Duration: 2 Hrs   **Total Marks:60**

Instructions: i) *All questions are compulsory.*
         ii) *Figures to the right indicate full marks.*

Q.1.A. Select the correct option and rewrite the statement.   **(5x1=05)**
   i) It is Connected to address bus and Specifies address for read or write op
    _____.
   ii) It has Larger SRAM component and Uses as cache or serial buffer_____.
   iii) It has direct control over I/O Sensing status and Read/write
     commands_____.
   iv) It indicates whether the processor is executing in user mode_____.
   v) Honeywell 400 is an example of which generation computer_____.

   B. Answer the following.   **(5x1=05)**
   i) What is Direct mapping?
   ii) What is Pagging?
   iii) What is Control unit?
   iv) What is Data Movement?
   v) What is loop buffer?

Q.2.A. Difference between Computer organization and Computer architecture.   **(02)**
   B. Explain the Von Neumann architecture.   **(03)**
   C. Draw and Explain the Structural view of computer.   **(05)**

Q.3.A. Perform the following conversions.   **(02)**
     (i) $(10011011)_2 = (X)_{10}$
     (ii) $(28)_{10} = (X)_2$

   B. Perform the following operations.   **(03)**
     (i) (-4)+(-3)
     (ii) (+7)+(+2)

   C. Explain the User visible registers.   **(05)**

Q.4.A. What are the different input output problems?   **(02)**
   B. Explain the three techniques of input and output.   **(03)**
   C. Explain Segmentation with example.   **(05)**

Q.5.A. Distinguish between CD and DVD operation.   **(02)**
   B. Explain Raid 1 and Raid 2.   **(03)**
   C. Explain the read/write mechanism of magnetic disk.   **(05)**

Q.6.A. Explain the basic elements of processor.   **(02)**
   B. Explain the Vertical Micro-programming.   **(03)**
   C. Draw and Explain the flow chart of instruction cycle.   **(05)**

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