

1. (d) $(69)_{16} \div (50)_{16} = (?)_2$
 $= (01101001)_2 \div (01010000)_2 = (1.0101)_2$

2. (a) D' Morgans Law.

3. (b)

4. (a) Given diagram is

$$Y = (A.B). (C + \bar{D})_s$$

$$= (1.1) (1 + \bar{D}) = \bar{1}.1 = \bar{1} = 0$$

5. (c)

(I) is correct from Q4.

(II) is incorrect because $(C + \bar{D})$ gives 1 therefore $Y=1$

(III) is correct because $(C + \bar{D}) = 1$.

6. (a) $Y = \overline{(AB+1)} . \overline{(A+B.0)} = \bar{1}.\bar{0} = 0.1 = 0$

7. (d) $11 + 103 \text{ MOD } 7 \text{ MOD } 3 - 1$
 $= 11 + 5 \text{ MOD } 3 - 1 = 11 + 2 - 1 = 12$

8. (c) 9. (b) 10. (a)

11. (b) 12. (c)

13. (c) $(222)_3 = (?)_2 = (222)_3 = (26)_{10} = (11010)_2$

14. (c) $A=10, B=2, C=-5$

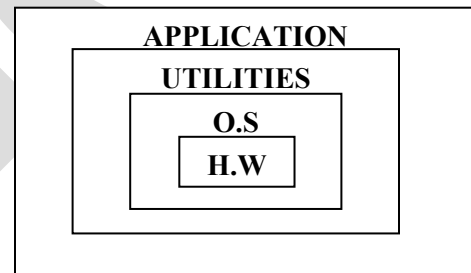
A	B	C	D
10	2	-5	12
9	44	23	

15. (d) $4 + 6 / 3 * 2 - 6 / 2 = 4 + 2 * 2 - 3 = 4 + 4 - 3 = 5$.

16. (d)	n	d	n%d	mod remain
	6720	4	0	
	1680	5	0	
	336	6	0	
	56	7	0	
	8	8	0	
	1	9	1	d = 9.

17. (d)

18. (c)



19. (a) Multiprogramming – More than one program are to be executed at the same time.

20. (d) Three types of I/O.

(I) Programmed I/O (a)

(II) Interrupt Driven I/O(b)

(III) DMA (c).

21. (d)

Speed in ascending order

Hard disks, RAM, Cache, and Register.

22. (a)



Disk interleaving. To access a word, Half can be stored in D1 and half in D2. They can be accessed faster. We can use no. of disks.

23. (c) $Z = \bar{A}\bar{B}C + \bar{A}BC + A\bar{B}C + ABC + ABC$
 $= BC + AB + BC = C + AB$

24. (c)

25. (c) NAND or NOR.