

SCHOOL OF PLANNING AND ARCHITECTURE, BHOPAL
Written Test for the post of Communication and System Operator
Date of Examination: 11/01/2024

Max. Marks. 80

Duration: 1.5 hours

Name of the Candidate:

Roll no. of the candidate:

INSTRUCTIONS

1. Mark 'Cross' (X) for your selected option on the answer sheet provided along with the question paper.
2. If more than one option is marked for a question using 'Cross' (X), that question/answer will not be considered for evaluation
3. Ensure that the symbol 'Cross' (X) does not cross the box.
4. Write 'Cross' (X) legibly and clearly.
5. No other symbol apart from 'Cross' (X) shall be used for indicating your answer.
6. Your answer shall not be considered for evaluation if any other symbol apart from 'Cross' (X) is used.
7. Do not make any mark/drawing or markings on the question/answer sheet.
8. No candidate shall be permitted to leave the Examination Room/ Hall before the end of the examination.
9. Question/ Answer sheet will not be given back once the candidate submits the sheet.
10. There will be no negative marking for wrong answers.
11. Use only Black/ Blue Ball Point pen(s) for marking your option.
12. Mobile phones, electronic gadgets/materials are not allowed inside the examination Hall.
13. A separate sheet (page nos. 13 & 14) have been provided for rough work. No rough work is allowed on the question/ answer sheet or any other paper other than the allocated space.
14. Furnish all information required on the question booklet such as Roll Number, Name of the candidate and signature, failing which the question booklet will not be evaluated. The candidate shall write only their Roll Number on the answer sheet.
15. Each question shall carry one mark.
16. A candidate must fill the number of boxes given at the end of the Answer sheet.

Total no. of pages: 14

Questions attempted out of 80: ____

Signature of the candidate

Signature of the Invigilator

PART - A

1. Arrange fractions in descending order.
A. $\frac{9}{11} > \frac{8}{9} > \frac{3}{5} > \frac{4}{7}$
B. $\frac{9}{11} > \frac{8}{9} > \frac{4}{7} > \frac{3}{5}$
C. $\frac{8}{9} > \frac{9}{11} > \frac{3}{5} > \frac{4}{7}$
D. $\frac{9}{11} > \frac{3}{5} > \frac{8}{9} > \frac{4}{7}$
2. In a certain code DOWN is written as '5@9#' and NAME as '#6%3'. How is MODE written in that code?
A. %653
B. %@63
C. %5@3
D. %@53
3. What is the highest number of satellite ISRO launched on Feb 15, 2017?
A. 105
B. 103
C. 102
D. 104
4. Neelu said, "I was playing cricket". Write in Third person form
A. Neelu says that she had been playing cricket
B. Neelu said that she has been playing cricket
C. Neelu said that she had been playing cricket
D. Neelu said that she was playing cricket
5. What least number must be added to 1056, so that the sum is completely divisible by 23?
A. 2
B. 3
C. 18
D. 21
6. Paw : Cat :: Hoof : ?
A. Lamb
B. Horse
C. Elephant
D. Tiger
7. Riya, Tiya, Diya are 3 sisters. If the following statements are all true, which of them is the youngest? Riya is the oldest, Diya is not the oldest, Tiya is not the youngest.
A. Tiya
B. Riya
C. Diya
D. both Tiya and Diya
8. Which country will host the 2024 World Telecommunication Standardisation Assembly (WTSA)?
A. USA
B. China
C. India
D. Singapore

9. Convert from Direct to Indirect speech: I said to him, "Why are you working so hard?"
- I asked him why he was working so hard.
 - I asked him why was he working so hard.
 - I asked him why had he been working so hard.
 - I asked him why he had been working so hard.
10. From a container having pure milk, 20% is replaced by water and the process is repeated thrice. At the end of the third operation, the milk is :
- 40%
 - 50%
 - 51.2%
 - 58.8%
11. Which of the following country is not part of QUAD?
- India
 - China
 - Japan
 - America
12. Arrange the words given below in a meaningful sequence:
- Presentation
 - Recommendation
 - Arrival
 - Discussion
 - Introduction
- 5, 3, 4, 1, 2
 - 3, 5, 4, 2, 1
 - 3, 5, 1, 4, 2
 - 5, 3, 1, 2, 4
13. A horse owner purchased 15 horses. After sometime, three of the horses died. He sold the remaining horses at Rs. 30,000 each and made a profit of 20% overall. Find the cost price of each horse.
- Rs. 24,000
 - Rs. 20,000
 - Rs. 25,000
 - Rs. 19,200
14. Five boys are sitting in a row. A is on the right of D and E is on the left of D, but to the right of C. If A is on the left of B, who is sitting in the middle.
- E
 - B
 - A
 - D
15. Who wrote the book "New Dimensions of India's Foreign Policy"?
- Atal Bihari Vajpayee
 - Abdul Kalam Azad
 - Amit Chaudhuri
 - Raghuram Rajan
16. Complete the sentence-
- Despite his best efforts to conceal his anger _____
- We could detect that he was very happy.
 - He failed to give us an impression of his agony.
 - He succeeded in camouflaging his emotions.
 - People came to know that he was annoyed.

17. Which sentence demonstrates correct usage of the past perfect tense?
- A. By the time I arrived, they already ate dinner
 - B. She has went to the market yesterday.
 - C. They have seen that movie last week.
 - D. The team had won the championship before the rain started.
18. A man's speed with the current is 15km/hr and the speed of the current is 2.5 km/hr. The man's speed against the current is:
- A. 8.5 km/hr
 - B. 9 km/hr
 - C. 10 km/hr
 - D. 12.5 km/hr
19. Statements:
Some flowers are beautiful.
Conclusions:
- I. Some flowers are beautiful
 - II. All beautiful things are red.
- A. Only conclusion I follows
 - B. Only conclusion II follows
 - C. Both conclusion I & II follow
 - D. Neither conclusion I nor II follow
20. Which Indian state shares its borders with the maximum number of other Indian states?
- A. Madhya Pradesh
 - B. Uttar Pradesh
 - C. Maharashtra
 - D. Assam

PART - B

21. Telecom switch board cables are used for
A. Indoor telecom wiring
B. Underground telecom wiring
C. Electrical switch board wiring
D. Outdoor telecom wiring
22. RG 8 cable can be used upto the length of _____.
A. 600 mtrs
B. 800 mtrs
C. 400 mtrs
D. 500 mtrs
23. In Telephone Exchange, Power supply card is responsible for
A. Power supply to telephone instruments
B. Power supply to peripheral and control cards
C. Power supply for bell circuit
D. Ringing power supply to subscribers
24. In the Windows Operating System when the files stored on the hard disk are deleted, the files:
A. Are moved to secondary hard disk
B. Are permanently deleted
C. Go into the Recycle Bin
D. Go into the Document Folder
25. A host on the Internet finds another host by its:
A. Postal Address
B. IP Address
C. Electronic Address
D. None of the above
26. High Quality, high speed, high volume are terms associated with:
A. Dot Matrix Printer
B. Plotter
C. Inkjet Printer
D. Laser Printer
27. The location of resources on the Internet is given by its:
A. URL
B. Protocol
C. Gateway
D. Router
28. DHCP is the abbreviation of
A. Dynamic Host Control Protocol
B. Dynamic Host Configuration Protocol
C. Dynamic Hyper Control Protocol
D. Dynamic Hyper Configuration Protocol

29. How many USB devices can be connected to the USB controller?
 A. 64 B.127 C. 255 D. 256
30. The example of an impact printer is
 A. Dot-matrix printer C. Laser printer
 B. Inkjet printer D. All of the above
31. Social engineering cyber-attacks are best countered by:
 A. Spam filters C. Firewalls
 B. Critical thinking D. Anti-virus software
32. Which of the following events will NOT generate an interrupt/exception to the CPU?
 A. Invalid memory address
 B. System call
 C. A keystroke on a keyboard
 D. Calling another user-defined function inside main function in C language
33. Which of the following is not a characteristic of a computer?
 A. Versatility C. Diligence
 B. Accuracy D. I.Q.
34. Which of the architecture is power efficient?
 A. CISC C. ISA
 B. RISC D. IANA
35. Data moves in and out of the CPU through embedded wires called
 A. Bus C. Lines
 B. Electronic wires D. Cables
36. STMP stands for?
 A. Simple Media Transfer Protocol
 B. Simple Media Transfer Protocol
 C. Simple Mail Transfer Protocol
 D. Simple Modem Transfer Protocol
37. The arrangement where all data pass through a central computer is known as:
 A. Ring Topology C. Star Topology
 B. Mesh Topology D. Bus Topology

38. Why are parity bits used?
- A. To encrypt data
 - B. To detect error
 - C. To identify user
 - D. None
39. Which of these is not a compression format file extension?
- A. .tar
 - B. .svg
 - C. .rar
 - D. .gz
40. Which of these operating systems is not Unix-based?
- A. BSD
 - B. Trustix
 - C. Vista
 - D. Ubuntu
41. Which of the following tree data structures is not a balanced binary tree?
- A. Splay tree
 - B. B-tree
 - C. AVL tree
 - D. Red-black tree
42. What is a zero-day vulnerability?
- A. A software bug that has been present for zero days
 - B. A security flaw that is exploited before the software developer releases a fix
 - C. Type of encryption vulnerability
 - D. A virus with no known cure
43. Which of the following are famous and common cyber-attacks used by hackers to infiltrate the user's system?
- A. DDos and Derive-by Downloads
 - B. Malware & Malvertising
 - C. Phishing and Password attacks
 - D. All of the above
44. A proxy server is used for which of the following?
- A. To provide TCP/IP
 - B. To process client requests for database access
 - C. To process client requests for web pages
 - D. To provide security against unauthorized users
45. What technology helps secure wireless LANs by encrypting data transmissions?
- A. VPN (Virtual Private Network)
 - B. WPA (Wi-Fi Protected Access)
 - C. DNS (Domain Name System)
 - D. HTTP (Hypertext Transfer Protocol)

46. Which graphical user interface (GUI) component allows users to navigate through the file system and folders?
 A. Taskbar
 B. Start Menu
 C. Desktop
 D. File Explorer
47. What utility tool is used in Windows to manage installed hardware devices?
 A. Device Manager
 B. Control Panel
 C. Disk Defragmenter
 D. Task Scheduler
48. What is the first program loaded into a computer's memory when it is turned on?
 A. BIOS (Basic Input/Output System)
 B. Operating System Kernel
 C. Bootloader
 D. Device Driver
49. Which CPU architecture is commonly used in modern computers?
 A. x86 B. ARM C. RISC D. CISC
50. What key components are part of the Von Neumann architecture?
 A. CPU, ALU and Registers
 B. CPU, GPU and RAM
 C. CPU, Memory and Input/Output
 D. CPU, Hard Drive and Monitor
51. Which operation adds an element to the rear end of a queue?
 A. Dequeue
 B. Enqueue
 C. Push
 D. Pop
52. What does a hashing function do in data structures?
 A. Sorts elements in ascending order
 B. Converts data into a hash code for storage or retrieval
 C. Allocates memory for data
 D. Deletes elements from the structure
53. Which algorithm is used for traversing all the vertices of a graph in a systematic order?
 A. Depth-First Search (DFS)
 B. Breadth-First Search (BFS)
 C. QuickSort
 D. MergeSort
54. A computer cannot boot if it does not have which of the following?
 A. Compiler B. Loader C. Operating System D. Assembler
55. Which of the following is NOT a Web Browser
 A. Safari B. Android C. Chrome D. Edge

56. Full form of DBMS?
 A. Data of Binary Management System
 B. Database Management System
 C. Database Management Service
 D. Data Backup Management System
57. Which of the following is not an example of DBMS??
 A. MySQL
 B. Microsoft Access
 C. IBM DB2
 D. Google
58. A telephone network communication is called _____
 A. Mess
 B. None of the options are correct
 C. Full Duplex
 D. Half Duplex
59. What is the full form of PRI?
 A. Primary Record Input
 B. Principal Record Interface
 C. Primary Rate Input
 D. Primary Rate Interface
60. An assembler is a program to translate the program from?
 A. Assembly to Machine
 B. Machine to low level program
 C. High level program to assembly
 D. Machine to assembly
61. What is the first step in the Software Development Life Cycle?
 A. System Designing
 B. System Development
 C. Preliminary Investigation
 D. Database Design
62. What is the meaning of EPABX In internet vocabulary?
 A. Electronic Protocol Automatic Branch Exchange
 B. Electron Proton Alpha Beta Exchange
 C. Electronic Private Automatic Branch Exchange
 D. None of the above
63. What is the prime reason to use Macro in MS Word, Power Point, Excel?
 A. Keystroke Recording
 B. Automate repetitive tasks
 C. Create reviews
 D. Create files
64. EPABX as a switching system make available
 A. The external switching functions of any organization
 B. Both internal and external switching functions of any organization
 C. Internal switching functions of any organization
 D. None

65. EPABX makes each extension behave as a trunk line is called as
- Direct Internet Dialing Facility (DID)
 - Direct Inwards Dialing Facility (DID)
 - Direct Intranet Dialing Facility (DID)
 - Direct Optional Dialing Facility (DOD)
66. What is the use of paging in operating system?
- To solve the internal fragmentation problem in operating system
 - To solve the external fragmentation problem in operating system
 - Both A & B
 - None
67. How many types of fragmentation occur in operating system?
- Physical fragmentation and virtual fragmentation
 - Internal fragmentation and external fragmentation
 - Virtual fragmentation
 - None
68. MESI stands for
- Module Exchange Series Valid
 - Modified, Exclusive, Shared, Invalid
 - Medium, Exchange, Series, Invalid
 - None
69. Steps involved in an instructions cycle:
- | | |
|---------------------------------------|---------------------------------------|
| A. Formal instruction, Encode, Decode | C. Fetch instruction, Decode, Execute |
| B. Fetch instruction, Decode, Encode | D. None |
70. Types of Micro-operation:
- Binary Micro-Operation, Logic Micro-operation, Arithmetic Micro-operation, Register transfer Micro-operation
 - Shift Micro-operation, logic micro-operation, Arithmetic Micro-operation, Register transfer Micro-operation
 - Both A & B
 - None
71. Maximum segment length of the 100Base-FX network:
- | | |
|---------------|---------------|
| A. 450 Meters | C. 422 Meters |
| B. 412 Meters | D. None |
72. What is Pseudo TTY?
- A false terminal allowing external machines to log in or to connect through Telnet
 - A false terminal allowing the computer to enter into an external portal
 - A false terminal allowing the telephone to connect USB port
 - None

73. What is UTP cable?
- A. An aluminum cable with resistance of 50 ohms
 - B. A copper cable with resistance of 100 ohms
 - C. A silver cable with resistance of 75 ohms
 - D. None
74. Difference between a PUSH and a POP:
- A. PUSH is used to add an item to stack, while POP is used to remove an item
 - B. PUSH is used to remove an item, while POP is used to add an item to a stack
 - C. None
 - D. Both A & B
75. Difference between NULL and VOID:
- A. NULL is a value, whereas VOID is a data identifier
 - B. NULL is a data identifier, VOID is a value
 - C. NULL is a file identifier, VOID is a value
 - D. None
76. What best describes a MAN?
- A. Covers a city or large campus area
 - B. Restricted to a single building
 - C. Spans globally
 - D. Connects devices within a country
77. In which network topology are all devices connected to a single central hub?
- A. Star
 - B. Ring
 - C. Bus
 - D. Mesh
78. Which technology is often used to establish WAN connections over telephone lines?
- A. DSL (Digital Subscriber Line)
 - B. Fibre – optic cables
 - C. Ethernet cables
 - D. Coaxial cables
79. Which of the following is a protocol used for secure communication over a computer network?
- A. HTTP
 - B. FTP
 - C. HTTPS
 - D. SMTP
80. What is the default port number for SSH?
- A. 22
 - B. 443
 - C. 21
 - D. 25

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SCHOOL OF PLANNING AND ARCHITECTURE, BHOPAL
 Written Test for the post of Communication and System Operator
 Date of Examination: 11/01/2024

ANSWER SHEET

ROLL NUMBER OF THE CANDIDATE:

| Q. | | | | |
|----|---|---|---|---|
| 1 | A | B | C | D |
| 2 | A | B | C | D |
| 3 | A | B | C | D |
| 4 | A | B | C | D |
| 5 | A | B | C | D |
| 6 | A | B | C | D |
| 7 | A | B | C | D |
| 8 | A | B | C | D |
| 9 | A | B | C | D |
| 10 | A | B | C | D |
| 11 | A | B | C | D |
| 12 | A | B | C | D |
| 13 | A | B | C | D |
| 14 | A | B | C | D |
| 15 | A | B | C | D |
| 16 | A | B | C | D |
| 17 | A | B | C | D |
| 18 | A | B | C | D |
| 19 | A | B | C | D |
| 20 | A | B | C | D |

| Q. | | | | |
|----|---|---|---|---|
| 21 | A | B | C | D |
| 22 | A | B | C | D |
| 23 | A | B | C | D |
| 24 | A | B | C | D |
| 25 | A | B | C | D |
| 26 | A | B | C | D |
| 27 | A | B | C | D |
| 28 | A | B | C | D |
| 29 | A | B | C | D |
| 30 | A | B | C | D |
| 31 | A | B | C | D |
| 32 | A | B | C | D |
| 33 | A | B | C | D |
| 34 | A | B | C | D |
| 35 | A | B | C | D |
| 36 | A | B | C | D |
| 37 | A | B | C | D |
| 38 | A | B | C | D |
| 39 | A | B | C | D |
| 40 | A | B | C | D |

| Q. | | | | |
|----|---|---|---|---|
| 41 | A | B | C | D |
| 42 | A | B | C | D |
| 43 | A | B | C | D |
| 44 | A | B | C | D |
| 45 | A | B | C | D |
| 46 | A | B | C | D |
| 47 | A | B | C | D |
| 48 | A | B | C | D |
| 49 | A | B | C | D |
| 50 | A | B | C | D |
| 51 | A | B | C | D |
| 52 | A | B | C | D |
| 53 | A | B | C | D |
| 54 | A | B | C | D |
| 55 | A | B | C | D |
| 56 | A | B | C | D |
| 57 | A | B | C | D |
| 58 | A | B | C | D |
| 59 | A | B | C | D |
| 60 | A | B | C | D |

| Q. | | | | |
|----|---|---|---|---|
| 61 | A | B | C | D |
| 62 | A | B | C | D |
| 63 | A | B | C | D |
| 64 | A | B | C | D |
| 65 | A | B | C | D |
| 66 | A | B | C | D |
| 67 | A | B | C | D |
| 68 | A | B | C | D |
| 69 | A | B | C | D |
| 70 | A | B | C | D |
| 71 | A | B | C | D |
| 72 | A | B | C | D |
| 73 | A | B | C | D |
| 74 | A | B | C | D |
| 75 | A | B | C | D |
| 76 | A | B | C | D |
| 77 | A | B | C | D |
| 78 | A | B | C | D |
| 79 | A | B | C | D |
| 80 | A | B | C | D |

Total questions attempted by the Candidate: _____

Number of answers marked more than one option: _____

I hereby declare that the information given above is correct.

Signature of the Candidate _____

Signature of the Invigilator _____