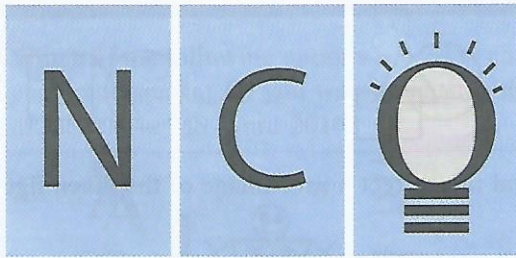
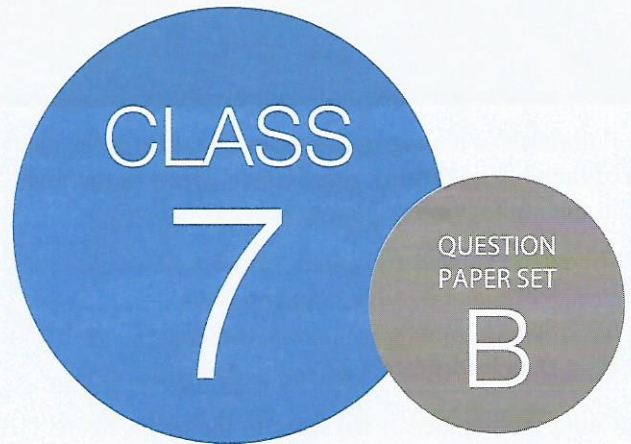


TCS iON
PRESENTS



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.

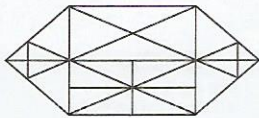
16. (A) (B) (C) (D)

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 on this page before attempting the paper.

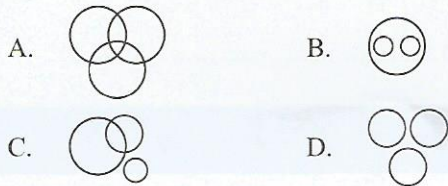
LOGICAL REASONING

1. Pointing to a photograph, Kavita said, "He is the son of the only son of my grandfather". How is the man in the photograph related to Kavita?
- A. Brother
B. Uncle
C. Son
D. Data inadequate

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

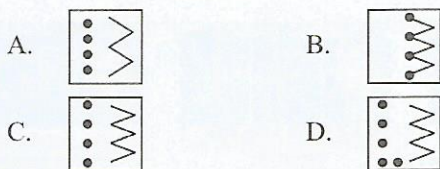


- A. 25
B. 26
C. 28
D. None of these
3. Which of the following Venn diagrams best represents the relationship amongst, "Paper, Stationery, Pen"?

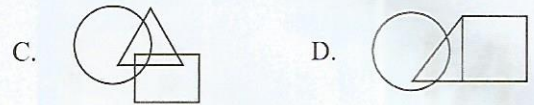
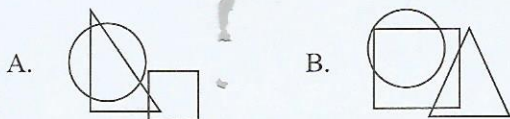
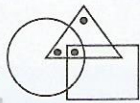


4. If $20 - 20$ means 400, $18 \div 4$ means 22, 16×12 means 4, then $100 - 10 \times 1000 \div 1000 \div 100 \times 10 = ?$
- A. 0
B. 20
C. 1090
D. 1900

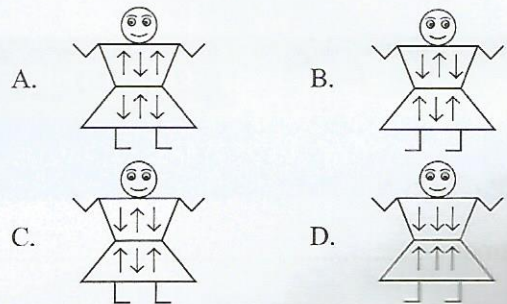
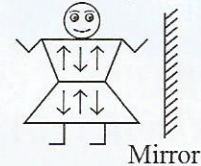
5. If is related to in some way, then in the same way is related to _____.



6. Select a figure from the options which satisfies the same condition of placement of the dots as in the given figure.

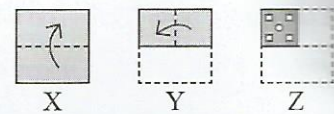


7. Find the correct mirror image of the given figure.

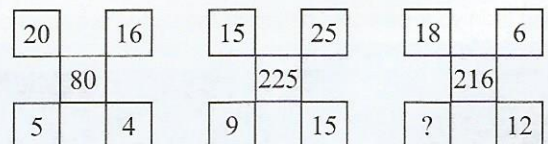


8. What is the smallest number of ducks that could swim in this formation - two ducks in front of three ducks, two ducks behind three ducks?
- A. 6
B. 5
C. 4
D. 3

9. The given question consists of a set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Fig. (Z) shows the manner in which the folded paper has been cut. Select a figure from the options which would most closely resemble the unfolded form of Fig. (Z).



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



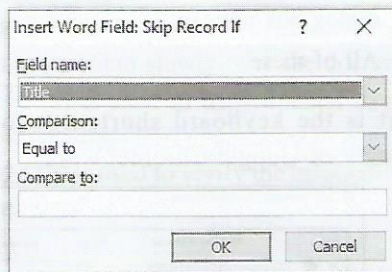
- A. 18
B. 36
C. 12
D. 14

COMPUTERS AND INFORMATION TECHNOLOGY

11. Which of the following options is used to change the paragraph spacing, if you want to change the styles of the text in MS-Word 2010?

- A.  B. 
- C.  D. 

12. You can add decision making ability to the mail merge. One of its examples is shown in the dialog box given below. Which of the following options will help you to do the same in MS-Word 2010?







- A. Update Labels
B. Rules
C. Match fields
D. Envelops

13. Identify the following:

- It is a set of commands, instructions, rules and syntax.
 - It is used to create a software program.
- A. Integrated chip
B. Software package
C. Operating system
D. Programming language

14. _____ icon is used when you want to share your presentations remotely to any audience, across the globe using an URL in MS-PowerPoint 2010.

- A.  B. 
- C.  D. 

15. SIMM is a module that contains one or more memory chips in a small circuit board. For which of the following types of memory chips is it used?

- A. ROM
B. RAM
C. EROM
D. PROM

16. Which of the following steps are CORRECT, if you want to rename a style in the Styles Gallery under Styles group in MS-Word 2010?

- A. Click on the dialog box launcher of Styles group → Click on Apply styles → Select Rename option.
B. Double click on a style to rename it.
C. Right click on a style → Select Rename option.
D. Click on the 'Change Styles' drop down → Select Rename option.

17. How many placeholders can be placed under Slide Master View in MS-PowerPoint 2010?

- A. 2 only
B. 3 only
C. 1 only
D. You can add as many placeholders as you like.

18. Which of the following keyboard shortcuts will be used to expand the formula bar, as shown in the given transformation from Figure-I to Figure-II in MS-Excel 2010?

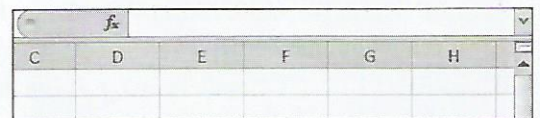


Figure-I

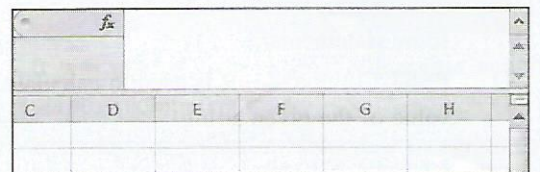
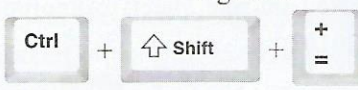
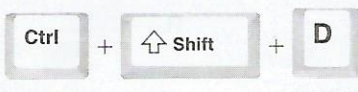
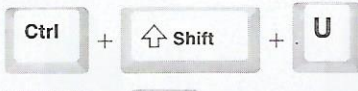




Figure-II

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

19. What would be the output of the following QBasic code?

```
FS = MID$("Predefined colour name", 16, 4)
PRINT FS
```

- A. lour
B. ur n
C. name
D. r nam

20. What would be the output, if you press  (present in Number group of Home tab), after selecting cells A2 to D2, as shown in the given snapshot of MS-Excel 2010?

	A	B	C	D	E
1	English	Maths	Science	Hindi	
2	78	87	45.5	76.5	
3					

- A.

	A	B	C	D	E
1	English	Maths	Science	Hindi	
2	78	87	45.5	76.5	
3					
- B.

	A	B	C	D	E
1	English	Maths	Science	Hindi	
2	78.00	87.00	45.50	76.50	
3					
- C.





	A	B	C	D	E
1	English	Maths	Science	Hindi	
2	78.00	87.00	45.00	76.00	
3					
- D.

	A	B	C	D	E
1	English	Maths	Science	Hindi	
2	78.0	87.0	45.0	76.0	
3					

21. Select the INCORRECT match regarding the QBASIC code.

- A. LINE (10, 10)-(100, 200), 14, B-Make a box with Yellow outline border
- B. PRINT LEN ("Computer parts") – Print the length of the given string *i.e.* 14.
- C. GOTO Statement – It can be used to skip or repeat some statements.
- D. PSET Command – It is used to calculate the mid value of the given string.


22. Which of the following icons is used to move the charts inserted on one sheet to another sheet in MS-Excel 2010?

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

23. Which of the following codes is CORRECT to set the whole background of the text to Cyan and foreground color as High Intensity White in a QBASIC program?

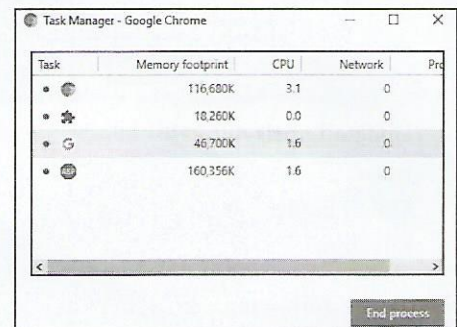
- A. COLOR 15, 3
PRINT "QBASIC is a high level programming language"
- B. COLOR 16, 4
PRINT "QBASIC is a high level programming language"


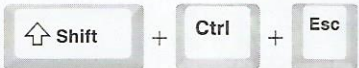
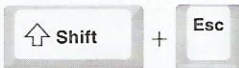
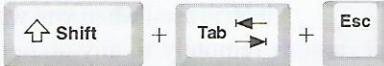
- C. COLOR 12, 2
PRINT "QBASIC is a high level programming language"
- D. COLOR 15, 0.3
PRINT "QBASIC is a high level programming language"

24. Which of the following statements is CORRECT about  icon in MS-PowerPoint 2010?




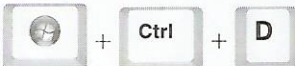
- A. Action assigned to an object will be performed during slide show when object is clicked.
- B. You can insert a play button to play a sound with action button.
- C. When we click on action button the Action Settings dialog box appears.
- D. All of these.

25. What is the keyboard shortcut to open the Task Manager of Google Chrome?



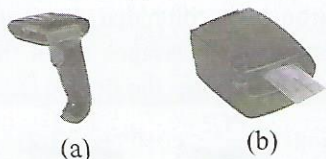
- A. 
- B. 
- C. 
- D. 

26. _____ Shortcut key is used to show or hide the desktop in Windows 7 when various applications are running.

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

27. _____ is a hidden computer virus that attacks operating system processes and averts typical anti-virus or anti-malware scans. It hides in files, partitions and boot sectors.
- Metamorphic virus
 - Stealth virus
 - File infector virus
 - Trojan Horse Virus

28. Observe the given images (a) and (b) and select the CORRECT statement(s) about them.



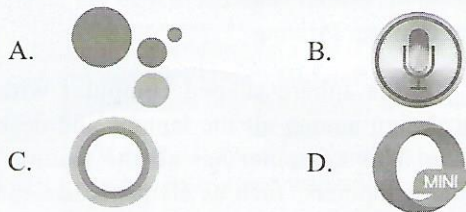
- Both (a) and (b) are hand-held scanners in which user drags them slowly over the document.
 - Image (a) is used in departmental stores and in supermarkets.
 - Image (b) is used to verify the originality of paper documents.
- Only (i)
 - Only (ii)
 - Both (ii) and (iii)
 - Both (i) and (iii)

29. Identify the technology with the help of given examples:

- It is useful in mental care hospitals where doctor can track each and every activity of the patient.
- Hospitals also use this technology for locating and tracking all the activities of the newly born babies.

- Optical Mark Reader
- Magnetic-Ink Character Recognition
- Radio-Frequency Identification
- Cloud Computing

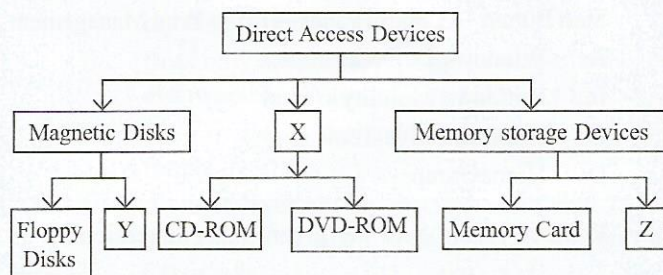
30. Which of the following is NOT a virtual assistant software?



31. The stepped reckoner was a digital mechanical calculator invented by the German mathematician _____. It was the first calculator that could perform all four arithmetic operations.

- Gottfried Wilhelm von Leibniz
- Charles Babbage
- Herman Hollerith
- John Mauchly

32. Which of the following options will replace X, Y and Z in the given diagram?



- X-Magnetic tape, Y-Flash drive, Z- Hard disks
- X-Magnetic tape, Y-CD-R, Z-Flash drive
- X-Optical disks, Y-Hard disks, Z-Flash drive
- X-Optical disks, Y-Hard disks, Z-Disk Pack

33. Identify the given computer known as ENIAC and select the statement(s) which is/are INCORRECT about it.



- It was amongst the earliest electronic general-purpose computers made.
 - It stands for Electronic Nuclear Integrator and computer.
 - It was designed by John Mauchly and J. Presper Eckert of the University of Pennsylvania.
 - It was designed during the third generation of computers.
- Only (ii)
 - Only (iii)
 - Both (ii) and (iii)
 - Both (ii) and (iv)

34. Which of the following is the fastest supercomputer established at Indian Institute of Tropical Meteorology (IITM), Pune in India dedicated for weather forecasting and climate monitoring?

- Aaditya
- Anupam
- Pratyush
- Param Yuva II

35. Which of the following options will replace (?) in the given steps to manage the local printers and remote print servers in Windows 7?

Start Button → Control Panel → (?) → Print Management

- A. Windows Defender
- B. Windows Mobility Center
- C. Administrative Tools
- D. HomeGroup

36. Replace X and Y in the given unit conversions.

1 Exa byte = X

1 Yotta byte = Y

X

Y

- A. 1024 Geop Byte, 1024 Yotta Byte
- B. 1024 Peta Byte, 1024 Zetta Byte
- C. 1024 Mega Byte 1024 Tera Byte
- D. 1024 Giga Byte 1024 Bronto Byte

37. Which of the following statements is/are CORRECT about the given icon in Windows 7?



- (i) To access this icon, Go to Start → Accessories → Ease of Access → Power options
 - (ii) To access this icon, Go to start → Control Panel → Power Options
 - (iii) You cannot create custom power plan with this icon.
- A. Only (i)
 - B. Only (ii)
 - C. Only (iii)
 - D. Both (i) and (ii)

38. Which of the following services is NOT offered by Google?

A.



B.



C.



D. All of these

39. Which of the following statements is CORRECT regarding the given app?

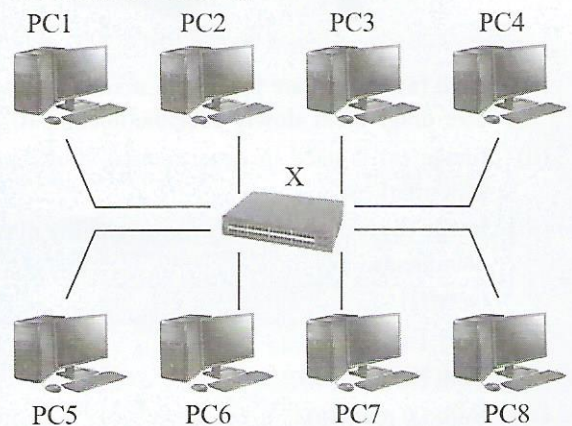


- A. It is an online money transfer app.
- B. It is developed by National Payment Corporation of India.
- C. It is based on Unified Payment Interface
- D. All of these

40. What is the primary function of a web server?

- A. To store, process and deliver web pages
- B. To allocate IP address over Internet
- C. To provide maintenance services
- D. To set default port for emailing

41. In the given diagram, device 'X' is the networking device that receives incoming data packets and redirects them to their destination computer, comprised of the messages, in the form of packets which is used to determine which output ports will be used to send the data on to its intended destination, rather than broadcasting the messages to all the computers on the network. Identify the device 'X'.



- A. Hub
- B. Ethernet
- C. Switch
- D. Firewall

42. Which of the following is the name of a feature of Windows 7 that remembers the network and printer you use among different locations and automatically switches the default printer to match the one you use in a particular location?

- A. Area Aware Printing
- B. Air Printing
- C. Location Aware Printing
- D. Net Connect Printing

43. _____ is the sphere shaped computer with the smallest design among all the laptops and desktops ever made. This computer has all the features like traditional computers, such as elements like mouse, keyboard, large screen display, DVD recorder, etc., all in an innovative manner. It is designed to be placed on two stands that open by simultaneously pressing and holding the two buttons located on each side.



- A. E-Sphere
- B. E-Ball
- C. PC-Ball
- D. E-shell

44. Intel 4004 was the _____ .
- A. First single chip microprocessor
 - B. First multi-tasking operating system
 - C. Portable micro-computer for general purpose
 - D. One of the first generation device

45. Which of the following is NOT a CORRECT difference between Blu-ray disc and DVD?
- A. The quality of audio and video recorded on Blu-ray disc is higher than DVDs.
 - B. Read only memory type is not available in Blu-ray disc whereas DVD supports read only memory.
 - C. Blu-ray disc is designed to supersede the DVD format.
 - D. A single layer blu-ray disc can store upto 25 GB data whereas a single layer DVD can store only 4.7 GB of data.

ACHIEVERS SECTION

46. Match the MS-Excel 2010 keyboard shortcut sequences given in Column-I with their descriptions in Column-II.

Column-I		Column-II
(a)	+	(i) Delete rows, columns or cells
(b)	+	(ii) Add or edit a cell comment
(c)	+	(iii) Insert rows, columns and cells
(d)	+	(iv) Enable filtering of selected cells

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

- B. (i)- Macro Virus, (ii)- Resident virus, (iii)- Trojan Horse virus
- C. (i)- Macro Virus, (ii)- Resident virus, (iii)- Boot sector virus
- D. (i)- Macro Virus, (ii)- Resident virus, (iii)- File infecting virus

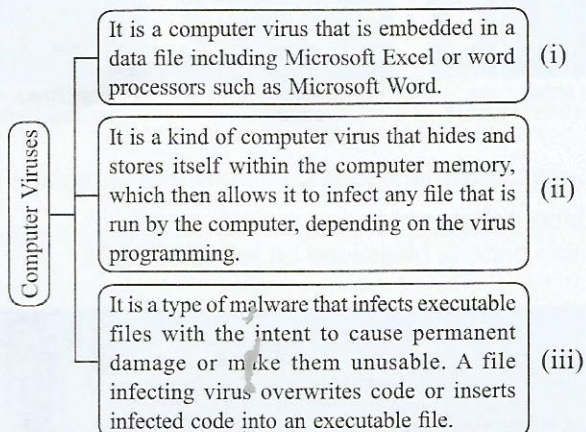
48. What would be the output of the following QBasic code?

```

N = 7
DO WHILE (N <= 100000)
    PRINT N
    N = N * 10
LOOP
  
```

A. 7	B. 10
70	100
700	1000
7000	
C. 10	D. 7
100	70
1000	700
10000	7000
	70000

47. Replace (i), (ii), (iii) by identifying the computer viruses with the help of the descriptions given in the diagram.



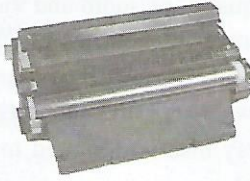
- A. (i)- Boot Sector virus, (ii)- Resident virus, (iii)- stealth virus

49. Identify the technology from the given icon:



- It is a US-based collaboration tool, online backup and file hosting service that allows users to access, synchronize and share data using a cloud-based server.
 - It is accessible through an app for Windows, Mac, Linux computer platforms, and AndroidOS.
- A. Google Drive
 - B. SpiderOak
 - C. Dropbox
 - D. Google Maps

50. Which of the following statements hold(s) true with respect to the given image?

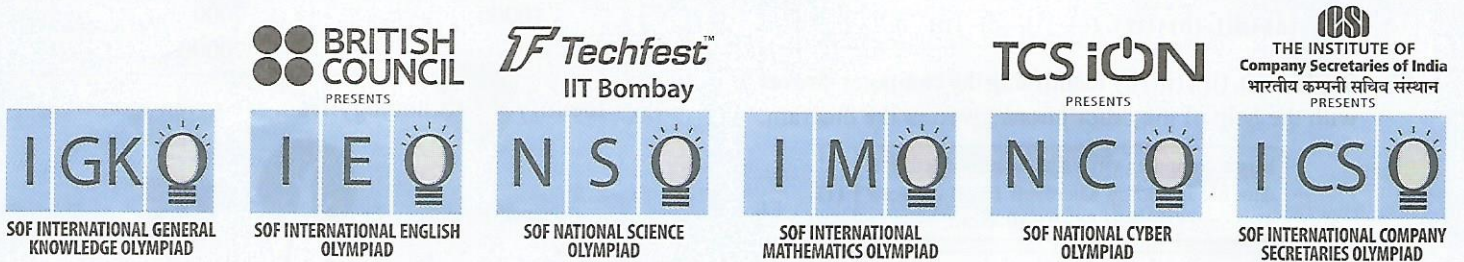


1. It uses rotating cylindrical drum to scan. In this device, the light from object that is to be scanned is

split into separate red, blue, green beams optically, making the image precise.

2. It is a manual device which is dragged over the surface of image to be scanned.
- 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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