

CS/B.TECH(ME/PE)/SEM-8/CS-815/2012

2012

**COMPUTER NETWORKING AND
WEB BASED TECHNOLOGY**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words as
far as practicable.*

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) A search engine resides in the
 - a) Browser b) Nearest router
 - c) PC hardware d) Server.
- ii) Which of the following classes of IP address is used for multicast addressing ?
 - a) Class A b) Class B
 - c) Class C d) Class D.
- iii) Cookie is created and sent by
 - a) Application Server b) Web Server
 - c) Web Browser d) Database Server.
- iv) Applet is based on the concept of
 - a) Server Push b) Server Pull
 - c) Client Push d) Client Pull.
- v) HTTP is a protocol of the type
 - a) Stateless b) Stateful
 - c) Both (a) and (b) d) None of these.
- vi) Which of the following is *not* used in LAN ?
 - a) Ethernet b) Token Ring

c) Token Bus d) DQDB.

vii) Which of the following TCP/IP protocols is used for file transfer with minimal capability and minimal overhead ?

a) FTP b) RARP

c) TETP d) TELNET.

viii) In an optical fibre, the inner core is the cladding.

a) less dense than b) denser than

c) the same density as d) another name for.

ix) The Hamming code is a method of

a) Error detection b) Error correction

c) Error encapsulation d) both (a) and (b).

x) Connection establishment involves a handshake.

a) one-way b) two-way

c) three-way d) all of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Explain the difference between OSI and TCP/IP model.

3. a) Explain the concept of switching in computer network.

b) Briefly discuss the various types of switching.

4. a) Briefly explain the different types of guided media.

b) Explain the merits and demerits of unguided media.

5. a) What is Search Engine ?

b) Explain the technology on which a search engine is based upon. $2 + 3$

6. Java is considered as a language which is based on the principle of WORA (Write Once Run Anywhere). Discuss this principle in the context of web technology.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Let a sender is sending a message to a recipient who resides in a different country. Briefly describe how this message transmission will be successful with special reference to OSI model.

8. a) What are the different classes of IP addressing system?

b) Explain the concept of dotted decimal notation of IP address. Write each of the following in dotted decimal notation :

- i) 10011011 11000110 10110100 10001101
- ii) 10001100 11100110 10101100 11000110
- iii) 10110010 00101101 01001000 00011011
- iv) 10001100 11000110 10011011 10001101
- v) 01001011 00000001 00110011 10000000

9. Briefly describe the influence of advanced java in web technology.

10. a) What is DNS and why is it used ?

b) If a DNS domain name is kal.cnn.edu, how many labels are involved here ?

c) Differentiate between iterative and recursive searching through the Application Layer.

d) What is three-way handshaking and how is it performed ?

11. Write short notes on any *three* of the following : 3×5

- a) Ethernet
- b) LAN and WAN
- c) HTTP
- d) Packet Switching
- e) JVM.

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