(7 pages) Reg. No. : .....

Code No. : 6180 Sub. Code : WCAE 12

M.C.A. (CBCS) DEGREE EXAMINATION.
APRIL 2024.

First Semester

Computer Application

Elective — ADVANCED COMPUTER NETWORKS

(For those who joined in July 2023 onwards)

Time : Three hours Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is an example of full-duplex system
   (a) The keyboard
   (b) CB radio
   (c) The telephone network
   (d) The repeater

2. Which address identifies a process on a host?
   (a) physical address (b) logical address
   (c) port address (d) specific address

3. An internetworking device operating at the transport layer is called a
   (a) Bridge (b) Router
   (c) Repeater (d) Gateway

4. Datagram switching is done at which layer of OSI model
   (a) Network layer (b) Physical layer
   (c) Application layer (d) Datalink layer

5. The Asynchronous Transfer Mode(ATM) network is an example of
   (a) packet switching network
   (b) datagram networks
   (c) virtual circuit network
   (d) message switched network

6. In cellular telephony, IS95 forward transmission, the output of the long code generator is fed to a
   (a) connector (b) protector
   (c) director (d) decimater

7. Which of the following field in IPv4 datagram is not related to fragmentation?
   (a) Flags (b) Offset
   (c) TOS (d) Identifier

8. The size of an IP address in IPv6 is
   (a) 4 bytes (b) 128 bits
   (c) 8 bytes (d) 100 bits

9. In ————, the router may forward the received jacket through several of its interfaces.
   (a) unicasting (b) multicasting
   (c) broadcasting (d) none of the above

10. Which of the following is false with respect to UDP?
    (a) Connection-oriented
    (b) Unreliable
    (c) Transport layer protocol
    (d) Low overhead

11. To achieve reliable transport in TCP, ———— is used to check the safe and sound arrival of data.
    (a) Packet (b) Buffer
    (c) Segment (d) Acknowledgment

12. In open-loop control, policies are applied to ————
    (a) Remove after congestion occurs
    (b) Remove after sometime
    (c) Prevent before congestion occurs
    (d) Prevent before sending packets

13. DNS database contains .
    (a) name server records
    (b) hostname-to-address records
    (c) hostname aliases
    (d) all of the mentioned

14. In Network Management System, the division that is responsible for controlling access to network based on a predefined policy is called
    (a) Fault Management
    (b) Secured Management
    (c) Active Management
    (d) Security Management

15. Which of the following protocols are used for remote login?
    (a) telnet (b) SSH
    (c) FTP and SCP (d) (a) and (b)

PART B — (5 × 4 = 20 marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

16. (a) Classify the components of data communication system.

Or

(b) Intricate on transport layer services and network layer services.

17. (a) Elaborate on framing.

Or

(b) Formulate the concepts behind satellite networks.

18. (a) Establish ICMP packet format with its message types.

Or

(b) Elucidate network layer delivery with its two types.

19. (a) Illuminate UDP.

Or

(b) Examine the leaky bucket algorithm for traffic shaping.

20. (a) Explain Domain Name System with its name space.

Or

(b) Explicate TELNET concepts.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

21. (a) Analyze the layers in OSI model.

Or

(b) Enumerate and explain the four types of addressing in TCP/IP protocols.

22. (a) Describe datagram networks with required block representation.

Or

(b) Designate any two random access protocols.

23. (a) Identify the ipv6 addressing format.

Or

(b) Illustrate link state routing.

24. (a) Illuminate TCP services with its features.

Or

(b) Explain the four closed loop congestion control techniques with block representations.

25. (a) Designate DNS in the internet.

Or

(b) Interpret SNMP protocol.

———————