

8.1 Disc fragmentation is an example of → Utility Software.

8.2 Disc Cleaner, Firewall → example of Utility Software.

8.3. Assembler, Compiler, Interpreter → Examples of Language Processor

8.4. Cache Memory can be categorised into two types →

- (i) L1 Cache/Primary Cache
- (ii) L2 Cache/Secondary Cache

(i) L1 Cache - is fast, expensive but small in size. L1 Cache is placed/embedded in ~~the~~ processor chip as CPU cache

(2) L2 Cache - relatively slow, less expensive and size is more than L1 cache.

* L2 Cache is placed/embedded/fabricated on Motherboard

8.5. BIOS - Basic Input Output System
BIOS is a program that helps to
* Boot up Operating System into computer

8.6. De-Morgan's Law →

(i) $\overline{A+B} = \bar{A} \cdot \bar{B}$

(ii) $\overline{A \cdot B} = \bar{A} + \bar{B}$

8.7. Distributive Law →

(i) $A \cdot (B+C) = A \cdot B + A \cdot C$

(ii) $A + (B \cdot C) = (A+B) \cdot (A+C)$

8.8. Associative Law →

(i) $A + (B+C) = (A+B) + C = A+B+C$

(ii) $A \cdot (B \cdot C) = (A \cdot B) \cdot C = A \cdot B \cdot C$

8.9. XOR Gate:

- XOR Gate is an Exclusive OR Gate which takes two or more inputs and provides one output

~~XOR Gate provides output 1 if there are odd no. of 1's if output 1 input is 1.~~

XOR Gate provides output - 1, if there are odd no. of 1's in input

XOR Gate uses \oplus symbol.

• Truth Table -

| A | B | $A \oplus B$ |
|---|---|--------------|
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

• Boolean Eqⁿ -

$$F = A \oplus B$$

Q.10. $(A9D7C)_{16} = (?)_8$

$= (A9D7C)_{16}$

$= \underline{1010} \underline{1001} \underline{1011} \underline{0111} \underline{1100}$

$= (A9D7C)_{16}$

$= (\underline{1010} \underline{1001} \underline{1011} \underline{0111} \underline{1100})_2$

$= (\overset{\downarrow}{0}10 \cdot 101 \cdot 001 \cdot 101 \cdot 101 \cdot 111 \cdot 100)_2$

$= (2 \quad 5 \quad 1 \quad 5 \quad 5 \quad 7 \quad 4)_8$

$= (2515574)_8$

| | | | | |
|---|---|---|---|-------|
| 8 | 4 | 2 | 1 | |
| 1 | 0 | 1 | 0 | -A-10 |
| 1 | 0 | 0 | 1 | -9 |
| 1 | 0 | 1 | 1 | -D-13 |
| D | 1 | 1 | 1 | -7 |
| 1 | 1 | 0 | 0 | -C-12 |

| | | | |
|---|---|---|----|
| 4 | 2 | 1 | |
| 0 | 1 | 0 | -2 |
| 1 | 0 | 1 | -5 |
| 0 | 0 | 1 | -1 |

Q.11. Flash Memory :

A flash drive is a small, ultra-portable storage device with a 'solid state' memory.

Flash Memory can be electrically erased and reprogrammed. Flash memory is used in Pen-Drive, SSD

Types of Flash Memory → NOR flash
NAND flash

Q.12. Windows O.S

Linux O.S

- | | |
|---|---|
| (i) Windows is not open source and is not free to use | (i) Linux is Open Source and is free to use |
| (ii) It is case-insensitive | (ii) It is case-sensitive |
| (iii) Linux O.S is more efficient | (iii) W |

Windows O.S

iii) ~~Linux~~ uses ~~monolithic~~
~~kernel~~

iii) Windows uses
micro Kernel

Linux O.S



iii) Linux uses monolithic
Kernel

Q.13. ASCII Code ISCI Code

i) It is ~~not~~
~~ASCII~~ 7-bit
encoding
system

i) ISCI is 8-bit
encoding
system

ii) full form-

American Standard
Code for Information
Interchange

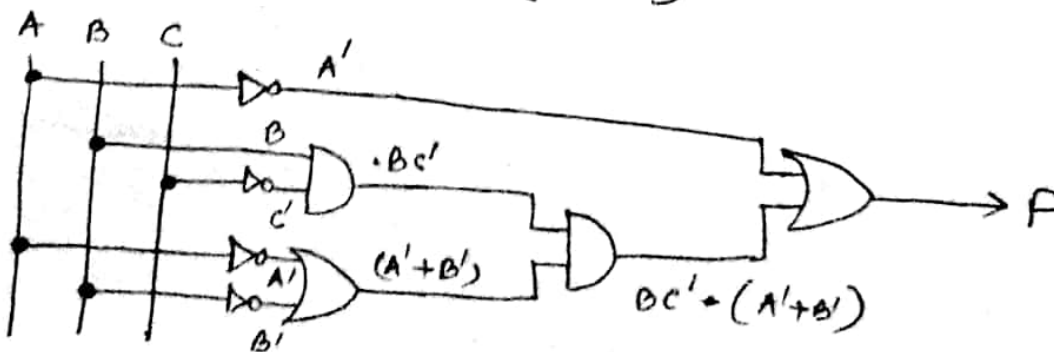
ii) full form-

Indian Script Code
for Information Interchange

iii) ASCII represents
128 characters

iii) ISCI represents 256
characters

Q.14. $F(A, B, C) = A' + BC' (A' + B')$



Q.15 Society, Law and Ethics →

- ① 3 types of Ethical Issues - P-545
- ② Intellectual Property Rights - P-546
- ③ Violation of IPR (Intellectual Property Rights)
P-546 P-547
- ④ Plagiarism - P-547
- ⑤ Copyright Infringement - P-548
- ⑥ Trademark Infringement - P-548
- ⑦ Digital Property, Digital Property Rights - P-548
- ⑧ Full Hack - FOSS, FSF, OSI - P-551
- ⑨ Free Software - P-549
- ⑩ Open Source Software - P-550
- ⑪ FOSS - P-551
- ⑫ Freeware - P-551
- ⑬ Shareware - P-552
- ~~⑭ Benefits of e-Waste Recycling P-~~
- ⑭ Public Domain Software, Proprietary software - P-554