තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Information and Communication Technology තොරතුරු හා සන්නිවේදන තාක්ෂණය Informatio

Multiverse Victory Project - 2025

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General Certificate of Education (Adv. Level) Examination, August 2025

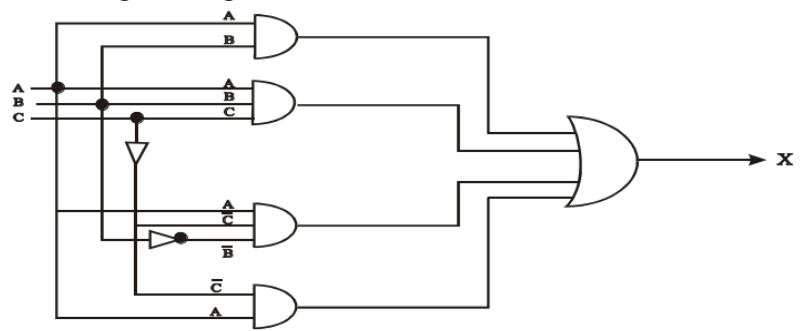|				
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MVP 2024 — MULTIVERSE VICTORY PROJECT

Instructions:

- *Answer **all** the questions.*
- *Write your **Index Number** in the space provided in the answer sheet.*
- *Instructions are also given on the back of the answer sheet. Follow those carefully.*
- *In each of the questions **1** to **5O**, pick one of the alternatives from (1), (2). (3). (4). (5) which is **correct** or **most appropriate** and **mark your response on the answer sheet with a cross (x) in accordance with the instructions given on the back of the answer sheet.***
- *Use of calculators is **not allowed**.*

1. Which unit is responsible for converting the data received from the user into computer understandable format?

   (1) Memory Unit   (2) Arithmetic & Logic Unit   (3) Input Unit

   (4) Output Unit   (5) Registers

2. A special request originated from some device to the CPU to acquire some of its time is called _____

   (1) Disturbance

   (2) Attenuation

   (3) Interrupt

   (4) Noise

   (5) Scheduling

3. What is the two's complement of 00001111?

   (1) 11110001   (2) 11110111   (3) 11110000

   (4) 11111111   (5) 11110011

4. To make an eight-bit adder from two four-bit adders you must connect _____.

   (1) the low-order carry-out to high-order carry-in

   (2) the high-order carry-out to ground.

   (3) the low-order sum to the high-order data input.

   (4) the high-order carry-in to ground.

   (5) none of the above

~ 1 ~

5. Solve this binary problem 10001011 + 00111010 = _____?

(1) 10111111   (2) 11001100   (3) 10111110

(4) 11000101   (5) 10000101

6. The two's complement of the signed decimal number -78_{10} is _____.

(1) 11001110   (2) 01001110   (3) 10110010

(4) 10110001   (5) 10110111

7. From the following which is known as the administrative section of the computer system?

(1) Control Unit

(2) Input Unit

(3) RAM

(4) Central Processing Unit

(5) Registers

8. The part of the CPU that access & decodes program instructions, & coordinates the flow of data among various system components is the _____.

(1) Control unit   (2) ALU   (3) Megahertz

(4) Motherboard   (5) Cache

9. New CPU whose instruction set includes the instruction set of its predecessor CPU is said to be _____ with its predecessor.

(1) fully compatible   (2) forward compatible   (3) compatible

(4) backward compatible   (5) compressed

10. Which of the following is fastest memory?

(1) Secondary Memory

(2) Auxiliary Memory

(3) Cache Memory

(4) Virtual Memory

(5) None of these

11. The decimal equivalent of hexa-decimal number 1A53 is?

(1) 6793   (2) 6739   (3) 6973

(4) 6379   (5) 6937

12. What will be the equal expression for the given logic circuit?

(1) A(B'+C')
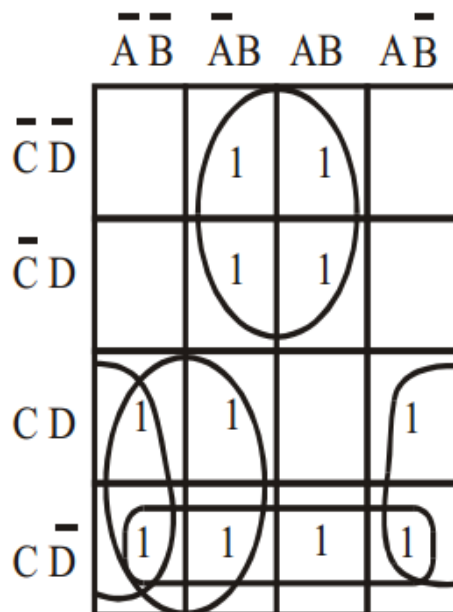
(2) A(B'+C)

(3) A'(B'.C')

(4) A,(B+C')

(5) A(B+C')

~ 2 ~

13. The simplified output for the Boolean expression AB'C'+AB'C+ABC'+ABC is _____?

    (1) $A\overline{B} + \overline{A}B$ (2) $\overline{A}$ (3) B

    (4) A   (5) 1

14. In microprocessor-based systems DMA facility is required to increase the speed of data transfer between the _____.

    (1) Microprocessor and the I/O devices

    (2) Microprocessor and the memory

    (3) Memory and the I/O devices

    (4) Memory and the reliability system

    (5) None of the above

15. A computer system supports 32-bit virtual addresses as well as 32-bit physical addresses. Since the virtual address space is of the same size as the physical address space, the operating system designers decide to get rid of the virtual memory entirely. Which one of the following is true?

    (1) Efficient implementation of multi-user support is no longer possible

    (2) The processor cache organization can be made more efficient now

    (3) Hardware support for memory management is no longer needed

    (4) CPU scheduling can be made more efficient now

    (5) All of the above

16. In which network topology the components are connected by a single cable?

    (1) Bus Topology

    (2) Ring Topology

    (3) Star Topology

    (4) Mesh Topology

    (5) Hybrid Topology

17. What is the name of the network topology in which every possible node has a bidirectional link?

    (1) ring topology   (2) star topology   (3) bus topology

    (4) mesh topology   (5) None of above

18. Which network topology forms a closed-loop where each device is connected to exactly two other devices?

    (1) Star Topology   (2) Bus Topology   (3) Ring Topology

    (4) Mesh Topology   (5) All of the mentioned

19. What does DNS resolve in networking?

    (1) Domain names to IP addresses

    (2) IP addresses to domain names

    (3) Encrypted data transmissions

(4) Network security issues

(5) All of above

20. Which protocol is used to securely transfer files between a local computer and a remote server?

(1) HTTP   (2) FTP   (3) SMTP

(4) POP3   (5) None of the mentioned

21. Which networking component is responsible for connecting the local network to the Internet?

(1) Modem   (2) Router   (3) Firewall

(4) switch   (5) Bridge

22. What will be the output if the following Boolean expression is minimized by use of the Karnaugh map X = AC'D+A'BC'D+A'B'D+AB'CD?

(1) B'D+CD   (2) B'+C'D   (3) BD+CD

(4) B'D+D'   (5) B'D+C'D

23. The gates required to build a half adder are?

(1) EX-OR gate and NOR gate

(2) EX-OR gate and OR gate

(3) EX-OR gate and AND gate

(4) Four NAND gates

(5) EX-NOR gate and AND gate

24. Which of the following -8 is equal to signed binary number?

(1) 10001000   (2) 00001000   (3) 10000000

(4) 11000000   (5) 11110111

25. The hexadecimal number for $(95.5)_{10}$ is?

(1) $(5F.8)_{16}$ (2) $(9A.B)_{16}$ (3) $(2E.F)_{16}$

(4) $(5A.4)_{16}$ (5) $(5F.A)_{16}$

26. Which module gives control of the CPU to the process selected by the short-term scheduler?

(1) Dispatcher   (2) Interrupt   (3) Scheduler

(4) Job Scheduler   (5) none of the mentioned

27. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called _____. Which of the following is suitable for the blank?

(1) Job queue   (2) Ready queue   (3) Execution queue

(4) Process queue   (5) None of the above

28. The interval from the time of submission of a process to the time of completion is termed as _____. Which of the following is suitable for the blank?

(1) Waiting time   (2) Turnaround time   (3) Response time

(4) Throughput   (5) None of the above

29. Consider the Karnaugh map shown below, what will be the derived output if you use the sum of product method?

(1) X = B'+A'C+CD' (2) X = BC'+AC+B'+CD' (3) X = BC'+A'C

(4) X = BC'+A'C+B'C (5) X = BC'+A'C+B'C+CD'

30. The Boolean function Y = A'B'CD'+A'BCD'+A'BCD+ABCD' is supposed simplify using only Karnaugh map. What will be the minimized output?

(1) Y = A'CD'+BC+BCD' (2) Y = A'CD'+A'BC+BCD' (3) Y = A'CD'+A'BC

(4) Y = A'BC+BCD' (5) Y = A'CD'+ BCD'

31. Which transmission media is capable of having a much higher bandwidth (data capacity)?

(1) Coaxial (2) Twisted pair cable (3) Untwisted cable

(4) Fiber optic (5) all of the mentioned

32. A device that forwards data packet from one network to another is called a _____.

(1) Bridge (2) Router (3) Hub

(3) Gateway (5) Firewall

33. Switch is a _____ device.

(1) Broadcast device (2) Unicast device (3) Multicast device

(4) None of the above (5) All of the above

34. Two devices are in network if _____.

(1) A process in one device is able to exchange information with a process in another device

(2) A process is running on both devices

(3) The processes running of different devices are of same type

(4) None of the above.

(5) All of the above.

35. Which software prevents the external access to a system?

    (1) Firewall   (2) Gateway   (3) Router

    (3) Virus checker   (5) All of the mentioned

36. Name of the protocol that is used to send emails is _____,

    (1) FTP   (2) SMTP   (3) HTTP

    (4) TCP   (5) none of the mentioned

37. Name of the protocol that is used to receive emails is _____.

    (1) POP   (2) VOIP   (3) DHCP

    (4) FTP   (5) Token Ring

38. What is the meaning of Bandwidth in Network?

    (1) Transmission capacity of a communication channels

    (2) Connected Computers in the Network

    (3) Class of IP used in Network

    (4) None of Above

    (5) All of the Above

39. The loss in signal power as light travels down the fiber is called _____.

    (1) Attenuation   (2) Propagation   (3) Scattering

    (4) Interruption   (5) Noise

40. Which of the following TCP/IP protocols is used for transferring files form one machine to another?

    (1) FTP   (2) SNMP   (3) SMPT

    (4) HTTP   (5) RCP
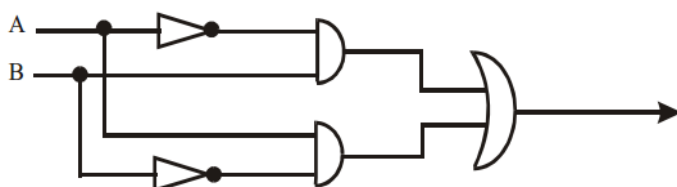
41. ARPANET stands for _____.

    (1) Advanced Recheck Projects Agency Internet

    (2) Advanced Recheck Projects Agency Network

    (3) Advanced Research Projects Agency Network

    (4) Advanced Research Projects Agency Internet

    (5) None of the mentioned

42. 1's complement representation of decimal number of -17 by using 8-bit representation is?

    (1) 1110 1110   (2) 1101 1101   (3) 1100 1100

    (4) 0001 0001   (5) 1011 0101

43. Consider the logic circuit given below.

Which of the following Boolean expressions represents the above logic circuit?

(1) A'B+AB   (2) A'B+B'   (3) A'+AB'

(4) A'B+AB'   (5) (A'+B).(A+B')

44. The decimal equivalent of the BCD value 1000 0110 is _____.

(1) 86   (2) 76   (3) 88

(4) 81   (5) 80

45. The decimal equivalent of hexadecimal 1E is _____.

(1) 35   (2) 30   (3) 29

(4) 21   (5) 31

46. The decimal equivalent of binary 10111110_2 is _____.

(1) 190   (2) 200   (3) 186

(4) 198   (5) 159

47. Convert the binary number 0001.0010 to decimal.

(1) 1.20   (2) 1.40   (3) 1.125

(4) 1.80   (5) 1.625

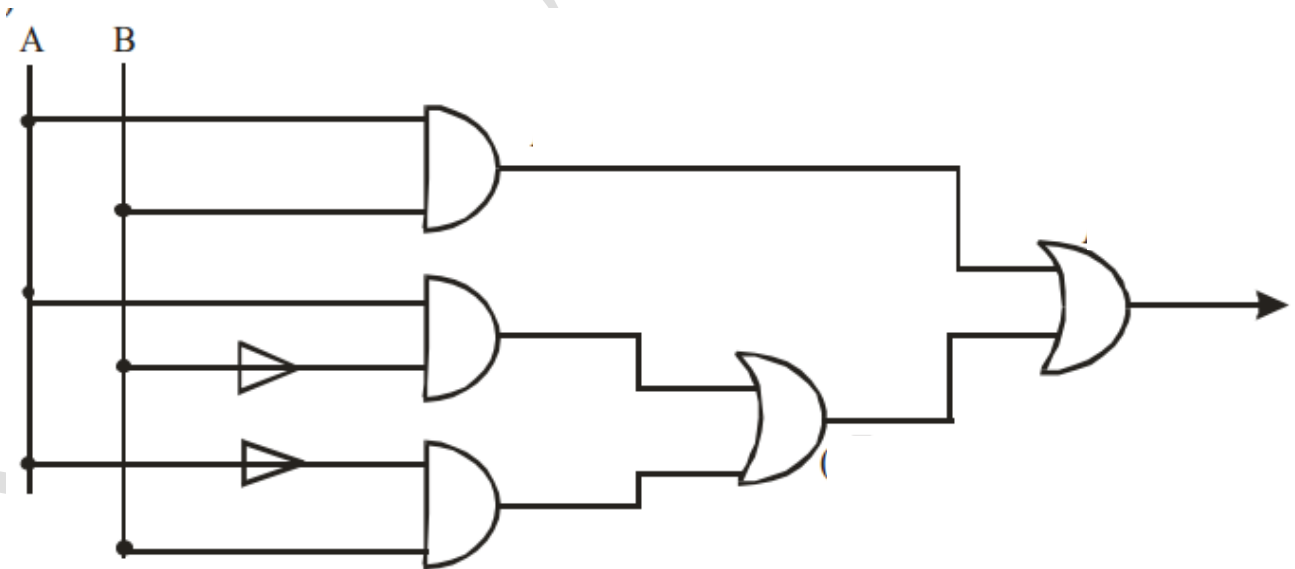**48.** The decimal equivalent of binary 01100001 is _____.
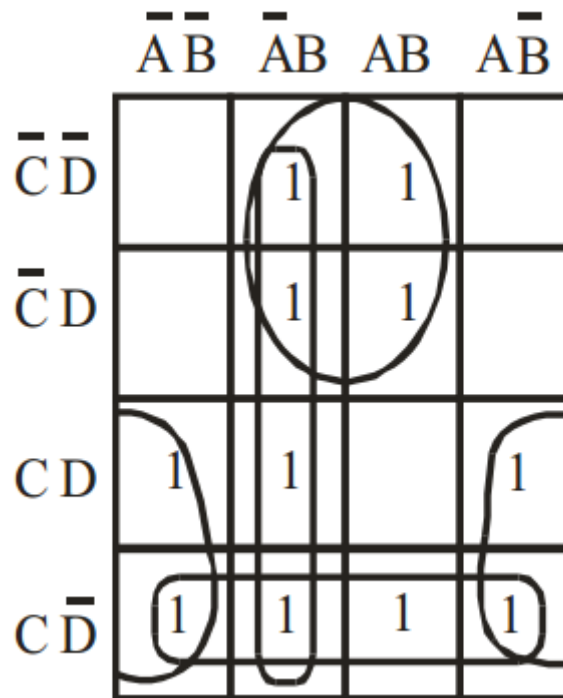
(1) 91   (2) 97   (3) 115.

(4) 101   (5) 201

49. Consider the following logic circuit.

(1) AB+(AB+A'B)
(2) AB+(AB'+AB)
(3) AB+(B'+A'B)
(4) AB+(AB'+AB')
(5) AB+(AB'+A'B)

50. Consider the Karnaugh map shown below, what will be the derived output if you use the sum of product method?

(1) BC'+B'C+A'B+CD'
(2) BC'+BC+A'B+CD'
(3) C'+B'C+A'B+CD'
(4) BC'+B'C+A'B+CD
(5) BC'+B'C+AB+CD'