



**[i] SANMACS**  
I N D I A

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Rewarding Career

HINTS AND SOLUTIONS

CTNC - IV

1. (c)
2. (c)
3. (a)
4. (b) with 16 address lines  $2^{16}$  memory words can be addressed. Each word is of 2 byte. Total memory of computer =  $2^{16} * 2$  bytes = 128 Kilobytes
5. (b) Equal to  $(1 - 2^{-8}) * 2^{63}$
6. (a) Capacity of general CD is 650 MB. 650 min. of film can be stored. Hence 5 complete film can be accommodated on it (with some space still left).
7. (a)
8. (b) CRC (Cyclic Redundancy Code), Parity Bit is used in magnetic still left)
9. (c)
10. (d) Output – Inside default Inside first  
**Note:** 'default' can be placed anywhere in the switch block.
11. (d)
12. (c) Error of misplaced else - - statements following if should be in block.
13. (a)
14. (b) device polling is software method to set priority.
15. (d)
16. (b)
17. (d) Information is written by creating pits on the disk space by laser beam.
18. (c)
19. (d)
20. (d)
21. (d) **Note:** Take diameter = 3.5 inch (more general than 5.25 inch) Rotational speed = 300 rpm. Time taken in one rotation =  $60 / 300 = 0.2$  seconds.  
No. of bits per inch = 1600.  
No. of bits per track =  $1600 * (\pi * 3.5) = 17600$  bits  
17600 bits are read in 0.2 seconds.  
In 1 second  $17600 / 0.2 = 88000$  bits/s = 11000 bytes/s.
22. (c) In DMA, a memory cycle is taken from the processor to enable data transfer to memory.
23. (a) Cylinder will use 8 surfaces for data storage.  
Length of track =  $12 \pi$  inch.  
Storage on one track =  $60000 * 12 \pi$  bytes  
Storage on one cylinder (8 tracks)  
=  $8 * 600000 * 12 \pi$  bytes. =  $57600000 \pi$  bytes  
 $57600000 \pi / 1024 = 562 \pi KB$  ( $\because 1 kb = 1024$  bytes)
24. (a) capacity =  $6240 * (32 * 12) * 8$  bits = 2340 Kilobytes
25. (b)