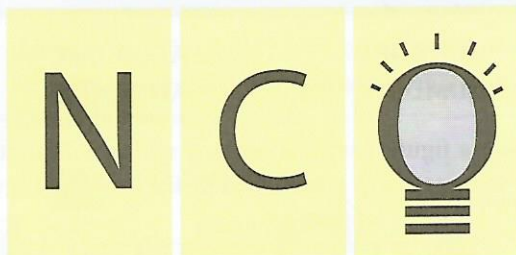
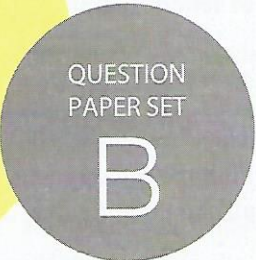


TCS iON
PRESENTS



SOF NATIONAL CYBER
OLYMPIAD 2018-19



DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Total Questions: 50 | Time: 1 hr.

Name:.....

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

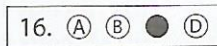
Guidelines for the Candidate

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 with you your marks/result/updates on your mobile number.
3. 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.
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.

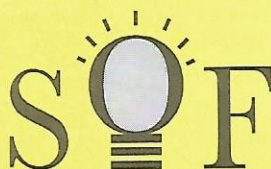
Q.16: Which of the following is a type of printer?

- 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.



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 on this page before attempting the paper.



Inspiring Young Minds Through Knowledge Olympiads

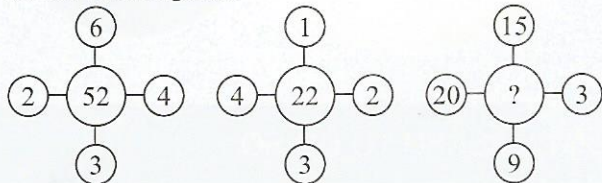
LOGICAL REASONING

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

US91Q4M5W3

- A. $\Omega S \partial I \textcircled{+} W \textcircled{R} \textcircled{M} \textcircled{3}$ B. $\Omega \textcircled{2} \partial I \textcircled{+} W \textcircled{R} \textcircled{M} \textcircled{3}$
 C. $\textcircled{E} W \textcircled{2} M \textcircled{+} \textcircled{Q} I \textcircled{2} U$ D. $\Omega \textcircled{2} \partial I \textcircled{+} W \textcircled{R} \textcircled{M} \textcircled{3}$

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



- A. 390 B. 205
 C. 104 D. 208

3. In the given question, two statements are followed by two conclusions numbered I and II. You have to consider the given statements to be true even if they seem to be at variance from the commonly known facts. Then decide which of the given conclusions logically follow from the given two statements, disregarding the commonly known facts.

Statements : All books are clocks.

All clocks are pens.

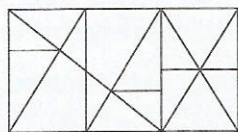
Conclusions : I. All books are pens.

II. Some pens are books.

- A. Only I B. Only II
 C. Both I and II D. Neither I nor II

4. Count the number of triangles in the given figure.

- A. 15
 B. 18
 C. 20
 D. None of these



5. Parents of a bride go to a jeweller's shop to buy a diamond ring. The jeweller shows them 5 different rings D, E, F, G and H. The difference in their prices is as follows:
 (i) D costs twice as much as E.
 (ii) E costs four and a half times as much as F.
 (iii) F costs half as much as G.
 (iv) G costs half as much as H.
 (v) H costs less than D but more than F.

Which of the following represents the rings in ascending order of their prices?

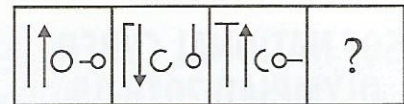
- A. E, G, H, D, F B. D, E, G, H, F
 C. H, F, G, D, E D. F, G, H, E, D

6. In a certain code language, 'PAPER' is written as 'OZODQ'. How will 'BIOLOGY' be written in that language?

- A. AHNKNFY B. AFOBHMXX
 C. ADMDJFX D. AHNKNFX

7. Select a figure from the options which will continue the same series as established by the Problem Figures.

Problem Figures

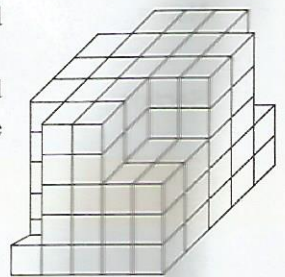


- A. B.
 C. D.

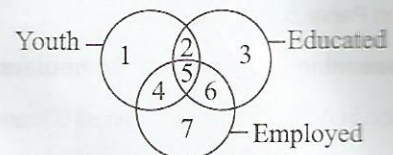
8. The given solid is painted red on all the faces.

How many cubes in the second layer from the top do not have any coloured faces?

- A. 4
 B. 6
 C. 8
 D. 9

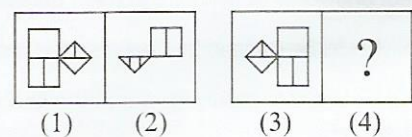


9. Study the given Venn diagram and identify the number representing youth who are employed but not educated.



- A. 4 only B. 5, 6
 C. 1, 4, 7 D. 4, 7

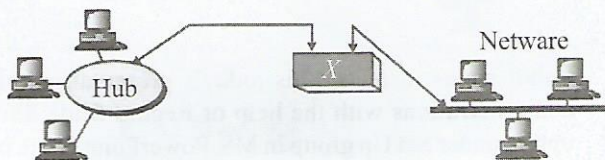
10. There is a certain relationship between figures (1) and (2). Establish the same relationship between the figures (3) and (4) by selecting a suitable figure from the options that would replace the (?) in figure (4).



- A. B.
 C. D.

COMPUTERS AND INFORMATION TECHNOLOGY

11. Identify the Device X. It is a hardware device used to connect two separate networks that use different communication protocols.



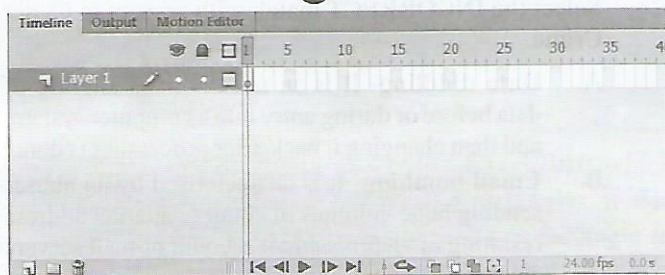
- A. Modem
 B. NIC
 C. Gateway
 D. NFC
12. Which of the following HTML codes will make the color of the text as red, font style as "Times New Roman" and size of the text as "4"?

- A. ``
 B. ``
 C. ``
 D. `<font="Times New Roman" bgcolor="red" size="4" >`

13. In the FONT tag of HTML, the browser's default value of the SIZE attribute is _____ and the maximum value is _____.

- A. 4,8
 B. 3,10
 C. 3,7
 D. 4,7

14. Observe the given Flash CS6 snapshot and identify the icon marked as 1.



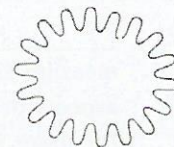
- A. Edit Multiple Frames
 B. Onion Skin
 C. New Layer
 D. Modify Markers

15. Which of the following HTML codes will place an image with a 100 pixels margin on top and bottom?

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

16. With the help of which tool in Flash CS6, we are able to draw the given image?

- A. 3D Rotation Tool
 B. Bone Tool
 C. Brush Tool
 D. Deco Tool



17. Which keystroke is used to "Create a New Symbol" in Flash CS6?

- A. **Ctrl** + **Enter**
 B. **Ctrl** + **F8**
 C. **Ctrl** + **F5**
 D. **Ctrl** + **F1**

18. Complete the following steps by replacing the question mark (?) to get the latest updates available for Microsoft Office in MS-Word 2010.

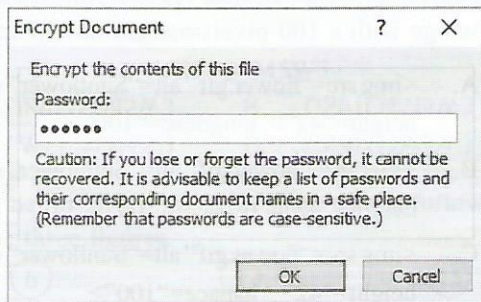
File tab → ? → Click on 'Check for updates'





- A. Info
 B. Recent
 C. Help
 D. New

19. CASBs are cloud-based security policy software placed between cloud service consumers and cloud service providers which monitor all activities and enforce security policies. What is the full form of CASB?

- A. Cloud Access System Broadly
 B. Cloud Agent Security Beyond
 C. Cloud Access System Broker
 D. Cloud Access Security Broker

20. Which of the following options is used to protect a document with the password in MS-Word 2010 as shown below in the given snapshot?




- A.  B. 
- C.  D. 


21. _____ is the technology that can identify, measure and analyze human behaviour and physical aspects of the body's structure and form. It allows for more natural interactions between humans and machines, including interactions related to touch, image, speech and body language recognition. It leads an intelligent conversation with users, responds to their questions and performs adequate non-verbal behaviour.

- A. Virtual Computer
B. Virtual Agent
C. Cyber Character
D. Echo Agent

22. Which of the following steps is used to recover the unsaved documents in MS-Word 2010?




- A. File tab → Recent → Click on 'Recover Unsaved Documents'
B. File tab → Info → Manage Versions → Click on 'Recover Unsaved Documents'
C. File tab → Help → Options → Click on 'Recover Unsaved documents'
D. Both A and B

23. Replace  in the given steps, if you want to hide spelling errors in MS-PowerPoint 2010.

File tab → Options → PowerPoint Options dialog box →  → Under "when correcting spelling in PowerPoint" section, Click on "Hide spelling errors" checkbox → Click OK

- A. Click on "Advanced"
B. Click on "General"
C. Click on "Proofing"
D. Click on "Language"





24. Which of the following options of MS-PowerPoint 2010 is used to run the presentation in "kiosk mode"?


- A.  B. 
- C.  D. All of these




25. Rahul wants to record his today's presentation with audio narrations with the help of Record Slide Show option under Set Up group in MS-PowerPoint 2010, but the option of the Narrations and laser point is disabled in the "Record Slide Show" dialog box. Which of the following options might be the reason for it?

- A. Digital personal assistant is not installed in the computer.
B. Microphone is not attached to the computer.
C. Theme for the presentation is not applied.
D. Both A and B

26. Which of the following is NOT a free (or open source) software?

- A.  B.  Thunderbird
- C.  D.  KeePass

27. Which of the following data types is being represented by  in the given snapshot of MS-Access 2010?

	ID		Click to Add
1	1	 (1)	
2	2	 (2)	
3	(New)	 (3)	

- A. Memo
B. Currency
C. Attachment
D. Hyperlink

28. Select the INCORRECT match with respect to Cyber Crime.

- A. **Data diddling**- It is an unauthorised altering of data before or during entry into a computer system, and then changing it back after processing is done.
B. **Email bombing**- It is characterised by an abuser sending huge volumes of email to a target address resulting in victim's email account or mail servers crashing.
C. **SQL injections**- A SQL injection is a technique that allows hackers to attack any type of unprotected or improperly protected SQL database.
D. **Virus dissemination**- It is a hard-to-find loophole in a web site, making it vulnerable to attack. In this the hacker infects a web page with a malicious client-side script or program.

29. The image shown below is of a _____, which is an 8-pin connector that is commonly used to connect computers onto Ethernet-based Local Area Networks (LAN).



- A. RCA connector
 B. RJ 45 Connector
 C. PS/2 Port
 D. VGA Port
30. Consider the given snapshot of MS-Excel 2010, what would be the result of the given formula?

=COUNT(A1:A4,17)

	A
1	\$56
2	\$89
3	\$21
4	\$12

- A. 5
 B. 4
 C. \$4
 D. \$178
31. Replace the (?) from the given steps, if you want to set the options displayed in the given snapshot of MS-Excel 2010.

File tab → options → ?

When correcting spelling in Microsoft Office programs

- Ignore words in UPPERCASE
- Ignore words that contain numbers
- Ignore Internet and file addresses
- Flag repeated words
- Enforce accented uppercase in French
- Suggest from main dictionary only

- A. Proofing
 B. General
 C. Advanced
 D. Language
32. Observe the given snapshot of MS-Excel 2010, which shows the length and breadth of 5 rectangles. It also shows you the formula of perimeter of rectangle in cell D2.

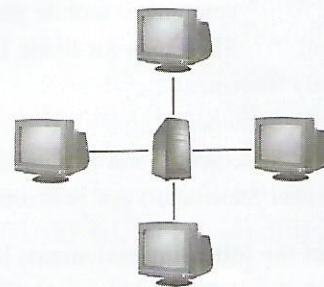
	A	B	C	D
1	Rectangle	Length	Breadth	Perimeter
2	1	10	30	=2*(\$B2+\$C2)
3	2	30	20	
4	3	20	20	
5	4	50	50	
6	5	40	20	

What would be the result in cells D2 , D3, D4, D5 and D6 respectively, after pressing the enter key in the cell D2 and then dragging the formula down to cell D6?

- A. 90, 100,60,100,120
 B. 80, 100,80,100,20
 C. 80, 100,80,200,120
 D. 100, 10,80,200,20
33. _____ is a computer input device that allows the user to enter characters or commands formed by pressing several keys together, like playing on a piano. A large number of combinations are available from a small number of keys that allows text or commands to be entered with one hand, leaving the other hand free.
- A. Cyan Keyboard
 B. Chorded keyboard
 C. Cloud keyboard
 D. None of these
34. Select the odd one out.



35. Which of the following statements is INCORRECT regarding the diagram shown here?



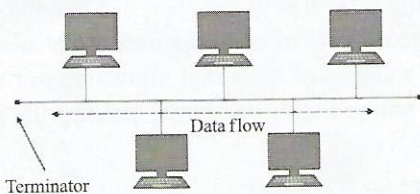
- A. A single operating system is being accessed by multiple users.
 B. A fault in any monitor will not affect the working of other monitors.
 C. A palm handheld computer is a good example of the multi-user operating system.
 D. Both A and B
36. Which of the following is a type of relationship that can be applied in Access database in MS-Access 2010?
- A. One-to-One
 B. One-to-Many
 C. Many-to-Many
 D. All of these

37. Identify the following.

- It is a social networking website for people in professional occupations.
- It is mainly used for professional networking.
- Its CEO is Jeff Weiner.



38. Which of the following statements hold(s) true regarding the Bus topology?



Statement 1 : It is a network setup in which each computer and network device are connected to a single cable or backbone.

Statement 2 : It requires less cable length than star topology.

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

39. Which of the following statements hold(s) true about SD cards?

Statement 1 : It is a non-volatile memory card used in portable devices such as tablet computers, mobile phones, etc.

Statement 2 : SD stands for Static Dynamic.

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

40. Which of the following statements hold(s) true about the given utility program?



Statement 1 : It is a computer maintenance utility included in Microsoft Windows designed to free up disk space on a computer's hard drive.

Statement 2 : It first searches and analyzes the hard drive for files that are no longer of any use, and then removes the unnecessary files.

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

41. Identify the following:

- It is an act of obtaining secrets without the permission of the owner's information via the Internet, networks or individual computers by means of malicious software techniques.
- It can be conducted by an individual, a group or groups.

- A. Cyber Spoofing
- B. Cyber Spying
- C. Cyber Sniffing
- D. Cyber Defamation

42. _____ is a software program or set of instructions programmed on a hardware device. It provides the necessary instructions for how the device communicates with the other computer hardware. It is typically stored in the flash ROM of a hardware device.

- A. Spamming
- B. Firmware
- C. Utility software
- D. None of these

43. Select the odd one out.



44. Identify the following :



- It is a type of electrical cable that has an inner conductor surrounded by a tubular insulating layer surrounded by a tubular conducting shield.
- It is used in computer networks and to deliver cable TV services to end users.

- A. Twisted pair cable
- B. Coaxial cable
- C. Fibre optic cable
- D. None of these

45. Arrange the following types of memory in ascending order according to their accessing speed.

RAM, DVD/CD/Pendrive, Cache

- A. Cache → DVD/CD/Pendrive → RAM
- B. DVD/CD/Pendrive → RAM → Cache
- C. RAM → DVD/CD/Pendrive → Cache
- D. Cache → RAM → DVD/CD/Pendrive

ACHIEVERS SECTION

46. What would be the output of the given HTML code?

```
<html>
<h3><i><u>List of Birds</u></i></h3>
<ol>
<li>Parrot</li>
<li>Sparrow</li>
<li>Crane</li>
<hr align="left" width="5%">
<li>Parrot</li>
<li>Hummingbird</li>
<li>Albatross</li>
</ol>
</html>
```

- | | |
|--|--|
| <p>A. <u>List of Birds</u></p> <ol style="list-style-type: none"> 1. Parrot 2. Sparrow 3. Crane <hr style="width: 20%; margin-left: 0;"/> <ol style="list-style-type: none"> 4. Parrot 5. Hummingbird 6. Albatross | <p>B. <u>List of Birds</u></p> <ol style="list-style-type: none"> 1. Parrot 2. Sparrow 3. Crane <hr style="width: 20%; margin-left: 0;"/> <ol style="list-style-type: none"> 4. Parrot 5. Hummingbird 6. Albatross |
| <p>C. <u>List of Birds</u></p> <ol style="list-style-type: none"> 1. Parrot 2. Sparrow 3. Crane 4. Parrot 5. Hummingbird 6. Albatross | <p>D. List of Birds</p> <ul style="list-style-type: none"> • Parrot • Sparrow • Crane <hr style="width: 20%; margin-left: 0;"/> <ul style="list-style-type: none"> • Parrot • Hummingbird • Albatross |

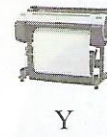
47. Suppose a person went for a holiday trip with his family. After coming back to home he wants to check the status of the money spent on each day of the trip to see if it is "within budget" or "over budget". Which of the following formulas is suitable regarding the given snapshot in MS-Excel 2010?

	A	B	C	D
1	Holiday Trip	Budgeted	Actual	Status
2	Day 1	1500	1745	
3	Day 2	1200	1565	
4	Day 3	1200	1665	

- A. =IF(C2>B2, "over budget" AND "within budget")
 B. =IF(C2>B2, "over budget" OR "within budget")
 C. =IF(C2>B2, "over budget", "within budget")
 D. =IF(C2>B2, "over budget" || "within budget")

48. Which of the following devices (marked as X, Y and Z) describes the following statements?

1. It is a vector graphics printing device used to print graphical plots on paper.
2. It is used for graphical applications like Computer Aided Designing (CAD) and for printing maps and drawings.
3. It draws lines using pen.



- A. Only X
 B. Only X and Y
 C. Only Z
 D. X, Y and Z

49. Match the following icons of 'create' tab in Column-I with their descriptions in Column-II with respect to MS-Access 2010.

- | Column-I | Column-II |
|----------|---|
| (a) | (i) Create a form with no controls or format |
| (b) | (ii) Add logic to your database to automate repetitive tasks and create more usable interfaces |
| (c) | (iii) Insert or create portions of a database or an entire database application |
| (d) | (iv) Create a basic report of data in the current query or table, to which you can add features such as groups or total |
- A. (a)- (iv), (b)- (i), (c)-(iii), (d)- (ii)
 B. (a)- (i), (b)- (iv), (c)-(iii), (d)- (ii)
 C. (a)- (iv), (b)- (ii), (c)-(iii), (d)- (i)
 D. (a)- (iv), (b)- (i), (c)-(ii), (d)- (iii)

50. Which of the following statements hold(s) true about the given feature of Windows 7?

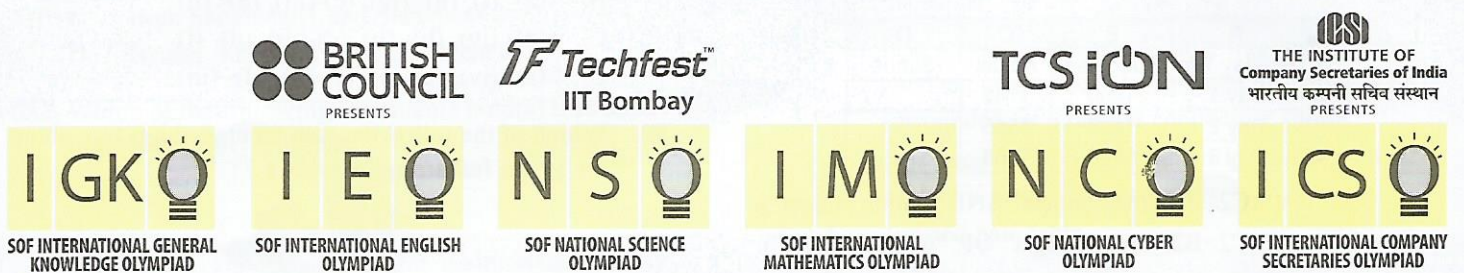


Statement 1 : This feature is known as Remote Window Transmit.

Statement 2 : It is a feature of the Help and Support System in which you allow another user take over your computer via Internet and figure out your problem for you.

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

SPACE FOR ROUGH WORK



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