(5) Question 1. Number of decimal digits

2000 alternatives is 3 ½ decimal digits

(5) Question 2. Decimal value

S$A5 = 10*16+5=165

(2) Part 3a. Specify RegB

RegB = 100+200-256 = 44

(2) Part 3b. Specify 0 or 1

C=1 (error, 100 + 200 is not 44)

(1) Part 3c. Specify 0 or 1

V=0 (no error, 100 + -54 = 44)

(5) Question 4. Choose A-E

E. ldy TCNT

rr110nnn, with rr=10 nnn=001

EDB1 ldy 2,sp+

bset DDRT,$#$40

or

ldaa DDRT

oraa #$40

staa DDRT

(5) Question 5. Show the machine code

(5) Question 6. Show assembly

(5) Question 7. Simplified memory cycles (you may or may not need all 5 entries)

<table>
<thead>
<tr>
<th>R/W</th>
<th>Addr</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read</td>
<td>$F000</td>
<td>DD</td>
</tr>
<tr>
<td>Read</td>
<td>$F001</td>
<td>00</td>
</tr>
<tr>
<td>Read</td>
<td>$0000</td>
<td>00</td>
</tr>
<tr>
<td>Read</td>
<td>$0001</td>
<td>01</td>
</tr>
</tbody>
</table>

(5) Question 8. Choose A-G

E) Value of Reg D is copied to Reg X

2000*1/4 = 500

EA=X+A=$0800+5= $0805

bis

9600(bits/s)/10(bits/frame) =960 bytes/s

B

(5) Question 9. Give value of number

255*1.00V/5V = 51

(5) Question 10. Effective address

base+I+4*J

(5) Question 11. Give op code

(5) Question 12. Number of bytes/sec

(5) Question 13. Choose A, B, C or D.

A. all registers but the SP

(5) Question 14. Matrix equation

(5) Question 15. ADC conversion

(5) Question 16. LED equation

(5) Question 17. List all registers

(5) Question 18. Choose A-E

(5) Question 19a) Choose A-F

(5) Question 19b) Choose A-F

B. array containing list of functions to execute

org $0800

*****C) place it here******

org $F000

org $F000

*****D) place it here******

main movw #SA,pt