CSC 305

B.Sc. VIᵗʰ SEMESTER EXAMINATION, 2024-25

COMPUTER SCIENCE

(Data Communication & Computer Networks)

Date (तिथि) : _____

Paper ID
(To be filled in the OMR Sheet)

5390

अनुक्रमांक (अंकों में) :
Roll No. (In Figures) :
अनुक्रमांक (शब्दों में) :

Roll No. (In Words) : _____

Time : 1:30 Hrs.
समय : 1:30 घण्टे

Max. Marks : 75
अधिकतम अंक : 75

नोट : पुस्तिका में 50 प्रश्न दिये गये हैं, सभी प्रश्न करने होंगे। प्रत्येक प्रश्न 1.5 अंक का होगा।

Important Instructions :	महत्वपूर्ण निर्देश :
1. The candidate will write his/her Roll Number only at the places provided for, i.e. on the cover page and on the OMR answer sheet at the end and nowhere else.	1. अभ्यर्थी अपने अनुक्रमांक केवल उन्हीं स्थानों पर लिखेंगे जो इसके लिए दिये गये है, अर्थात् प्रश्न पुस्तिका के मुख्य पृष्ठ तथा साथ दिये गये ओ०एम०आर० उत्तर पत्र पर, तथा अन्यत्र कहीं नही लिखेंगे।
2. Immediately on receipt of the question booklet, the candidate should check up the booklet and ensure that it contains all the pages and that no question is missing. If the candidate finds any discrepancy in the question booklet, he/she should report the invigilator within 10 minutes of the issue of this booklet and a fresh question booklet without any discrepancy be obtained.	2. प्रश्न पुस्तिका मिलते ही अभ्यर्थी को जाँच करके सुनिश्चित कर लेना चाहिए कि इस पुस्तिका में पूरे पृष्ठ हैं और कोई प्रश्न छूटा तो नहीं है। यदि कोई विसंगति है तो प्रश्न पुस्तिका मिलने के 10 मिनट के भीतर ही कक्ष परिप्रेक्षक को सूचित करना चाहिए और बिना त्रुटि की दूसरी प्रश्न पुस्तिका प्राप्त कर लेना चाहिए।

1. What is a computer network ?

    (A) Transformation of physical document record to digital record data

    (B) A collection of interconnected computers hardware and software that can communicate and share the resources

    (C) Various types of software and hardware used to create documents and presentations

    (D) The protocol that provide security to computer's software and data

2. Which of the following is LAN topology uses token ?

    (A) Star

    (B) Bus

    (C) Ring

    (D) Mesh

3. A combination of hardware and software device that connects LAN with WAN ?

    (A) Bridge

    (B) Router

    (C) Terminal

    (D) Modem

4. Which of the following is max range between the Bluetooth connectivity ?

    (A) 10 meter

    (B) 50 meter

    (C) 100 meter

    (D) 200 meter

5. Which of the directional communication modes support two way traffic in both direction at a time ?

(A) Simplex

(B) Half-duplex

(C) Three-quarter's duplex

(D) Full duplex

6. What does TCP stands for in Computer Network ?

(A) Transfer Communication problem

(B) Transmission Communication problem

(C) Transmission Control Protocol

(D) Transfer Control Protocol

7. Technique used the single channel to be shared by multiple signals or combined multiple channel to single channel is in a computer network ?

(A) Spreading

(B) Multiplexing

(C) Coupling

(D) Switching

8. _____ is the correct arrange order of the networks those covers geographic areas that are larger to smaller.

(A) LAN>MAN>WAN

(B) MAN>LAN>WAN

(C) WAN>MAN>LAN

(D) PAN>LAN<WAN<MAN

9.

10.

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9. Which of the following transmission mode allows high data transfer ?

   (A) Synchronous and Parallel

   (B) Synchronous and Serial

   (C) Asynchronous and Parallel

   (D) Asynchronous and Serial

10. FTP is used for :

    (A) Local Login

    (B) Remote Login

    (C) Remote File Transfer

    (D) File Transfer Protection

11. The loss in data signal strength while travel through wired cable transmission medium is called _____.

    (A) Emission

    (B) Attenuation

    (C) Scattering

    (D) Interruption

12. Which of the following is the Application layer protocol for the internet ?

    (A) Hypertext transfer protocol

    (B) DHCP

    (C) Ethernet protocol

    (D) Internet protocol

13. Which of the following primarily uses unguided media for transmission ?

    (A) Cable Communication

    (B) Local telephone system

    (C) Fiber Communications

    (D) Radio broadcasting

14. Optical fiber transmission media work usually on technique of _____.

    (A)   Light beam Infraction

    (B)   Total internal reflection

    (C)   Refraction

    (D)   Laser beam deflection

15. Television and radio communication between user and station is a type of

    _____ transmission.

    (A)   Hyper

    (B)   Simplex

    (C)   Full-duplex

    (D)   Half-duplex

16. _____ is a collection of point-to-point links that may every node is directly

    connected maintaining privacy.

    (A)   PAN

    (B)   WAN

    (C)   Mesh Topology

    (D)   Star Topology

17. How many layers are there in the OSI reference model ?

    (A)   7

    (B)   5

    (C)   6

    (D)   4

18. Which operating mode of telnet is full duplex ?

 (A) Default mode

 (B) Line mode

 (C) Character mode

 (D) Bit mode

19. Two devices directly share a link among them in _____ connection.

 (A) Unipoint

 (B) Multipoint

 (C) Point to point

 (D) Common point

20. A _____ set of rule and regulations that governs each and every components

 of data communication over network.

 (A) RFCs

 (B) Protocols

 (C) Standards

 (D) ASCII

21. The length of hardware or MAC address of the device used in internet

 communication.

 (A) 10 Dec

 (B) 48 Bits

 (C) 16 Hex

 (D) 10 Oct

22. Which layer actual data are being transmitted from device ?

    (A)   Application layer

    (B)   Presentation layer

    (C)   Session layer

    (D)   Physical layer

23. The network topology which requires a central controller or hub as connection ?

    (A)   Walkie-talkie

    (B)   Star

    (C)   Ring

    (D)   Mesh

24. In the OSI reference model, as a data packet moves from top to bottom layers, headers are _____ .

    (A)   Added

    (B)   Removed

    (C)   Rearranged

    (D)   Suppressed

25. OFC contains _____ .

    (A)   Fiber cable

    (B)   Coaxial cable

    (C)   Twisted Pair Cable

    (D)   STP Cable

26. Which address is used on the internet at application layer for employing the TCP/IP protocols ?

    (A)   Physical and logical address

    (B)   Port address

    (C)   Specific address

    (D)   All of the mentioned

27. Which network model is oldest one ?

    (A)   OSI

    (B)   TCP/IP

    (C)   IP

    (D)   TCP

28. Which type of address is used to identify a process on a host by the transport layer in TCP/IP ?

    (A)   Physical address

    (B)   Logical address

    (C)   Port address

    (D)   Specific address

29. Logical IP address length for IPv4 is _____.

    (A)   16 bit

    (B)   32 bit

    (C)   64 bit

    (D)   128 bit

30. HDLC frame protocol is :

(A) Bit orient

(B) Byte oriented

(C) Character oriented

(D) Boolean logic oriented

31. A device that used to converts protocol is _____.

(A) A packet

(B) Gateway

(C) Modem

(D) Repeater

32. Technique used for error detection and correction is/are :

(A) Parity bits

(B) Humming code

(C) CRC

(D) All of the above

33. What protects the coaxial cable from noise ?

(A) Inner conductor

(B) Outer plastic material

(C) Metallic mesh conductor

(D) Insulating cover

34. Radio channels signal intensity decrease with distance the relation between Intensity and Distance is _____.

(A) Intensity Inversely proportional to square root of distance

(B) Intensity directly proportional distance

(C) Intensity fluctuates with distance

(D) None of these

35. VSAT terminals are connected through :

(A) Satellites

(B) Cable

(C) Radio communications

(D) Both Cable and Radio Communication

36. _____ is/are the example of switching technology.

(A) Circuit Switching

(B) Message Switching

(C) Packet Switching

(D) All of the above

37. A gateway has functionality of :

(A) Signal conversion

(B) Signal amplification

(C) Router functionality with protocol conversion

(D) Connecting two similar LANs

38. A Router works on _____ layer.

(A) Physical

(B) Data link

(C) Network

(D) Transport

39. Framing technique can have capability of multiplexing :

(A) HDLC

(B) PPP

(C) Hyper LAN

(D) All of the above

40. _____ is Random Medium Access technology.

    (A)   CSMA

    (B)   CDMA

    (C)   Poll and select

    (D)   Reservation

41. Which of the following is a type of multiplexing method that does not waste any bandwidth resource ?

    (A)   FDM

    (B)   TDM

    (C)   WDM

    (D)   All of the above

42. _____ is/are an analog multiplexing technique usually involving signals in the visible light frequencies.

    (A)   FDM

    (B)   CDM

    (C)   WDM

    (D)   Both (B) and (C)

43. For 1's as even parity, after adding the redundant bit 1 is to make whole combination of 1's in frame including parity bit _____.

    (A)   0s should be odd

    (B)   Should be odd

    (C)   Should be even

    (D)   0 and 1 should not be equal

44. FDDI network communication is basically :

  (A)   Ring

  (B)   Bus

  (C)   Star

  (D)   Both (B) and (C)

45. _____ signal is digital.

  (A)   Broadband

  (B)   Baseband

  (C)   An ethernet

  (D)   Composite

46. Ethernet, Token Ring and Token Bus are all different type of _____.

  (A)   LANs

  (B)   MANs

  (C)   WANs

  (D)   PAN

47. _____ is perfect an example of Full duplex communication.

  (A)   Radio set

  (B)   TV

  (C)   Walkie-Talkie

  (D)   VSAT communication

48. _____ signal is analog.

  (A)   Broadband

  (B)   Baseband

  (C)   Ethernet

  (D)   All of the above

49. Which network topology requires a central controller or hub ?

   (A)   Ring

   (B)   Bus

   (C)   Star

   (D)   Mesh

50. OSI stands for :

   (A)   Optical Service Implementation

   (B)   Open Service Internet

   (C)   Open System Interconnection

   (D)   Operating System Interface

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