No. of Printed Pages—2

12 (FNI)

[18-HRGPKAC-M1S]

PGDCA/MSc IT 1st Semester Exam., 2018

FUNDAMENTALS OF NETWORKING AND INTERNET

[PGDCA/MSc IT (S1) 04]

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer any *five* from the following questions (each within *50* words) : 2×5=10

(a) Write two advantages of star topology.

(b) Name two commonly used LAN implementations.

(c) Define unicast and broadcast data transmissions.

(d) Write IEEE standard for Fast Ethernet and Gigabit Ethernet.

(e) What is the difference between an IP address and a MAC address?

(f) State two application layer protocols with their functions.

2. Answer any *three* from the following questions (each within *150* words) : 4×3=12

(a) Define transmission mode. Discuss about various types of transmission mode.

(b) List out the advantages and disadvantages of optical fiber cabling system.

(c) Distinguish between peer-to-peer LAN and client-server LAN.

(d) Discuss about domain name system with an example.

3. Answer any *three* from the following questions (each within *250* words) : 6×3=18

(a) Write the meaning of physical address and logical address in computer network. Explain various types of IP address in brief.

(b) With suitable examples, discuss the functioning of a Web server and a Web browser.

(c) How many types of networks are defined by Bluetooth network? Explain them briefly.

(d) Define a URL. Using an example, identify the components of a URL.

4. Answer any *four* from the following questions (each within *500* words) : 10×4=40

(a) List out the functions of various layers of TCP/IP model.

(b) Write the IEEE standard for Wireless LAN. Explain the terminologies related to Wireless LAN—Access point, basic service set, coordination function, extended service set.

(c) Write short notes on any *two* of the following :

(i) Intranet

(ii) NIC

(iii) Proxy server

(iv) Router

(d) Define network topology. Compare and contrast different network topologies.

(e) How can you protect a computer connected to the Internet? Describe the working principle of a firewall.

★★★