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Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) **Attempt any THREE of the following:**   12

    (i) Explain the concept of cache memory with neat diagram.

    (ii) State any four preventive maintenance of a Hard Disk Drive.

    (iii) Draw neat labeled block diagram of flat bed scanner.

    (iv) State any four functions of Internet protocol (IP)

   b) **Attempt any ONE of the following:**   6

    (i) Draw and explain the function of each layer of TCP/IP protocol architecture.

    (ii) Compare between UTP cable and STP cable. (6-points)

Marks

2. **Attempt any <u>FOUR</u> of the following:** **16**

   a) State any four features of PCI bus.

   b) Explain beep error indications with reference to PC problem (any four)

   c) Explain power on self-test (POST) of PC.

   d) Give the ARP protocol message format.

   e) Draw and explain the packet structure of UDP.

3. **Attempt any <u>TWO</u> of the following:** **16**

   a) Explain the working of Inkjet printer with neat block diagram. State its two limitations.

   b) Draw the block, diagram and explain the working of SMPS. Give any two functions of PWM in SMPS.

   c) Give the classification of network topology. Explain any two network topology in details.

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