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Class: 8 Gr  
Roll no: 6  
Subject: Computer

## Mid-Term Exam-2077

### Group A

Answer the following questions:  $[1 \times 4 = 4]$

- 1)  $\rightarrow$  Decimal number system is a number system which consists of ~~10~~ digits from 0 to 9.
- 2)  $\rightarrow$  Binary number system is a number system which is formed by the digits 0 and 1.
- 3)  $\rightarrow$  Octal number system is a number system which consists of eight different digits which are 0, 1, 2, 3, 4, 5, 6, 7.
- 4)  $\rightarrow$  Hexadecimal number system is a number system which is formed by 16 different characters which are 0 to 9 and A to F respectively.

### Group B

Perform the following calculations:  $[2 \times 8 = 16]$

$\rightarrow$



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A.  $(2010)_{10} = (?)_2$

→ Soln, Here,

		R
2	2010	0
2	1005	1
2	502	0
2	251	1
2	125	1
2	62	0
2	31	1
2	15	1
2	7	1
2	3	1
2	1	1
	0	

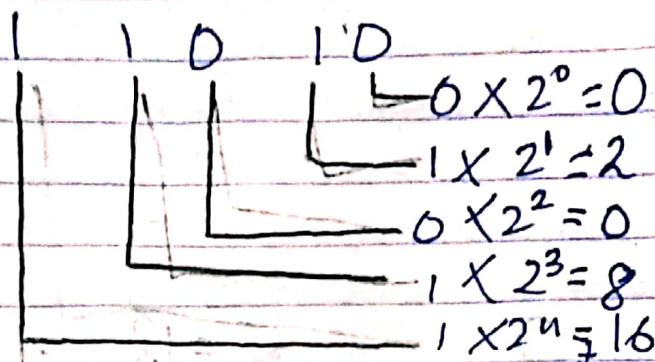
$= (11111011010)_2$

B.  $(11010)_2 = (?)_{10}$

→ Soln  
Here,

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$$\therefore (11010)_2 = (26)_{10}$$

C)  $(1011001)_2 = (?)_8$

→ Soln Here,

001	011	001
421	421	421
1	3	1

$$(1011001)_2 = (131)_8$$

D)  $(1020)_{10} = (?)_8$

→ Soln Here,

		R
8	1020	4
8	127	7
8	15	7
8	1	1
	0	

$$\therefore (1020)_{10} = (1774)_8$$



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E)  $(10CE)_{16} = (?)_2$

→ Soln, here,

1	0	C = 12	E = 14
8421	8421	8421	8421
0001	0000	1100	1110

$(10CE)_{16} = (1000011001110)_2$

F)  $(5BF)_{16} = (?)_8$

→ Soln

Here,

5	B = 11	F = 15
8421	8421	8421
0101	1011	1111

$= (1011011111)_2$

Now,

010	110	111
421	421	421
2	6	7

$(5BF)_{16} = (2677)_8$



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G.  $(2075)_8 = (?)_2$

→ Soln

Here

2	0	7	5
421	421	421	421
010	000	111	101

$= (010000111101)_2$

\*

H)  $(10643)_8 = (?)_{16}$

→ Soln, Here

1	0	6	4	3
421	421	421	421	421
001	000	110	100	011

$= (1000110100011)_2$

Now,

0001	0001	1010	0011
8421	8421	8421	8421
1	1	10=A	3

$(10643)_8 = (11A3)_{16}$