output :-

$r16 \rightarrow 0XE5 \xrightarrow{\text{finally}} r16 \xrightarrow{\text{stores}} 0X1B$

$r17 \rightarrow 0X1B$

$r12 \rightarrow 0XF6$

Output :-

$r17 = 10$

$r18 = 2$

result => $0x0300 = 5$

Input :-

$r16 = 128 \rightarrow 0x80$

output :-

$r17 = 0x00$

Input :

$r18 \rightarrow 0x0B$	$r18 \rightarrow 0x0F$	$r19 \rightarrow 0x05$
$r19 \rightarrow 0x00$	$r19 \rightarrow 0x00$	$r18 \rightarrow 0x01$

Output :-

$r18 \rightarrow 0x78$

$r19 \rightarrow 0x00$

$r16 \rightarrow 0xff$

o/p:

Name	address	value
pina	0x39	0x45
DDRA	0x3A	0x00
portA	0x3B	0x45
pinb	0x36	0x20
DDRB	0x37	0x00
portB	0x38	0x20
pinc	0x33	0xA0
DDRC	0x34	0xFF
portc	0x35	0xA0 (Lower byte)
pind	0x30	0x08
DDRD	0x31	0xbf
portd	0x32	0x08 (higher byte)

output:

Name	Address	Value	Bits
pina	0X39	0X00	00000000
DDRA	0X3A	0Xff	11111111
Portla	0X3A	0X00	00000000
pinb	0X36	0X4E	01001110
DDRB	0X37	0Xff	11111111
portb	0X38	0X4E	01001110
pinc	0X33	0X20	00000000
DDRC	0X34	0XFD	11111101
portc	0X35	0X20	00100000

O/P:

I/P : R20 → 0X38

R16 → 0XFF

R18 → 0X18

R19 → 0X00

o/p:-

Registers

R16 → 0X0A

R19 → 0X10

R20 → 0X0A

R21 → 0X37

final answer will be stored in register R21

Q/P: 10

$a_{20} = 2$

$a_{21} = 8$