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Class: BS (AI)-4A

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Task 1 and Task 2:

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Class:- BS(AI)
Section:- 4A

Course: COAL(Lab)
Roll no:- 22F-3134

Q1:-

(a) $(10101110)_2 = (?)_{16}$

Combining 4 bits :-

0001 0101 1010

added zeroes bcz of 4 bits

So, 0001 = 1
0101 = 5
1010 = 10 = A

So, $(10101110)_2 = (15A)_{16}$

(b) $(4C)_{16} = (?)_2$

Converting '4' and 'C' into

4 = $(0100)_2$

C = $(12)_{10} = (1100)_2$

So, $(01001100)_2 = (4C)_{16}$

OR

$(1001100)_2 = (4C)_{16}$

c) $(512)_{10} = (?)_{16}$

So,

$(512)_{10} = (200)_{16}$

16	512
16	32 - 0
	2 - 0

Q2:-

(a) 3A + B7 = F1

① 3A
+ B7
F1

(b) D3 - 1A = B9

CD3
- 1A
B9

B20 + F3 = ~~E1E~~ C21

(c) $1357 - 2A + E3 = (C10)_{16}$

$$\begin{array}{r} 13\overset{4}{\cancel{5}}17 \\ -\ \ 2A \\ \hline 13\ 2\ D \end{array}$$

$$\begin{array}{r} \overset{1}{}\ \overset{1}{} \\ 13\ 2\ D \\ +\ E\ 3 \\ \hline C\ 1\ 0 \end{array}$$

Task 3:

Code file:

hamza.asm

```
1   [org 0x100]
2
3   mov ax, 2000H
4   mov bx, 2000
5   mov cx, -2000H
6   mov dx, -2000
7   mov ax, 1010001B
8   mov ah, 'A'
9   mov al, 'a'
10  mov ax, 0x4c00
11  int 0x21
```

Dos-Box:

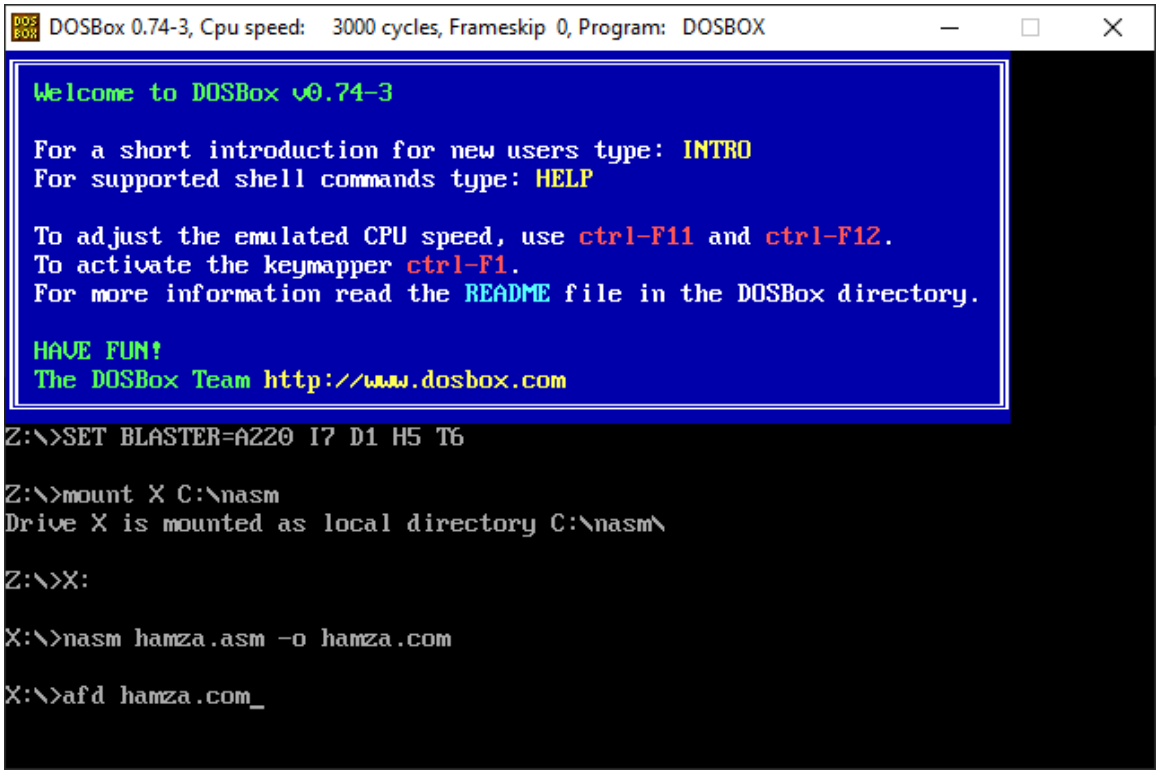

Table:

	Lines							
Registers	**3**	4	**5**	**6**	**7**	**8**	**9**	**11**
AX	2000	2000	2000	2000	0051	4151	4161	4C00
AH	20	20	20	20	00	41	41	4C
AL	00	00	00	00	51	51	61	00
BX	0000	07D0	07D0	07D0	07D0	07D0	07D0	07D0
CX	0018	0018	E000	E000	E000	E000	E000	E000
DX	0000	0000	0000	F830	F830	F830	F830	F830
IP	0103	0106	0109	010C	010F	0111	0113	0116