay duration in the code.

   (D) Press the KBINT key.
8. If the delay duration introduced in the stepper motor is reduced, what happens to the speed of the stepper motor? [ ] [2]

(A) Increases (B) Decreases (C) Remains the same (D) can't predict

9. The locations in the interrupt vector table that are reserved for keyboard interrupt are from _____ H to _____H . [2]

10. If the traffic has to follow the pattern indicated in the figures 1,2,3 and 4 , what should be the data that need to be entered for the traffic light controller?(Assume the order of the ports to be Port A, Port B, Port C) Note: Pedestrians are allowed to cross the road only in figure 2 and 4. [4]

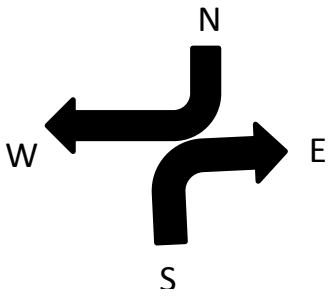

Fig.1

Fig.2

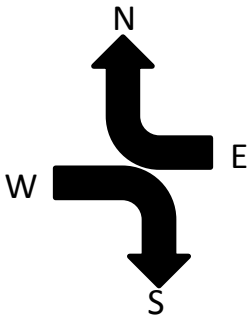

Fig.3

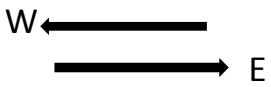

Fig.4

ANSWER:

	LED	Port Line
SOUTH	RED	PA3
	AMBER	PA2
	LEFT	PA0
	STRAIGHT	PC3
	RIGHT	PA1
	PEDESTRIAN	PC6
EAST	RED	PA7
	AMBER	PA6
	LEFT	PA4
	STRAIGHT	PC2
	RIGHT	PA5
	PEDESTRIAN	PC7
NORTH	RED	PB3
	AMBER	PB2
	LEFT	PB0
	STRAIGHT	PC1
	RIGHT	PB1
	PEDESTRIAN	PC4
WEST	RED	PB7
	AMBER	PB6
	LEFT	PB4
	STRAIGHT	PC0
	RIGHT	PB5
	PEDESTRIAN	PC5