



BRAINWARE UNIVERSITY

Course – B.Sc (HN)

Basic Hardware (BHNC201)

(Semester – 2)

Time allotted: 3 Hours

Full Marks: 70

[The figures in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Multiple Choice Type Question)

10 x 1 = 10

Q1. Choose the correct alternatives for the following: (*Any ten*)

(i) Maximum number of primary partitions, supported by GPT, is

- (a) 4
- (b) 24
- (c) 127
- (d) 128

(ii) Colour of +12 V DC voltage in SMPS is

- (a) Red
- (b) Blue
- (c) Green
- (d) None of the above

(iii) In a hard disk, each sector stores _____ data.

- (a) 256 KB
- (b) 512 KB
- (c) 256 Byte
- (d) 512 Byte

(iv) Pentium 233 MHz MMX supports the _____

- (a) Socket 1
- (b) Socket mPGA-370
- (c) Socket A
- (d) Socket 7

(v) The location of MBR in hard disk is _____

- (a) CHS 100
- (b) CHS 001
- (c) CHS 010
- (d) CHS 110

- (vi) The 'North Bridge Chip' is popularly known as _____
- (a) MCH (b) GMCH
(c) NBC (d) ICH
- (vii) UEFI is a _____
- (a) BIOS (b) Firmwire
(c) Firwire (d) None of the above
- (viii) _____ is the bootloader of Windows XP
- (a) BOOTMGR (b) NTDETECT.COM
(c) BCD (d) None of the above
- (ix) The RAID-5 implies _____
- (a) Disk Mirroring (b) Disk Striping
(c) Spanned Volume (d) Strip set with parity
- (x) In mini-POST, all the devices are checked, except _____
- (a) Cache Memory (b) Hard Disk
(c) RAM (d) All of the above
- (xi) Number of pins in RDRAM is _____
- (a) 168 (b) 184
(c) 180 (d) 240

Group – B

(Short Answer Type Question)

3 x 5 = 15

(Answer *any three* of the following)

- Q2. (a) Define "Cluster".
- (b) Explain the features of "FAT 16" file system. [2 + 3]
- Q3. Draw the diagram of a CRT monitor (with labeling). [5]
- Q4. Explain the process of "Low Level Formatting (LLF)" in a Hard Disk. [5]

- Q5. (a) What is “Cache Memory”?
 (b) Explain the “Paper Feed Mechanism” of Dot-Matrix printer. [2 + 3]
- Q6. Explain - Primary Partition & Extended Partition. [5]

Group – C

(Long Answer Type Question)

3 x 15 = 45

(Answer *any three* of the following)

- Q7. (a) What is “Booting Process”?
 (b) Explain - Cold booting and Warm Booting.
 (c) Briefly explain the general boot process. [1 + (2 + 2) + 10]
- Q8. (a) Write a short note on the followings:-
 Write Precompensation, Landing Zone, Zoned Bit Recording (ZBR), Cylinder
 (b) Differentiate - SRAM vs. DRAM.
 (c) Write the features of NTFS. [(4 x 2) + 4 + 3]
- Q9. (a) Draw the block diagram of SMPS.
 (b) Explain each section of SMPS. [5 + 10]
- Q10. (a) What are the boot files of Windows XP?
 (b) Why do you use “High Level Formatting” at the time of partitioning a Hard Disk?
 (c) Compare and contrast between MBR and GPT. [5 + 5 + 5]
- Q11. (a) Write the concept of Basic Disk and Dynamic Disk.
 (b) Explain the “RAID” concept. [7 + 8]