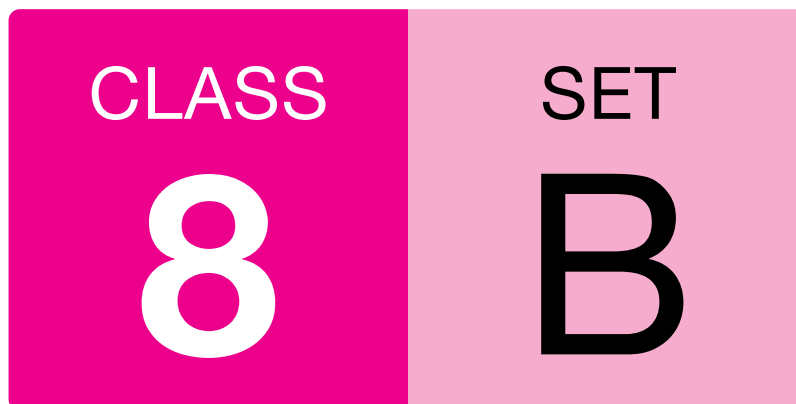




Total Questions : 50

Time : 1 hr.

Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
2. 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.
3. The Question Paper comprises four sections:
Logical Reasoning (10 Questions), **Computer Science** (30 Questions), **AI, Robotics and Information Technology** (5 Questions) and **Achievers Section** (5 Questions).

Each question in Achievers Section carries 3 marks, whereas all other questions carry 1 mark each.

4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
5. There is only ONE correct answer. Choose only ONE option for an answer.
6. 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.

16. (A) (B) (C) (D)

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



DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Name:.....

SOF Olympiad Roll No.:..... Contact No.:.....

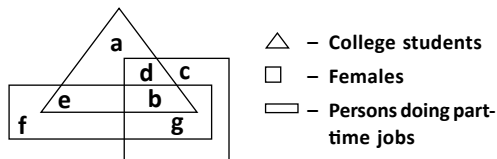
LOGICAL REASONING

1. Find the missing number, if a certain rule is followed either row-wise or column-wise.

7	8	5
5	4	3
3	2	7
222	160	?

- A. 83
B. 201
C. 290
D. 238

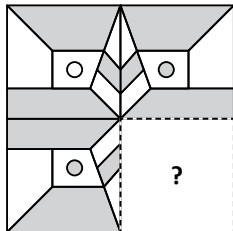
2. Study the given Venn diagram carefully and answer the following question.



Which of the following letters represents the males who are not college students but doing part time jobs?

- A. d
B. e
C. f
D. b

3. Select a figure from the options which will replace the (?) to complete the pattern in the given figure.



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

4. In a certain code language, 'in ba pe' means 'he has won', 'le ki ba' means 'she has lost' and 'in se pe' means 'he always won'. Which word in that language means 'he'?

- A. in
B. pe
C. se
D. Either in or pe

5. If the angle between the hour and the minute hand of a clock is 125° at P hours 10 minutes, then the value of P is _____.

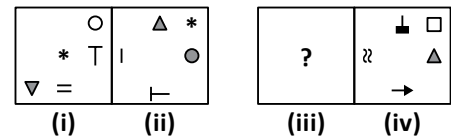
- A. 8
B. 6
C. 7
D. Can't be determined

6. Select the correct water image of the given combination of letters and numbers.

P3a417Rr9p6

- A. b39vIΔB1qbe
B. 0q01R7IΔ6E9
C. 9d61R7IΔ6E9
D. 0p91R7IΔa3P

7. There is a certain relationship between the figures (i) and (ii). Establish a similar relationship between figures (iii) and (iv) by selecting a suitable figure from the options that would replace the (?) in figure (iii).



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

8. Three different positions of a cube are given below. Which of the following elements will be at the top, if '#' is at the bottom?



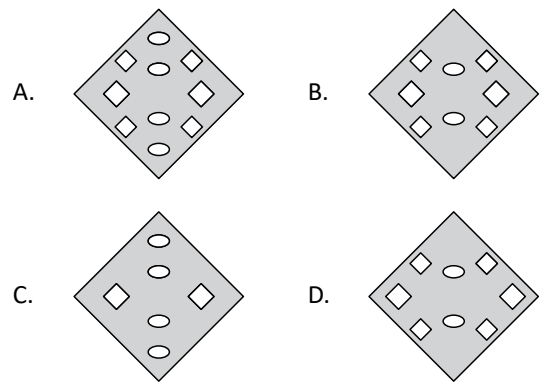
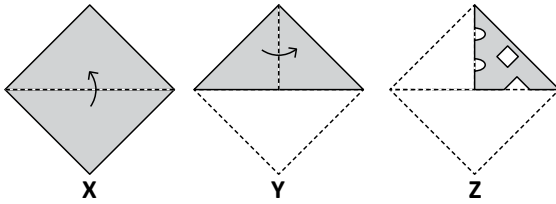
- A. @
B. x
C. =
D. •

9. How many such even digits are there in the given sequence, each of which is immediately followed by an odd digit but not immediately preceded by an even prime digit?

51674249359262878679582

- A. One
B. Two
C. Three
D. More than three

10. Three figures X, Y and Z showing a sequence of folding of a piece of paper are given. Fig. Z shows the manner in which the folded paper has been cut. Select a figure from the options which represents the unfolded form of Fig. Z.

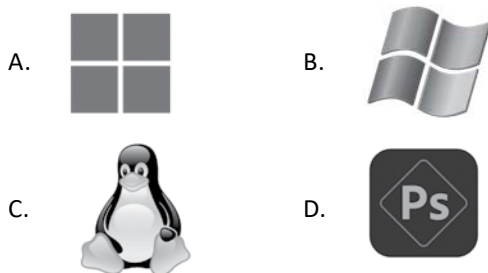


COMPUTER SCIENCE

11. Which of the following is an example of an absolute cell referencing in MS-Excel 2016?

- A. A1
- B. \$A1
- C. A\$1
- D. \$A\$1

12. Which of the following is not an example of an operating system?



13. What will be the result of the following formula in MS-Excel 2016?

=ODD(5.3)

- A. 6
- B. 5
- C. 7
- D. #Error

14. The digital data is converted to analog format by the modem at _____.

- A. The source computer
- B. The destination digital computer
- C. Both the source and the destination digital computers
- D. Neither the source nor destination digital computers

15. Which of the following statements are correct about bus topology?

- (i) It requires terminators at the centre of the cable.

- (ii) It uses a single main cable that, if fails, affects the whole network.

- (iii) It provides the more secure way of communication.

- (iv) It is also known as a line topology.

- A. (i) and (ii) only
- B. (i), (iii) and (iv) only
- C. (i) and (iii) only
- D. (ii) and (iv) only

16. A/An _____ address is a numerical label assigned to each device connected to a network that is used for communication over the internet. It comes in two main versions.

- A. IP
- B. MAC
- C. URL
- D. DNS

17. Select the correct order of steps to protect your presentation with a password in MS-PowerPoint 2016.

- A. Home tab → Editing group → Protect Presentation → Restrict Access
- B. File tab → Info → Protect Presentation → Encrypt with Password
- C. Review tab → Proofing group → Protect Presentation → Mask as Final
- D. View tab → Presentation Views group → Protect Presentation → Add a Digital Signature

18. Identify the following with respect to MS-Access 2016.

- It prevents you from entering invalid data in the child table that doesn't exist in the parent table.
- It establishes relationships between tables.
- It enables you to retrieve related data from multiple tables efficiently.

- A. Primary key
- B. Lookup field
- C. AutoNumber
- D. Enforcing referential integrity

19. Identify the following.

- It stores frequently accessed data for quick retrieval.
- It boosts overall processing speed and system performance.
- It is smaller in size but faster than main memory.
- It is located very close to or inside the CPU chip.

- A. Hard disk drive
B. Solid state drive
C. Cache memory
D. Both A and B

20. Which of the following options is correct about phishing in cyber safety?

- A. It is a method used to encrypt data to protect it from unauthorized access.
B. It is a type of cyber attack where attackers trick users into revealing personal or financial information.
C. It is a technique for creating strong passwords to secure online accounts.
D. It disrupts service availability by overloading a system with traffic from multiple sources.

21. Identify the following.

- It is used to indicate that a website is using HTTPS or a secure protocol.
- It is located at the address bar of the Microsoft Edge.

- A.  B. 
C.  D. 

22. Match the functions given in Column-I with their correct descriptions in Column-II with respect to MS-Excel 2016.

- | Column-I | Column-II |
|--------------|---|
| (a) =POWER() | (i) Returns how many numeric values are in a range |
| (b) =ROUND() | (ii) Raise a number to the power of another number |
| (c) =COUNT() | (iii) Returns the largest number in a selected group |
| (d) =MAX() | (iv) Returns a number to a specified number of decimal places |

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

23. Select the incorrect match with respect to MS-Access 2016.

- A. Table – It is core component of a database that is used to store data in structured format.
B. Form – It is used for entering or viewing data easily.
C. Query – It is a collection of user-defined functions, subroutines written in VBA code.
D. Report – It presents data in a printable layout, mainly for viewing or printing.

24. Which of the following statements hold(s) true about the Styles group in MS-Word 2016?

Statement 1 : It is a visual list of predefined text formatting styles (like headings, titles, subtitles, emphasis, etc.).

Statement 2 : It doesn't allow to create your own style in a document.

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

25. Which of the following types of references changes automatically when a formula is copied to another cell in MS-Excel 2016?

- A. Mixed cell reference
B. Absolute cell reference
C. Relative cell reference
D. Static cell reference

26. Which of the following options of Control Panel is used to configure your internet display and connection settings in Windows 11?

- A. 
B. 
C. 
D. 

27. Which of the following was the first network to use packet switching, a method of breaking data into small packets for transmission?

- A. ETHERNET
- B. ARPANET
- C. NSFNET
- D. ARCNET

28. Which of the following is not a valid digit in the binary number system?

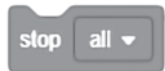
- A. 0
- B. 1
- C. 2
- D. Both B and C

29. Match the flowchart symbols given in Column-I with their uses given in Column-II.

- | Column-I | Column-II |
|---|---------------------------------|
| (a)  | (i) Decision/condition checking |
| (b)  | (ii) Start or End |
| (c)  | (iii) Input/Output |
| (d)  | (iv) Process or action step |

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

30. Which of the following blocks helps different sprites work together simultaneously in Scratch?

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

31. Which of the following is not a characteristic of a good algorithm?

- A. It must be clear and unambiguous.
- B. It should always give correct output.
- C. It should finish in a infinite number of steps.
- D. Both A and B

32. Which of the following options will open Bookmark window in MS-Word 2016?

- A. Insert tab → Links group → Bookmark
- B. View tab → Window group → Bookmark
- C. Page Layout tab → Arrange group → Bookmark
- D. Review tab → Create group → Bookmark

33. The given set of commands are present under the _____ group of the _____ tab in MS-PowerPoint 2016.



- A. Illustrations, Edit Master
- B. Master Layout, Slide Master
- C. Set Up, Slide Show
- D. Timings, Animations

34. Which of the following options is used to combine revisions from multiple authors into a single document in MS-Word 2016?

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

35. Which of the following options will allow you to record the rehearse timings in MS-PowerPoint 2016?

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

36. Select the incorrect match with respect to MS-Word 2016.

- A. All Markup – It shows all tracked changes, including insertions, deletions and formatting, with different colours and lines.
- B. Simple Markup – It shows a clean version of the document with a red line in the margin to indicate where changes have been made.
- C. No Markup – It removes tracked changes, hides the document as if changes have been accepted.
- D. Original – It shows the document in its original form, without any tracked changes.

37. Which of the following statements are incorrect about the given icon of MS-PowerPoint 2016?



- (i) It allows you to set a common layout across all slides.
 - (ii) It can be enabled by clicking on Slide Master under the Review tab.
 - (iii) It lets you apply consistent themes, fonts and placeholders.
 - (iv) It is mainly used for inserting animations on every slide.
- A. (i) and (ii) only B. (ii) and (iv) only
 - C. (i) and (iii) only D. (i), (ii) and (iv) only

38. FLOPS is a standard unit used to measure the performance of supercomputers, especially for scientific, simulations, and graphics computations. What does FLOPS stand for_____.

- A. Fixed-Logic Operations Per Second
- B. Floating-Logic Output Processing System
- C. Floating-Point Operations Per Second
- D. Fast Line Output Processing Speed

39. In MS-Excel 2016, if you do not put an equal to (=) before a formula, _____.

- A. \$\$\$\$\$ is displayed in the cell
- B. #REF! is displayed in the cell
- C. The formula is displayed as it is in the cell
- D. The formula will still execute and its result will be displayed in the cell

40. Which of the following statements hold(s) true about the Power User menu in Windows 11?

Statement 1 : It can be opened by right-clicking on the Start button or pressing the



Statement 2 : It offers shortcuts to Device Manager, Task Manager, File Explorer and more, streamlining common tasks.

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

AI, ROBOTICS AND INFORMATION TECHNOLOGY

41. Identify the given robot.



- A. Sophia Robot
- B. Asimo Robot
- C. Atlas Robot
- D. NAO Robot

42. Select the odd one out regarding the possibilities of robotics in AI.

- A. Space research
- B. Ocean research
- C. Environment research
- D. Emotion research

43. Which of the following apps can be used for advanced note-taking, saving multimedia and organising detailed notebooks?

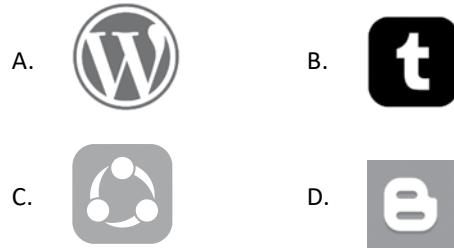


44. Identify the type of intelligence with the help of the given statement.

A person loves writing stories, enjoys reading books and is quick at learning new languages.

- A. Linguistic Intelligence
- B. Musical Intelligence
- C. Logical Intelligence
- D. Spatial Intelligence

45. Select the odd one out.



ACHIEVERS SECTION

46. Which of the following statements are correct about link colours in HTML?

- (i) By default, `alink` attributes defines the red color for active links.
- (ii) By default, `vlink` attributes defines the purple color for visited links.
- (iii) By default, `link` attributes defines the black color for unvisited links.

- A. (i) and (ii) only
- B. (ii) and (iii) only
- C. (i) and (iii) only
- D. (i), (ii) and (iii)

47. A school is upgrading its computer network to ensure that online learning and administrative systems remain operational even if a cable or node fails. The IT team is looking for a network topology that can continue to function without interruption in the event of such failures. Which network topology should the IT team choose to ensure the highest level of fault tolerance?

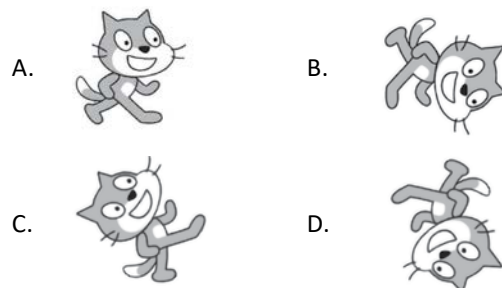
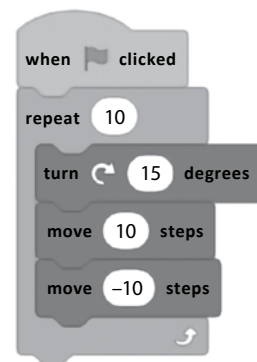
- A. Star topology
- B. Ring topology
- C. Mesh topology
- D. Bus topology

48. What will be the output of given HTML code?

```
<ol type="a" start="2">
  <li>Fruits
    <ol type="i" start="2">
      <li>Apple</li>
      <li>Banana</li>
      <li>Orange</li>
    </ol>
  </li>
  <li>Vegetables
    <ol type="i" start="1">
      <li>Carrot</li>
      <li>Spinach</li>
      <li>Broccoli</li>
    </ol>
  </li>
</ol>
```

- | | | | |
|----|---------------|----|---------------|
| A. | a. Fruits | B. | b. Fruits |
| | i. Apple | | ii. Apple |
| | ii. Banana | | iii. Banana |
| | iii. Orange | | iv. Orange |
| | b. Vegetables | | c. Vegetables |
| | i. Carrot | | i. Carrot |
| | ii. Spinach | | ii. Spinach |
| | iii. Broccoli | | iii. Broccoli |
| C. | b. Fruits | D. | Fruits |
| | 1. Apple | | Apple |
| | 2. Banana | | Banana |
| | 3. Orange | | Orange |
| | c. Vegetables | | Vegetables |
| | 1. Carrot | | Carrot |
| | 2. Spinach | | Spinach |
| | 3. Broccoli | | Broccoli |

49. What will be the position of the given Sprite by performing the following code snippet at a very first time in Scratch?



50. Which of the following statements hold(s) true about the given icon in MS-Word 2016?



Statement 1 : It is present under the Captions group of References tab.

Statement 2 : It is used to add references or acknowledge the source of information used in a document while writing your document.

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

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