Computer Organization and Assembly Language

Class Test: 4   **Session** BSSEF12M
 Total Marks: 15   **Time:** 20 minutes

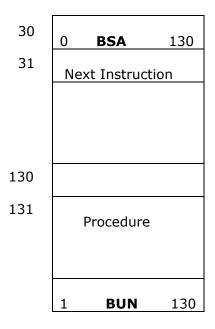**Question 1:**   **[10]**
(a) The contents of PC in the basic Computer is 3AF. The contents of AC is 7EC3. The content of Memory at address 3AF is 932E. The content of memory at address 32E is 09AC. The content of memory at address 9AC is 8B9F. Give the contents of registers PC,AR,IR,DR,AC,**E**,I and SC at the end of the execution of the above instruction

Time Signal Register	T_0	T_1 Fetching	T_2 Decoding	T_3 Eff-Address	T_4	T_5 Execution	T_6....
PC		3B0					
AR	3AF		32E	9AC			
IR		932E					
I			1				
DR					8B9F		
AC						0A62	
SC						0000	
E						1	

Question 2: [05]

(b) Consider the instructions in memory and give the answers given below:-

Memory

```
30  ┌─────────────────────────┐
    │ 0    BSA        130     │
31  ├─────────────────────────┤
    │ Next Instruction        │
    │                         │
    │                         │
    │                         │
130 ├─────────────────────────┤
    │                         │
131 ├─────────────────────────┤
    │     Procedure           │
    │                         │
    ├─────────────────────────┤
    │ 1    BUN        130     │
    └─────────────────────────┘
```

After the execution of **BSA** instruction at address 30,

      i) The Return address i.e _____**31**_____,

      ii) It will be saved in a memory location at address ____**130**_____.

      iii) The new value of PC is _____**131**_____.

Also, as a result of the execution of **BUN** instruction,

      iv) The value of PC will be _____**31**_____

      v) This BUN instruction is similar to ____**JMP**_____instruction, in 8086 processor instruction set.