Note :   1. Answer all Four Question.
           2. Question No.1 & Question No.2 are Compulsory.
           3. Question No. 3 & 4 has multiple choices.

Q. 1   Define e-Commerce and what are the issues in developing e-Commerce **(15)** applications ? Explain e-Procurement with various stages in e-Procurement of indirect goods.

Q. 2   **Explain in Brief :**   **(15)**
      a) Operational, Analytical, Distributed, Online databases
      b) LAN WAN SAN
      c) EDI and EFT
      d) VOIP
      e) TPS, OAS, KWS
      f) ALU, CU, CPU
      g) Volatile and Non-Volatile Memory
      h) Information Technology and Information Systems

Q. 3   **A**   What is a Computer and why is it called a Data Processor ?   **(15)** Define Characteristics of Computer.

       B   Explain various generations of computers with examples.

<center>**OR**</center>

       A   What is a communication Protocol and its functions ? Describe with diagram various Data Transmission modes.

       B   Explain in brief different types of network, and network topologies.

Q. 4   **A**   Define database. Describe in brief various types of databases and   **(15)** the advantages of database approach ?

       B   What is DBMS and its functions ? Explain in brief various types of Database Models.

<center>**OR**</center>

       A   Define Internet and what technology is required for Internet to work ?

       B   What are the applications and disadvantages of Internet; What are the components, benefits and disadvantages of Extranet ?

<center>✻✻✻✻✻</center>