



Name :

Roll No. :

Invigilator's Signature :

CS / B.TECH(ECE) / SEP.SUPPLE / SEM-8 / EC-804A / 2012

2012

INTERNET 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.

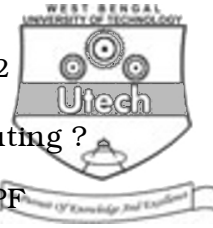
GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

- i) Full form of WWW is
 - a) World Window Web
 - b) World Wide Wave
 - c) World Window Wave
 - d) None of these.
- ii) Class C IP addresses have numbers of hosts per network.
 - a) 128
 - b) 256
 - c) 512
 - d) 1024.
- iii) Which of the following classes of IP address is used for multicast addressing ?
 - a) Class D
 - b) Class C
 - c) Class B
 - d) None of these.
- iv) The process to process delivery of the entire message is the responsibility of the..... Layer.
 - a) Physical
 - b) Datalink
 - c) Transport
 - d) None of these.



- v) Which of the following is not used in Routing ?
- a) Distance Vector b) ~~SPF~~
- c) BGP d) DHCP.
- vi) Intransmission, both communication devices share the channel capacity at all times.
- a) Simplex b) Half Simplex
- c) Full Duplex d) Half Duplex.
- vii) A WAN using the OSPF protocol that connects two routers is an example of a type of OSPF network.
- a) Point to point b) Transient
- c) Stub d) Virtual.
- viii) Which of the following OSI layers is responsible for identifying communication partners ?
- a) Application b) Session
- c) Network d) Presentation.
- ix) The maximum size of TCP header is
- a) 64 bytes b) 16 bytes
- c) 60 bytes d) 2^{16} bytes.
- x) The position of SSL in TCP/IP model is in between
- a) Physical and Data link Layer
- b) Transport and Application Layer
- c) Network and Data link Layer
- d) Network and Transport Layer.



- xi) UDP is
- a) connection oriented
 - b) connection-less
 - c) both (a) and (b)
 - d) none of these.
- xii) A TCP/IP protocol that allows a host to find its Internet address given its physical address is
- a) ARP
 - b) RARP
 - c) RPF
 - d) RPM.

GROUP – B

(Short Answer Type Questions)

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

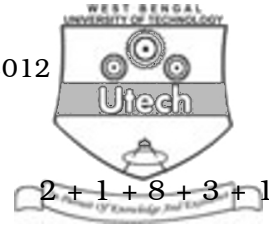
2. What is firewall ? Discuss each type of firewall briefly. $1 + 4$
3. Write down the difference between ARP and RARP.
4. Explain "Distance Vector Routing" with a suitable example.
5. What is the drawback of BOOTP ? Explain how DHCP works. $1 + 4$
6. What is ISDN ? Draw and explain the B-ISDN functional architecture. $1 + 4$

GROUP – C

(Long Answer Type Questions)

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

7. a) Distinguish between Internet and Intranet.
- b) What is network protocol ?
- c) Draw the ISO 7-Layer Reference model and explain the purpose of each layer in the ISO model.



- d) How does packet duplication occur ?
- e) What is a router ? $2 + 1 + 8 + 3 + 1$
8. What are interior routing and exterior routing ? Give example of both routing protocols. Explain any one interior routing protocol. $4 + 3 + 8$
9. a) Draw the fields of an Internet Datagram
- b) Draw and explain how datagram encapsulation is done and what is the advantage to do so.
- c) What is fragmentation and why is it important in Internet Datagram transportation ?
- d) What is the minimum network MTU (Maximum Transfer Unit) required to send an IP datagram that contains at least one octet of data ? $4 + 4 + 4 + 3$
10. a) Differentiate between circuit switching and packet switching.
- b) The ATM standard defines how many layers ? Briefly explain each of them.
- c) What are the techniques that have been used by VPN to guarantee privacy for an organization ? Briefly explain each of them. $4 + (1 + 4) + (1 + 5)$
11. Write short notes on any *three* of the following : 3×5
- a) BGP
- b) FTP
- c) E-mail
- d) VPN
- e) Protocol Layering.
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