**BRAHMA VALLEY COLLEGE OF TECHNICAL EDUCATION, NASHIK**

 **Preliminary Exam**

**Course: CM/IF Date: 03/10/2014**

**Class: SYCM Duration: 3 hrs**

**Subject:-CHM Marks: 100 marks**

**Q. 1. Attempt any six questions from the following: 12 marks**

**i. List any 4 features of PCI bus.**

 **ii. Explain the term cluster.**

**iii. List advantages of CRT display related to LCD.**

**iv. Define Landing zone.**

**v. State symptoms of power problem.**

**vi. List 2 features of SCSI interface.**

**vii. Name any 2 H/W and S/W tools used for troubleshooting of PC.**

**B. Attempt any two questions from the following. 8 marks**

**i) Differentiate between interlaced and non-interlaced display.**

**ii) Explain partitioning in detail.**

**iii) Draw and explain block diagram of SMPS.**

**Q.2. Attempt any four question from the following: 16 marks**

**a) Explain the concept of cache memory with its types**

**b) Draw functional block diagram of flat bed scanner.**

**c) Draw and explain block diagram of CRT color monitor**

**d) Explain working of membrane key switch.**

**e) Describe the following related to LCD.**

**f) List and explain motherboard selection criteria**

**Q.3. Attempt any four questions from the following: 16 marks**

**a) Draw and explain block diagram of internal modem.**

**b) Differentiate between online and offline UPS**

**c) Draw functional block diagram of Dot matrix printer.**

**d) Describe any 4 signals of centronics interface from printer to PC.**

**e) Explain the following power related problems**

**f) Explain four features of USB.**

**Q.4. Attempt any four of the following: 16 marks**

**a) Describe in brief:**

 **1) Conventional memory**

 **2) Extended Memory:**

 **b) Enlist servo technique and explain embedded servo**

**c) Draw and explain block diagram of LCD monitor.**

**d) Explain steps involved in high level formatting**

**e) Explain the following protection devices:**

 **a) Circuit Breaker**

 **b) Surge Suppressor**

**f) Draw and explain pin diagram of RS-232**

**Q.5. Attempt any two of the following: 16 marks**

**a) Draw and explain Intel hub architecture in detail**

**b) Draw waveform of FM, MFM recording technique for the data pattern 11011000 and also count the**

 **number of pulses**

**c) Write causes and preliminary checks for the following.**

**d) Explain the following terms related to HDD**

 **1) Cylinder**

 **2) Zone bit recording**

**Q.6. Attempt any two of the following: 16 marks**

**a) Explain the following modes of processor**

 **1) Real mode:**

 **2) Protected mode**

**b) Explain working of logic probe with suitable diagram.**

**c) List symptoms of virus infection and state precaution to prevent it.**

**d) Define the terms TWAIN, and OCR with reference to scanner**