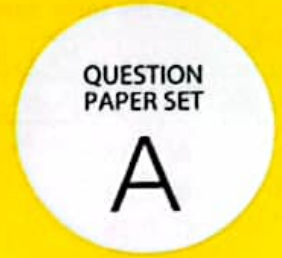




SOF NATIONAL CYBER OLYMPIAD 2023-24



DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 50 | Time: 1 hr.

Guidelines for the Candidate

- You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
- Write your **Name, School Code, Class, Section, Roll No.** and **Mobile Number** clearly on the **OMR Sheet** and do not forget to sign it. We will share your marks / result and other information related to SOF exams on your mobile number.
- The Question Paper comprises three sections:  
**Logical Reasoning** (10 Questions), **Computers and Information Technology** (35 Questions) and **Achievers Section** (5 Questions). Each question in Achievers Section carries 3 marks, whereas all other questions carry one mark each.
- All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
- There is only ONE correct answer. Choose only ONE option for an answer.
- To mark your choice of answers by darkening the circles on the OMR Sheet, use **HB Pencil** or **Blue / Black ball point pen** only. E.g.

**Q.16: Which of the following is a type of printer?**

- A. Cathode Ray Tube
- B. Light Emitting Diode
- C. Thermal Flatbed
- D. Liquid Crystal Display

As the correct answer is option C, you must darken the circle corresponding to option C on the OMR Sheet.



- Rough work should be done in the blank space provided in this booklet.
- Return the OMR Sheet to the invigilator at the end of the exam.
- Please fill in your personal details in the space provided before attempting the paper.

Name:.....

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## LOGICAL REASONING

1. Find the missing number, if same rule is followed in all the three figures.

8	13
42	

5	7
?	

6	11
34	

- B. \$%©\*×  
C. %\$@\*©  
D. \$©%\*@

6. Nikita celebrates her son's birthday on the day just after the second Friday of March 20XX. The date just after Nikita's son's birthday will be \_\_\_\_\_.





MARCH 20XX						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

2. In a row, Sahil is 15<sup>th</sup> from the right end and Rohan is 18<sup>th</sup> from the left end. If there are 45 students in the row, then how many students are there between Sahil and Rohan?

- A. 13  
B. 10  
C. 12  
D. 14

- A. 16<sup>th</sup> March  
B. 9<sup>th</sup> March  
C. 10<sup>th</sup> March  
D. 15<sup>th</sup> March

3. Which of the following Venn diagrams best represents the relationship amongst, "Ornaments, Necklaces and Bangles"?

- A.   
B.   
C.   
D. 

7. Select the correct water image of the given combination of letters.

MOUSE

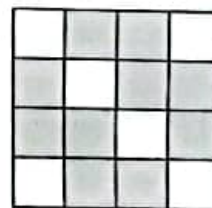
- A.   
B.   
C.   
D. 

4. There is a certain relationship between the pair of terms on the either side of : ∴. Identify the relationship on the left pair and find the missing term.

LPG : OTJ :: CNG : ?

- A. FRK  
B. EPJ  
C. FRJ  
D. ALE

8. How many lines of symmetry are there in the given figure?



- A. 1  
B. 3  
C. 2  
D. 4

5. Some letters are coded in a certain code as given below.

Letters	A	L	M	C	T	U	K	S	Y
Codes	#	\$	2	•	©	%	@	?	×

Find the code for LUCKY.

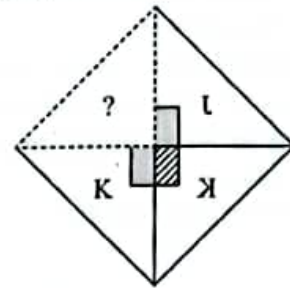
- A. \$%\*@×

9. Meenal is facing the balloon cart. If she turns 270° to her right and then 45° to her left, then what will she be facing now?



- A. Grocery store
- B. Garage
- C. Dental clinic
- D. Pizza shop

10. Select a figure from the options which will complete the given figure pattern.



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

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Which of the following is an input as well as an output device?

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

12. Which of the following statements is INCORRECT about primary memory?

- A. It is faster than secondary memory.
- B. It serves as an external memory of computer.
- C. RAM is a type of primary memory.
- D. It can be accessed directly by the processor.

13. Which of the following statements hold(s) true regarding multimedia?

**Statement 1 :** It is a combination of different contents such as text, audio, image, animation and video.

**Statement 2 :** It can work without using any hardware parts like CD, headphone or software like windows media player.

- A. Only Statement 1
- B. Only Statement 2
- C. Both Statement 1 and Statement 2
- D. Neither Statement 1 nor Statement 2

14. What is the function of the given tool in MS-Paint of Windows 10?



- A. It is used to draw free-hand drawings.
- B. It is used to select a color from the drawing.
- C. It is used to set foreground color in a picture.
- D. It is used to select the medium for the shape outline.

15. How can you create a bulleted list in MS-Word 2016?

- A. Home tab → Font group →
- B. Home tab → Font group →
- C. Insert tab → Paragraph group →
- D. Home tab → Paragraph group →

16. Identify the given icon of MS-PowerPoint 2016.

- A. Pictures
- B. SmartArt
- C. New Photo Album
- D. Chart



17. Identify the following:

- It is a connection method that provides wireless internet access over short distances.
  - It uses wi-fi technology and allows users to connect to the internet through radio waves.
  - It can be phone based, commercial or free at the public place.
- A. Dial-up connection  
B. Hotspot  
C. DSL  
D. Cable TV connection


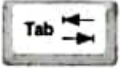
18. Which of the following statements hold(s) true regarding given logo?



**Statement 1** : It is an instant messaging app.

**Statement 2** : It allows you to create group chats and make group calls.

- A. Only Statement 1  
B. Only Statement 2  
C. Both Statement 1 and Statement 2  
D. Neither Statement 1 nor Statement 2

19. Pressing  +  keys you can open \_\_\_\_\_ in Windows 10.

- A. Snap view  
B. Peek Aero  
C. Task view  
D. Shake 3D





20. \_\_\_\_\_ is a technology that uses sensors to read and interpret hand movements as commands.

- A. Motion icon  
B. Touch pointer  
C. Gesture recognition  
D. Light gun

21. Identify the following:

- It is a virtual environment which is generated by computers.
  - Here, a person can interact with objects of this environment using some devices such as headset, gloves, etc.
- A. Virtual reality  
B. Authentic environment  
C. Biometric interaction  
D. All of these












22. Select the INCORRECT match.

- A.  : Displays the output on a large surface.
- B.  : Transfers hardcopy documents into a computer generated file.
- C.  : Makes mark on paper by striking a head.
- D.  : Draws or points to objects directly on computer screen.

23. Utility softwares are programs designed to perform maintenance work on a computer system, so that the system can function smoothly. Which among the following is/are utility software?

- (1) Word processing software  
(2) Disk defragmenter  
(3) Antivirus software  
(4) Desktop publishing software
- A. Both (1) and (2)  
B. Both (2) and (3)  
C. (1), (3) and (4)  
D. (1), (2), (3) and (4)

24. Which of the following keyboard shortcut keys is used to duplicate your current slide in MS-PowerPoint 2016?

- A.  +  + 
- B.  +  + 
- C.  +  + 
- D.  +  + 

25. Which of the following statements is/are CORRECT about computer memory?

- (1) Cache memory is faster than main memory.  
(2) The secondary memory is directly accessible via input/output operations.  
(3) Register memory is located in the CPU.
- A. Only (1)  
B. Only (2)  
C. Both (2) and (3)  
D. Both (1) and (3)

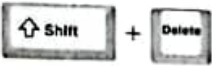

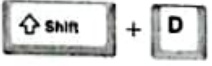

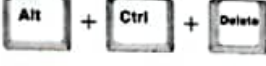



26. \_\_\_\_\_ is an animation that captures one frame at a time with physical objects that are moved between frames and when you play back the sequences, it creates the illusion of movement.

- A. Flattening animation
- B. Densing animation
- C. Stop motion animation
- D. Authoring animation





27. All the URLs are translated into numeric address using the \_\_\_\_\_. The numeric addresses, are called the \_\_\_\_\_.

- A. Web browser, Links
- B. DNS, IP addresses
- C. Search engine, Protocols
- D. HTTP, DNS

28. Which of the following key combinations is used to delete a file or folder permanently in Windows 10?

- A.  + 
- B.  + 
- C.  +  + 
- D. 

29. Match the following and select the correct option.




- | Column-I  | Column-II         |
|---|-------------------|
| (a)  | (i) Google Keep   |
| (b)  | (ii) Google News  |
| (c)  | (iii) Google Docs |
| (d)  | (iv) Google Forms |

- A. (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
- B. (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
- C. (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)
- D. (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)





30. Which of the following options allows you to add readymade objects as shown in the given image in MS-PowerPoint 2016?







- A. 

- B. 
- C. 
- D. 

31. Select the INCORRECT match with respect to MS-PowerPoint 2016.

- A.  - Draw a Text Box
- B.  - Insert Pictures
- C.  - Insert Header & Footer
- D.  - Start Screen Recording

32. Which of the following applications of Windows 10 provides a bundle of updated apps?

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

33. When a cash transaction is performed on a website, then which of the following protocols in the address bar ensures that the transaction is safe?

- A. FTP
- B. NNTP
- C. HTTPS
- D. FTPS

34. Which of the following statements hold(s) true regarding Firewall?

**Statement 1 :** It is a malicious software that is designed to damage the computer system.

**Statement 2 :** It is a security device that filters and monitors incoming and outgoing network traffic based on security rules.

- A. Only Statement 1
- B. Only Statement 2
- C. Both Statement 1 and Statement 2
- D. Neither Statement 1 nor Statement 2

35. Which of the following is an example of guided transmission media?

- A. Coaxial cable
- B. Microwave
- C. Radiowave
- D. None of these

36. Which of the following does not belong to the category of an Android operating system versions?

- A. Oreo
- B. Pie
- C. Nougat
- D. Catalina





37. Which of the following components are found inside the CPU box?

1. Hard disk drive
  2. SMPS
  3. Motherboard
- A. Both 1 and 2
  - B. Both 2 and 3
  - C. Both 1 and 3
  - D. 1, 2 and 3

38. Identify the following:

- It is a computerised device that accepts input, interprets it and produces audible language.
  - It is capable of translating any text or predefined input into audible speech.
- A. Microphone
  - B. Speech synthesizer
  - C. Speech convertor
  - D. Speech recogniser

39. Find the odd one out (regarding types of software).

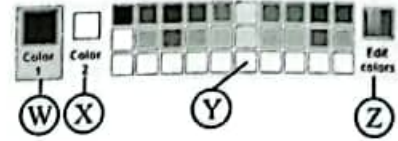
- A.  Bitdefender
- B. 
- C. 
- D. 

40. Which of the following statements is INCORRECT?

- A. A DVD is similar to a CD, but it has a larger storage capacity.
- B. Non-volatile memory uses continuous power to keep the data and programs stored in it.

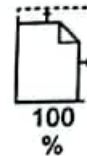
- C. Auxiliary memory is synonyms with secondary memory.
- D. Flash drive is a portable storage media.

41. Which of the following marked options when clicked, will allow you to create custom colors from the color palette in MS-Paint of Windows 10?







- A. (W)
- B. (X)
- C. (Y)
- D. (Z)

42. What is the function of given tool in MS-Paint of Windows 10?







- A. It is used to outline any shape.
- B. It is used to crop a part of the picture.
- C. It is used to bring a zoomed-in or zoomed-out image to its original size.
- D. It is used to rotate any image.

43. Which of the following options is used to align the text to both left and right margin to create a clean look in the page in MS-Word 2016?

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

44. Select the INCORRECT match with respect to Windows 10.

- A.  - A quick way to access system information.
- B.  - The file management application.
- C.  - Provides ability to change system settings.
- D.  - It is used to open Start Menu.

45. Identify the following:

- It is a network protocol used to virtually access a computer.
- It uses TCP/IP protocols for creating remote sessions.

- A. SNMP  
B. HTTP  
C. FTP  
D. Telnet

### ACHIEVERS SECTION

46. Select the CORRECT statement about given image.



- A. It is an application software suite that is owned and developed by Microsoft.  
B. It is a group of GUI operating system family.  
C. It is a Unix operating system developed by Apple Inc.  
D. None of these

47. Match the networking protocols given in Column-I with their explanations given in Column-II.

- | Column-I | Column-II  |
|----------|--|
| (a) FTP  | (i) It is used to manage devices on the network.   |
| (b) TCP  | (ii) It is used to transmit the files from one host to another.  |
| (c) SNMP | (iii) It is used to provide internet access.   |
| (d) ISP  | (iv) It is a transport layer protocol that facilitates the transmission of packets from source to destination. |

- A. (a)-(iv), (b)-(ii), (c)-(iii), (d)-(i)  
B. (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)  
C. (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)  
D. (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

48. A Uniform Resource Locator (URL) is a unique identifier used to locate a resource on the internet. It is generally categorised into three parts as shown in the given example.

<https://www.google.com/computer-network>

①

②

③

Select the CORRECT statement about the part marked as ①.

- A. It represents a protocol that contains a set of rules to determine how data is transmitted between devices on the network.  
B. It represents an IP address of the web page.  
C. It represents the domain name of the web page.  
D. It identifies a specific device attached to the website.

49. Match the following with respect to MS-Word 2016 Header & Footer Tools.

- | Column-I | Column-II  |
|----------|--|
| (a)      | (i) Used to insert document properties anywhere in the document.             |
| (b)      | (ii) Used to quickly insert document information.                            |
| (c)      | (iii) Used to insert pictures from online sources.                           |
| (d)      | (iv) Used to insert pictures from your computer or other connected computer. |
- A. (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)  
B. (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)  
C. (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)  
D. (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)

50. Which of the following statements are INCORRECT about the given option of MS-PowerPoint 2016?




- (i) It displays a list of all inserted objects in slide.  
(ii) It allows you to easily change the order of inserted objects.  
(iii) It allows you to fill the object with a solid color.  
(iv) It allows you to insert artistic effects to the objects.
- A. Both (i) and (ii)  
B. Both (iii) and (iv)  
C. Both (ii) and (iv)  
D. Both (i) and (iii)

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