



Name : .....  
Roll No. : .....  
Invigilator's Signature : .....

**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) TFTP
  - 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.

$$1 \frac{1}{2} + 3 \frac{1}{2}$$

4. a) Briefly explain the different types of guided media.  
b) Explain the merits and demerits of unguided media.

$$2 \frac{1}{2} + 2 \frac{1}{2}$$

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.

