

This question paper contains 2 printed pages]

**BO—17—2016**

**FACULTY OF COMPUTER STUDIES**

**B.C.A. (Second Year) (Third Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2016**

**(Revised Course)**

**COMPUTER APPLICATION**

**Paper S3.1**

**(Computer Network)**

**(Tuesday, 22-11-2016)**

**Time : 2.00 p.m. to 5.00 p.m.**

*Time—Three Hours*

*Maximum Marks—80*

*N.B. :— (i) Attempt All questions.*

*(ii) Figures to the right indicate full marks.*

*(iii) Draw well labelled diagram if necessary.*

1. Attempt the following : 20
  - (a) What is computer network ? Explain advantages of computer network.
  - (b) Explain data communication model.
  - (c) Differentiate between analog and digital signal
  - (d) What is transmission ? Explain synchronous transmission.
2.
  - (a) What is transmission media ? Explain twisted pair in detail. 8
  - (b) What is topology ? Explain different types of topologies. 7

*Or*

  - (c) Explain connectionless and connection oriented service with example. 8
  - (d) What is multiplexing ? Explain TDM in detail. 7
3.
  - (a) Explain protocol hierarchies in detail. 8
  - (b) Explain in detail TCP/IP reference model. 7

*Or*

  - (c) What are bridge and router ? Explain in detail. 8
  - (d) What is protocol ? Explain SMTP in detail. 7

P.T.O.

- 4. (a) What is internet ? Explain its applications. 8
- (b) Explain structure of telephone system. 7

*Or*

- (c) Explain in detail narrow band ISDN. 8
- (d) Explain geosynchronous communication satellite. 7
- 5. Write short notes on (any *three*) : 15

  - (a) URL
  - (b) PPP
  - (c) Repeaters
  - (d) Infrared
  - (e) Channel capacity.