

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

MScIT/PGDCA 1<sup>st</sup> Semester Examination, 2015

**MScIT(S1)04/PGDCA(S1)04-Fundamentals of Networking & Internet**

Time: 3 hours

Maximum marks: 80

The figures in the margin indicate full marks for the questions

- 1 *Answer any five questions from the following:* 2×5=10
- Write two advantages of bus topology.
  - What are the responsibilities of the transport layer in the TCP/IP model?
  - Write two applications of coaxial cable.
  - What is a router?
  - Define Uniform Resource Locator (URL)?
  - What is a gateway?
  - Draw a suitable diagram to describe tree topology.
- 2 *Write any three questions from the following:* 4×3=12
- Distinguish between peer-to-peer LAN and server based LAN.
  - Write the function of presentation layer and application layer of ISO/OSI reference model.
  - With a suitable diagram, discuss the light propagation technique through an optical fiber.
  - Write the function of a switch.
  - What are search engines? Give examples.

- 3 *Answer any three questions from the following:* 6×3=18
- With suitable examples describe LAN, MAN and WAN.
  - How do the layers of the TCP/IP model correlate to the layers of the OSI model?
  - What is Bluetooth? Compare piconet and scatternet.
  - Describe the functions of a network interface card (NIC).
  - With suitable examples, discuss the functioning of a web server and web browser.
- 4 *Answer any four questions from the following:* 10×4=40
- Describe different network topologies with suitable diagrams of each topology.
  - Write the functions of various layers of the TCP/IP model.
  - Discuss the working principle of a firewall.
  - Describe the frame format of IEEE 802.3.
  - Describe different applications of internet.
  - Write short notes on:
    - IP address
    - Satellite Communication.