BRAINWARE UNIVERSITY

Course – B.Sc. (HN)

Basic Hardware and Operating System-II (BHN203)

(Semester – 2)

Time allotted: 3 Hours **Full Marks: 70**

[The figure 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 Questions) 10 x 1 = 10

1. *Choose the correct alternative from the following*

(i) What is the voltage of the Blue coloured wire in ATX-SMPS?

a. -12V DC b. -5V DC

c. +3.3V DC d. None of these

(ii) Which are the sub pixels that make an individual pixel in a colour monitor?

a. Red, Green, Black b. Red, Green, Cyan

c. Red, Green, Blue d. Red, Green, Orange

(iii) RAID-0 level supports

a. Simple Volume b. Spanned Volume

c. Striped Volume d. Strip set with parity

(iv) Which of the following wire supports PWR_OK signal?

a. Red wire b. Green wire

c. Brown wire d. Black wire

(v) The +24V DC voltage in Dot Matrix Printer drives

a. Print solenoid drive b. Buzzer board

c. Paper feed motor d. None of these

(vi) Which of the following sensor is responsible for detecting the internal temperature of print head?

a. Print timing sensor b. Motor temperature sensor

c. Paper end sensor d. Head temperature sensor

(vii) Which of the following topology is using a central node to communicate?

e. Bus topology f. Star topology

g. Mesh topology h. None of these

(viii) Maximum how many drives can you create under basic disk format?

a. 4 b. 127

c. 128 d. 24

(ix) The size of 'cell' is

a. 53 Byte b. 53 KB

c. 153 Byte d. 153 KB

(x) 'DSL' stands for

a. Digital Station Link b. Distributed Subscriber Line

c. Dual Subscriber Line d. Digital Subscriber Line

Group – B

(Short Answer Type Questions) 3 x 5 = 15

Answer any *three* from the following

2. Draw a neat diagram of CRT monitor with proper labelling. [5]
3. Define 'Dial-up Networking'. [5]
4. (a) Discuss the features of 'Graphics Processing Unit'. [2]
   (b) How the dynamic disk mechanism is helpful in disk management? [3]
5. (a) What is the relevance of using RTC/NVRAM in a PC? [3]
   (b) Differentiate between Partition and Volume. [2]
6. (a) Write a short note on 'Disk Mirroring'. [3]
   (b) How does a VRAM accelerate the video signal processing? [2]

Group – C

(Long Answer Type Questions) 3 x 15 = 45

Answer any *three* from the following

7. (a) Draw the block diagram of ATX-SMPS with proper labelling. [5]
   (b) Explain each section of ATX-SMPS. [10]
8. Illustrate the different types of sensors and driver motors of Dot Matrix Printer. [15]
9. (a) Discuss the roles of the following cables:-
   Coaxial, Twisted Pair, Optical Fibre [10]
   (b) Define 'Cell Topology'. [5]
10. (a) Compare between EIA/TIA 568A and EIA/TIA 568B. [3]
    (b) Write a short note on ISDN and Leased Line technology. [8]
    (c) Discuss the SAN technology. [4]
11. (a) Write a short note on 'Postscript' and 'Printer Command Language'. [5]
    (b) What is function of 'Operator Control Panel' in Dot Matrix Printer? [5]
    (c) Distinguish between 'Horizontal frequency' and 'Vertical frequency'. [5]
