EXAMINATION PAPER

FACULTY	**:**	**COMPUTER SCIENCE AND MULTIMEDIA**		
COURSE	**:**	**BACHELOR OF INFORMATION TECHNOLOGY (HONS)**		
YEAR/ SEMESTER	**:**	**SECOND YEAR / SEMESTER FOUR**		
MODULE TITLE	**:**	**TCP/IP**		
CODE	**:**	**BIT 241**		
DATE	**:**	**23 SEPTEMBER - 2019, MONDAY**		
TIME ALLOWED	**:**	**3 HOURS**		
START	**:**	**1:00 PM**	**FINISH**	**: 4:00 PM**

Instruction to candidates

1. This question paper has THREE (3) Sections.
2. Answer **ALL** questions in Section A, MCQ.
3. Answer **5** questions in Section B, MSAQ.
4. Answer **2** questions in Section C, MEQ.
5. No scripts or answer sheets are to be taken out of the Examination Hall.
6. For Section A, answer in the OMR form provided.

Do not open this question paper until instructed

(Candidates are required to give their answers in their own words as far as practicable)

SECTION A
Multiple Choice Questions
Attempt All Questions **[30×1=30]**

1. **TCP/IP is related to:**
   A. ARPANET
   B. OSI
   C. DECNET
   D. ALOHA

2. **How many levels of addressing is provided in TCP/IP protocol?**
   A. One
   B. Two
   C. Three
   D. Four

3. **Packets of data that is transported by IP is called:**
   A. Datagrams
   B. Frames
   C. Segments
   D. Encapsulate message

4. **ICMP Stands for:**
   A. Internet Connect Message Protocol
   B. Internet Control Message Protocol
   C. International Connect Message Protocol
   D. International Control Message Protocol

5. **You want to implement a mechanism that automates the IP configuration, including IP address, subnet mask, default gateway, and DNS information. Which protocol will you use to accomplish this?**
   A. SMTP
   B. SNMP
   C. DHCP
   D. ARP

6. **Which class of IP address provides a maximum of only 254 host addresses per network ID?**
   A. Class A
   B. Class B
   C. Class C
   D. None of the above

7. Which of the following is private IP address?

A. 12.0.0.1
B. 168.172.19.39
C. 172.15.14.36
D. 192.168.24.43

8. Which protocol ensures reliable delivery?

A. TCP
B. UDP
C. UD-IP
D. None of above

9. Which layer will be used while transmitting data using FTP or Telnet?

A. Presentation
B. Session
C. Application
D. Transport

10. An IPV4 address is _____ bits.

A. 24
B. 32
C. 48
D. 128

11. An IP address is _____ bytes in dotted decimal notation.

A. 3
B. 4
C. 5
D. None of above

12. A class A address starts with leading bit(s) _____.

A. 0
B. 01
C. 10
D. 101

13. What is the class of the address 224.0.0.0?

A. A
B. B
C. C
D. D

14. What is the class of the address 126.255.255.254?

A. A
B. B
C. C
D. D

15. What is network id of the address 227.78.19.21?

A. 227
B. 227.78
C. 227.78.19
D. None of the above

16. What is the host id of the address 130.8.243.12?

A. 8.243.12
B. 243.12
C. 12
D. 130.8

17. The network layer concerns with:

A. Bits
B. Frames
C. Packets
D. None of the above

18. Which of the following is NOT a function of network layer?

A. Routing
B. Inter-networking
C. Congestion control
D. None of the above

19. How many levels of addressing are provided in OSI Model?

A. One
B. Two
C. Four
D. Seven

20. Which of the following is equivalents to 192.168.1.2?

A. 0:0:0:0:0:ffff:c0a8:100
B. 0:0:0:0:0:ffff:c0a8:101
C. 0:0:0:0:0:ffff:c0a8:102
D. 0:0:0:0:0:ffff:c0a8:103

21. Identify the statement which cannot be associated with OSI model:

A. A structured way to discuss and easier update system components
B. One layer may duplicate lower layer functionality
C. Functionality at one layer no way requires information from another layer
D. None of the above

22. What protocols are used to find the hardware address of a local device?

A. ARP
B. RARP
C. IP
D. ICMP

23. TCP/IP model was developed _____ the OSI model.

A. prior to
B. after
C. simultaneous to
D. none of the above

24. Which of the following protocols uses both TCP and UDP?

A. FTP
B. SMTP
C. Telnet
D. DNS

25. Which layer links the network support layers and user support layers?

A. Session layer
B. Data link layer
C. Transport layer
D. Network layer

26. What is the maximum number of valid IP addresses in a class B network?

A. 65536
B. 65534
C. 254
D. 256

27. Transmission Control Protocol divides a stream of data into smaller units that are called:

A. Frame
B. Datagram
C. Segments
D. Information

28. An application-level protocol in which a few manager stations control a set of agents, known as:

A. HTML
B. TCP
C. SNMP
D. SNMP/IP

29. To use Simple Network Management System (SNMP), we need:

A. Entities
B. Standard types
C. Frames
D. Rules

30. Which protocol is connection oriented?

A. ICMP
B. UDP
C. IP
D. TCP

SECTION B

Short Answer Questions

Answer any five (5) questions out of eight (8) questions [5×6=30]

1. Write short note on protocol. Describe any 4 protocols. [2+4]

2. How TCP/IP differs from OSI Reference Model?

3. Explain briefly about IPV4 Class address.

4. Elucidate the term ‘node and host’ and Client Server Architecture.

5. Explain briefly about SNMP.

6. Describe Ipv6 Ipv4 Dual Stack.

7. Explain about Reed's Law and Beckstrom's Law along with example.

8. Define:[6×1]

- **A.** Router
- **B.** Public Network
- **C.** Gateway
- **D.** Network Part
- **E.** SAN
- **F.** Firewall

SECTION C

Long Answer Questions

Attempt any two (2) questions out of three (3) questions. [2×20=40]

1. Explain about TCP/IP model. Describe each layer of TCP/IP model along with their functions. Briefly describe the name of any two protocols used in different layer of TCP/IP model.[5+7+8]

2.

A. Define IPV6 addressing. Explain along with its header format. [10]
B. Why Are We Running Out of Ipv4 Addresses?[5]
C. Is IPv6 ultimate solution for IP address? Justify [5]

3.

A. Discuss the features of TCP. [5]
B. Write the meaning of Three-way handshake. Explain briefly with diagrammatic representation. [10]
C. Explain about TCP Header. [5]

******BEST OF LUCK******