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Rewarding Career

HINTS AND SOLUTIONS

CTNC - I

- **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

$$Y = (A.B). (C + \overline{D})s$$

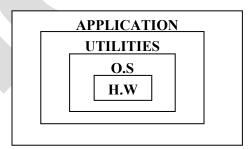
$$= (1.1) (1 + \overline{D}) \qquad = \qquad \overline{1.1} = \overline{1} = 0$$

- 5. (c)
- (I) is correct from O4.
- (II) is incorrect because $(C + \overline{D})$ gives 1 therefore Y=1
- (III) is correct because $(C + \overline{D}) = 1$.

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

- 7. (d) 11+103 MOD 7 MOD 3-1= 11+5 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.

- n%d mod remain 16. (d) d 4 0 6720 5 1680 0 336 6 0 56 8 8 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)
$$Z = \overline{A} \overline{B} C + \overline{A}BC + A\overline{B}C + ABC + ABC$$

= BC + AB + BC = C + AB

- 24. (c)
- **25. (c)** NAND or NOR.