# SOF
SCIENCE OLYMPIAD FOUNDATION

Inspiring Young Minds
Through Knowledge Olympiads

## CLASS

## 2

## SET-B

Name:..................................................

Section:.................... Roll No.:......................

Contact No...........................................

Total Questions: 35                          Time: 1 hr.

# NCO

## 16TH SOF NATIONAL CYBER OLYMPIAD

### Guidelines for the Candidate

1. Please check your Name, Class and Section on the OMR sheet provided to you. In case, OMR sheet with your name is missing, please fill in information about yourself in the blank OMR sheet provided before start of exam.

2. Please fill in your **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

3. The Question Paper comprises three sections:

   **Logical Reasoning** (5 Questions), **Computers and Information Technology** (25 Questions) and **Achievers Section** (5 Questions).

   Each question in Achievers Section carries 2 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 in the OMR Sheet, use **HB Pencil** or **Blue / Black ball point pen** only. E.g.

**Q. 16:** _____ means to hold down the left mouse button while you move the mouse pointer to a new place.

A.  Single click     B.  Double click     C.  Dragging     D.  Left click

As the correct answer is option C, you must darken the circle corresponding to option C in the OMR Sheet.     16. Ⓐ Ⓑ ● Ⓓ

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1. Find P and Q respectively.

   A. 

   B. 

   C. 

   D. 



2. The number of T-shirts to the right of red T-shirt is _____.



   A. 5          B. 4          C. 3          D. 6

3. Which is the heaviest?



   A.      B.      C.      D. Can't be predicted

4. In which of the following options, Shape (X) can be placed?



Shape (X)
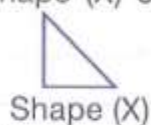
   A.      B.      C.      D. 

5. If  is called ,  is called ,  is called ,  is called , then with which of the following would a person hear?

   A.      B.      C.      D. 

SPACE FOR ROUGH WORK

6. Qwerty is the most widely used keyboard layout in computing devices. Which among the following does not support this layout?

A.   B.   C.   D. 

7. The given image shows the use of computers in _____.

   A. Designing cars

   B. Making animated movies

   C. Launching missiles

   D. Preparing bills



8. What would be displayed on the monitor screen, if you press ⇧ Shift + # 3 , ⇧ Shift + A , < , $ 4 key when Caps Lock is Off?

   A. 3A<4        B. #a<$        C. 3a,$        D. #A,4

9. Unscramble the words given on left side and select the INCORRECT match.

   A. YEKROADB    –   I am used for typing work.

   B. ROTINOM     –   I look like a TV.

   C. SPU         –   I help computer to think.

   D. YOJICSTK    –   I help you to play games.

10. Given below are some features. Identify which features belong to human being and which belong to computer?

   1. Never makes any mistake on its own.    2. Does not need order.

   3. Does not get angry or tired.           4. May forget stored information.

   A. Computer – 1 and 2          B. Computer – 1 and 3
      Human Being – 3 and 4          Human Being – 2 and 4

   C. Computer – 2 and 3          D. Computer – 2 and 4
      Human Being – 1 and 4          Human Being – 1 and 3

SPACE FOR ROUGH WORK

11. Working on data is called processing. Which part of computer works on data and is located on system board?

A.   B.   C.   D. 

12. Given below are some pictures numbered as 1, 2, 3 and 4. Rearrange them to indicate the CORRECT order of steps for starting a computer.

1.    2.    3.    4. 

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

13. Observe the position of cursor in given snapshot. Pressing Delete key and then pressing the Backspace key will display the text as _____.

Monit|yor

A. Monitor   B. Monit or   C. Monior   D. Monityr

14. Riya's teacher asked her to open a program to write the names of her family members, friends and relatives. She performed the steps given below. Identify which of the following options can replace the question mark(?) in the given steps.

Click on  → All Programs → Accessories → ?

A.    B.    C.    D. Both A and B

15. Which of the following mouse actions when performed on  icon of Windows 7 will display the given window?

A. Left-click   B. Right-click
C. Double-click   D. Drag and drop



16. I have made cat face and ears in MS-Paint as shown in the given snapshot. Now, I want to place cat's ears on its face. Which of the following tools shall I use?

A.    B. 

C.    D. 
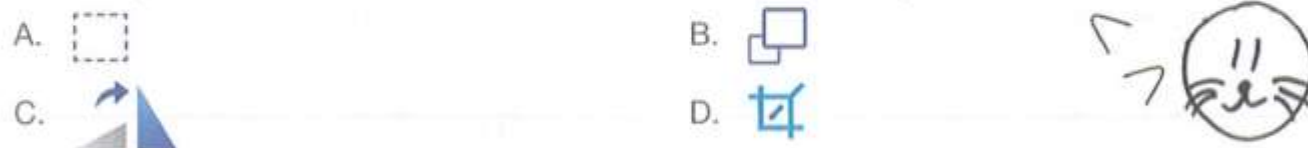


SPACE FOR ROUGH WORK

17. Select the odd one out regarding the parts of computer.

A.   B.   C.   D. 

18. Marshmallow, Lollipop and KitKat are versions of _____

A.   B.   C.   D. Both A and B

19. Arrange the following in CORRECT order of IPO (Input-Process-output) cycle.

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



20. Computer is an advanced machine compared to a calculator because the computer _____.

   A. Can perform more complex mathematical calculations
   B. Can perform logical operations
   C. Has memory and can store large amount of data
   D. All of these

21. Computers are used in offices to perform many tasks. Which of the following is a disadvantage of using computers in offices?

   A. Fast and accurate work
   B. Storing of large amount of information
   C. Easy modification in stored data
   D. None of these

22. For which of the following purpose architects use computers?

   A. Preparing building layouts
   B. Making toys
   C. Issuing debit cards
   D. Updating passbooks

23. Identify the following :
   - It is a part of taskbar in Windows 7.
   - It shows volume control button and current date and time in Windows 7.

   A. Start menu   B. System Tray   C. Desktop button   D. Status bar

SPACE FOR ROUGH WORK

24. Which of the following keys does not work in combination of another key?

A. Alt
B. Shift
C. Ctrl
D. Num Lock
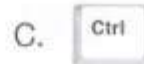
25. Match the following :

| Column-I | Column-II |
|---|---|
| (a) | 1. Presence of it displays a pointer on screen |
| (b) | 2. Let you talk to the computer |
| (c) | 3. Gives you a copy of everything shown on the monitor on a paper |

A. (a)-1, (b)-2, (c)-3   B. (a)-2, (b)-1, (c)-3   C. (a)-1, (b)-3, (c)-2   D. (a)-2, (b)-3, (c)-1

26. Which of the following tasks CANNOT be done with the given part of computer?
   A. Opening a program
   B. Closing a program
   C. Scrolling a page up/down
   D. Supplying power to computer in case of power cut

27. Ashu and Naman were discussing about a feature of Windows 7 and they provided following hints about it:
   1. It let you search different programs.
   2. It is also used for putting computer on sleep mode.
   3. It is available on taskbar.
   Identify it.

A.   B.   C.   D.

28. Sam has performed the following steps to draw rectangle in MS-Paint. Which of the following tools will be there in place of [?] in the given steps.

   Step 1 : Select [?].

   Step 2 : Point the mouse on drawing area.

   Step 3 : Click and drag the mouse once to draw rectangle.

A.   B.   C.   D.

SPACE FOR ROUGH WORK

29. The _____ bar appears on the top of MS-Paint window. It shows three control buttons at its _____.

   A. Title bar, Right corner
   B. Status bar, Left corner
   C. Ribbon, Left corner
   D. Scroll bar, Right corner

30. Computer is a smart machine that works on electricity. From the following, select the one which also works on electricity.

   A. 
   B. 
   C. 
   D. 

## ACHIEVERS SECTION

31. A touchpad is a pointing device that can be used for moving the pointer appearing on screen by moving finger on a flat surface. Which of the following device generally incorporates a touchpad?

   A. 
   B. 
   C. 
   D. 

32. Eraser tool is used for correcting drawing mistakes in MS-Paint. It is also used for replacing a color with another color by right clicking and dragging the mouse on the desired area. Which color values should be set to replace color of given shape outline with red color using Eraser tool?

   A.  Color 1  Color 2
   B.  Color 1  Color 2
   C.  Color 1  Color 2
   D.  Color 1  Color 2

33. Given here is a grid that contains some words related to computer. How many such words can you find in the given grid?

   A. 2
   B. 3
   C. 5
   D. 7

| R | M | T | A | N | O | B | E | T |
|---|---|---|---|---|---|---|---|---|
| E | C | X | R | Y | L | O | M | S |
| S | M | O | A | W | E | O | T | N |
| C | E | S | T | O | R | T | C | M |
| P | T | L | I | R | F | I | H | I |
| E | C | E | S | I | N | N | H | C |
| T | R | E | S | Y | C | G | N | O |
| C | A | P | T | A | I | N | O | N |

SPACE FOR ROUGH WORK

34. Which of the following statements is CORRECT regarding the Command Button-1 and Command Button-2 of MS-Paint?

Command Button-1
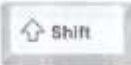
Command Button-2

A. Command Button-1 : Reverse the current selection and Command Button-2 : Selects the entire drawing.

B. Command Button-1 : Changes the height and width of selected drawing and Command Button-2 : Selects the entire drawing.

C. Both command buttons change the height and width of selected drawing.

D. Both command buttons select the entire drawing.

35. Which of the following statements is true if you want to type numbers 6457 with the help of given set of number keys?

A. Shift key should be pressed.

B. Shift key should not be pressed.

C. You can only use the number row when the Num Lock is ON and the Shift key is pressed.

D. You can only use the number row when the Num Lock is Off.

SPACE FOR ROUGH WORK

# S O F

SCIENCE OLYMPIAD FOUNDATION

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# CLASS

# 3

## SET-B

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1. Trishika celebrates her mother's birthday on the previous day of second Thursday of February 20XX. On which date will she celebrate her mother's birthday?

    A. 10th February
    B. 9th February
    C. 11th February
    D. 12th February

| February 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 | | | | | |

2. Find the missing numbers in the given series.

    4   8   ?   16   20   ?
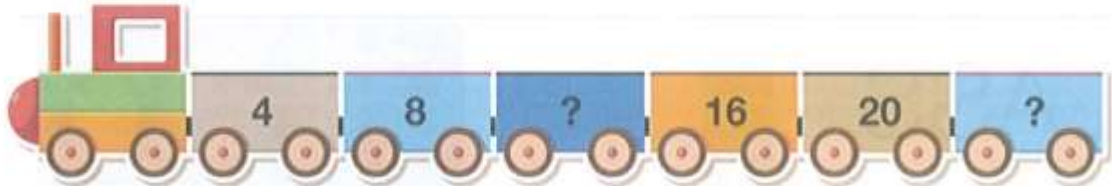
    A. 12, 24        B. 10, 22        C. 12, 22        D. 10, 24

3. Select the CORRECT match.

    A. △ — CHOCOLATE        B. ▭ — pizza

    C. ○ — CD        D. ▢ — candle

4. Select the correct mirror image of Fig. (X).

    Fig. (X)  Mirror

    A.        B.        C.        D.

5. If [sharpener] is called [eraser], [eraser] is called [book] and [book] is called [pen], then what is used to erase anything?

    A. [sharpener]        B. [eraser]        C. [book]        D. [pen]

SPACE FOR ROUGH WORK

6. Which among the following can be referred as portable microcomputer?

1.    2.    3. 

   A. Only 1     B. Only 2     C. Both 2 and 3     D. Both 1 and 3

---

7. Identify the following :
   - It is an input device.
   - It consists of a special pad and a stylus.
   - Whatever is written on pad is displayed on the monitor.

A.    B.    C.    D. 

---

8. Which of the following is a storage device that needs to be connected to a port present on the CPU box?

   A. CD     B. Magnetic tape     C. Microphone     D. Flash drive

---

9. Computers are used in research and science field for _____.

   A. Controlling space shuttle     B. Inventing new medicines/vaccines

   C. Maintaining fingerprint records     D. Both A and B

---

10. Now-a-days, we can watch live telecasts of music concerts or cricket matches in TV. TV channels use _____ to transmit their programs with the help of computers.

   A. Satellite     B. Rockets     C. Space     D. Wires

---

11. Observe the position of cursor in the given snapshot of MS-Word 2010. What would be the position of cursor after pressing the Home and then End keys?

> But the Ant went on its| way and continued its
> toil. When the winter came.................................

   A. At the beginning of first line     B. At the beginning of second line

   C. At the end of first line     D. At the end of second line

---

12. _____ is an output device which is similar to printer but is bigger in size and used for making drawing on paper with automated pens.

   A. Plotter     B. Projector     C. Scanner     D. Protector

---

SPACE FOR ROUGH WORK

13. Identify the part pointed by Ⓧ in the given image.
    A. Pointing stick
    B. Trackball
    C. Joystick
    D. Stylus

14. What do you understand by smart wearables?
    A. Any clothing or accessory that is connected to internet and incorporates computer or any other advanced technologies.
    B. Any device that can be carried easily.
    C. Any machine that has a small computing chip.
    D. Any device that is installed on the motherboard of a computer.

15. To de-select a highlighted icon on desktop as shown in the given image, you should _____.
    A. Press the Esc key
    B. Click on the empty area on the desktop
    C. Wiggle the mouse
    D. Press the Ctrl key

16. Which of the following screen elements is NOT present at the top of MS-Word window?
    A. [window controls]
    B. [File Home Insert]
    C. [zoom slider 100%]
    D. Both A and B

17. Search engines are programs that help user to find information about a website or any topic. Which among the following is needed to make use of search engine?
    1. Web browser     2. Internet connection 3. Notepad
    A. Only 1          B. Only 2          C. Only 3          D. Both 1 and 2

18. MS-Paint is a free drawing application available in Windows 7. We can use it to create different artistic pictures. Which of the following CANNOT be done using MS-Paint?
    A. Inserting readymade shapes          B. Filling colors in the drawing
    C. Adding sound to a drawing            D. Adding your name in a drawing

SPACE FOR ROUGH WORK

19. The shape of the mouse pointer changes according to the action we perform. When we resize a program's window the shape of pointer gets changed into _____ in Windows 7.

A.    B.    C.    D. 

20. Your teacher has asked you to type four lines about yourself in MS-Word 2010 and also instructed you to close the file after saving it. Which of the following commands would NOT be used in this task?

1.    2.    3. 

A. Only 1      B. Only 2      C. Only 3      D. Both 1 and 2

21. Unscramble the word given here and select the icon it represents in Windows 7.

DOSWNIW POLEREXR

A.    B.    C.    D. 

22. Printer, Scanner and Flash drives are devices that are attached with a computer to provide some basic functionality. They are not the essential part of a computer but yet are quite useful. Which of the following terms can be used for these devices?

A. Primary devices    B. Extra devices    C. Peripherals    D. Archivers

23. Which of the following statements hold true about primary memory of a computer?

Statement 1 : RAM and ROM are two types of primary memory.

Statement 2 : ROM contains important information and instructions on how to start a computer.

A. Only Statement 1                    B. Only Statement 2

C. Both Statement 1 and Statement 2    D. Neither Statement 1 nor Statement 2

24. You have Wi-Fi connection at your home that let you access internet from any corner of your home. Which of the following devices can be connected to this type of internet connection ?
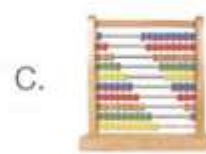
A.    B.    C.    D. Both A and B

SPACE FOR ROUGH WORK

25. Secondary memory comprises of _____.

    A. CD,DVD and flash drives
    B. RAM and Hard disk
    C. ROM, Floppy disk and flash drives
    D. RAM and ROM

26.  is used to _____ in MS-Paint of Windows 7.

    A. Magnify the current drawing

    B. Display the current drawing in the full screen

    C. Save a picture for the first time

    D. Zoom-in and Zoom-out the current drawing

27. Which of the following steps would properly arrange the scattered icons(as shown here) towards the left side of the screen after right clicking on empty area of desktop in Windows 7?
(Icons shown in the image are currently at right side of screen)



    A. Personalize → View → Show desktop icons

    B. View → Align icons to grid

    C. View → Auto arrange icons

    D. Sort by → Item type

28. Which of the following devices is inserted into a special tray that opens out from the CPU box?

    A. 
    B. 
    C. 
    D. 

29. Smartphones have gained immense popularity in the last few years. You can do almost everything on a smartphone that you used to do on desktop PCs. Which of the following tasks CANNOT be performed on smartphone?

    A. Surfing Internet
    B. Playing games
    C. Reading a CD
    D. Downloading music

30. _____ is a collection of linked documents that contain text and other media elements, such as graphics, animation, video and audio.

    A. Web server
    B. URL
    C. Website
    D. Search tools

SPACE FOR ROUGH WORK

31. What would be the result if following steps are performed in sequence in MS-Word 2010?

    1. Type -It was great day.
    2. Press space bar and then press Enter key.
    3. Press Backspace key
    4. Type-We will meet again.

    A. It was great day.
       We will meet again

    B. It was great day.

    C. We will meet again.

    D. It was great day. We will meet again.

32. The process of Input-Process-Output cycle is not only performed in computers but also in real life. When you talk to your friend using a phone, then also IPO cycle is performed. Which of the following statements is INCORRECT regarding the steps shown in the image shown here?



Step 1            Step 2            Step 3

    A. In Step 1, the input is supplied by dialing the number.

    B. Step 2 shows the process of connecting the number.

    C. Step 3 shows that the call gets connected and person is having the conversation over the phone.

    D. None of these

33. What do you understand by terms data and command with respect to computers?

    A. Number or text entered into the computer is data and telling computer to do something is called command.

    B. Number or text entered into the computer is data and processing that data to compute final result is command.

    C. Meaningful form of input is called data and its raw form is called command.

    D. Processing the input fed into computer is called data and hard copy of output is called command.

SPACE FOR ROUGH WORK

34. The given two shapes were drawn in MS-Paint. Which of the following tools' setting was changed in Image 2 to make it look different from Image 1?

A.

B.

C.

D.

Image 1    Image 2

35. A person driving a car stops the car when the traffic signal turns red and starts it when the signal turns green. The person understands the instruction to be followed by interpreting the color of the lights. Similarly the _____ of a computer interprets the task to be performed, by interpreting the input supplied to it in form of commands.

A.

B.

C.

D.

SPACE FOR ROUGH WORK

## CLASS

# 4

## SET-B

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1. Find the number of triangles in the given figure.

    A. 16

    B. 12

    C. 15

    D. 14
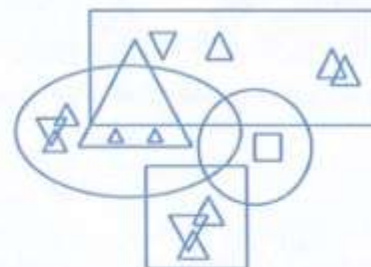
2. Complete the number pattern given below.

    11010   11100   11190   ?   11370   11460
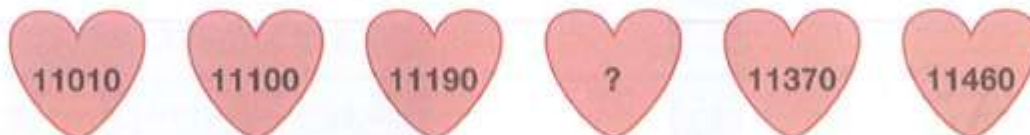
    A. 11180          B. 11380          C. 11280          D. 11310

3. If ⬜ means ◖◗, ◖◗ means △ and △ means ▱, then which of the following looks like a birthday cap?

    A. ⬜          B. ◖◗          C. △          D. ▱

4. Which of the following is the correct mirror image of Fig. (X)?

    PENCIL

    Fig. (X)   Mirror

    A. PENCIL          B. PENCIL (reversed)          C. ЬEИCIᒋ          D. ЬEИCIᒋ
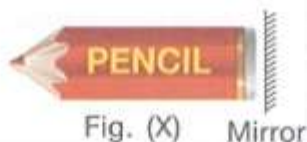
5. Who is standing to the North of Priya?

    A. Megha

    B. Latika

    C. Garima

    D. Beena
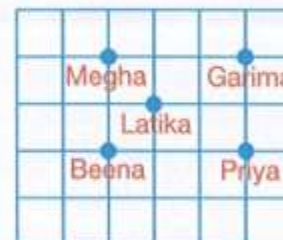
SPACE FOR ROUGH WORK

6. Identify the following :
   - It is a manual calculating device.
   - It consists of nine (sometimes 10) sticks with numbers marked on them.
   - It was invented to perform long multiplication and divisions.

   A. Napier's Bones   B. Difference Engine   C. Arithmometer   D. Pascaline

7. Given here is a snapshot of Research task pane. What would happen when you click on the green arrow pointed by letter 'P' in a document in MS-Word 2010?

   A. The next word in the document will get shown in the 'Search for' box.

   B. Synonyms for the word 'go' will be searched.

   C. Word 'go' will get inserted at the current cursor position.

   D. Pronunciation of word 'go' will be played.
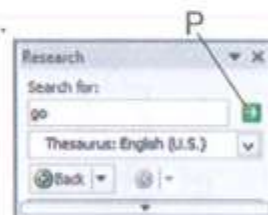
8. Arrange the following in ascending order of their invention.
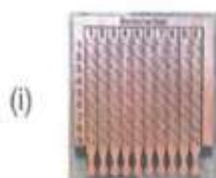
   (i)   (ii)   (iii)

   A. (i)→(ii)→(iii)   B. (iii)→(ii)→(i)   C. (ii)→(i)→(iii)   D. (i)→(iii)→(ii)

9. Select the CORRECT match with respect to MS-Word 2010.

   A. $A^{\cdot}$   – Shift the selected text slightly above the baseline

   B. Aa   – Used for changing the case of selected text

   C. abc   – Delete the selected text

   D. A▾   – Can be used for applying reflection to selected text

10. A drawing is made by you in MS-Paint of Windows 7. What steps should be followed if you want to fill the entire desktop screen with this drawing?

    A. View tab → Display group →   B. View tab → Display group →

    C. Paint button → → Screen   D. Paint button → → Fill

SPACE FOR ROUGH WORK

11. Which among the following is a stored program machine and the successor of ENIAC?

    A. ENIAC ONE        B. EDVAC             C. EDUSAC          D. PARAM

12. Select the INCORRECT match.

    A. ROM      – It stores a special program that helps to load the operating system when the computer is switched ON.

    B. RAM      – It affects the number and size of program that a system can run at a time.

    C. DVD      – It can store data on both sides.

    D. Hard disk – It is a main primary memory device found inside the CPU box.

13. Which of the following tools has not been used for creating the given drawing in MS-Paint of Windows 7?

    A. 

    B. 

    C. 

    D. Both A and B



14. Which of the following is a type of optical storage device which stores more data than a DVD and is mainly used for storing very high quality video files?

    A.     B.     C.     D. 

15. A _____ is a standard that specifies the interaction between communicating entities in a computer network.

    A. Node          B. Protocol        C. Port          D. Server

16. Which of the following statements is/are CORRECT about computer peripheral?

    A. It is a core element of a computer system.

    B. Power supply and motherboard are examples of computer peripherals.

    C. It is dependent on computer system to perform its functionality.

    D. Both A and B

17. If the storage capacity of a flash drive is 4 GB, then which among the following can be saved in it?

    (i)  A video file of 1250 MB          (ii)  A backup file of 1 Terabyte

    (iii) A collection of songs of 1024 bytes

    A. Only (i)        B. Only (ii)       C. Only (iii)      D. Both (i) and (iii)

SPACE FOR ROUGH WORK

18. Arrange the following activities performed in sending a message in order of Input-Process-Output cycle.

    (i) Message gets converted into data signals and travels by communication path.

    (ii) A message is typed and send button is pressed.

    (iii) Message got delivered to its intended recipient.

    A. (i)-(ii)-(iii)          B. (ii)-(i)-(iii)          C. (iii)-(ii)-(i)          D. (iii)-(i)-(ii)

19. Which among the following can neither be classified as application software nor as utility software?

    A.           B.  Norton by Symantec          C.           D. 

20. Match the devices given in Column-I with the functions they perform given in Column-II.

    | Column-I | | Column-II | |
    |---|---|---|---|
    | (a) |  | (i) | Used with magnetic stripe cards |
    | (b) |  | (ii) | Uses laser light to read data |
    | (c) |  | (iii) | Used for processing of objective type answer sheet |

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

21. Which of the following options determine the speed of a computer?

    A. Speed of its processor and capacity of ROM.

    B. Capacity of Hard disk.

    C. Speed of its processor and operating system.

    D. Speed of its processor and capacity of RAM.

22. Microphone and touchpads are used for providing input. Which of the following devices incorporates both of them in it?

    A.           B.           C.           D. 

SPACE FOR ROUGH WORK

23. Identify the following :

    – It is a private network that is used only by those organisations who owns it, campus and corporate networks are its good examples.

    – It should be closed off to the general public and require a login for authorised users.

    A. Internet      B. Tetranet      C. Betanet      D. Intranet

24. What would happen after clicking the highlighted option in context menu of Sticky notes shown in the given snapshot of Windows 7?
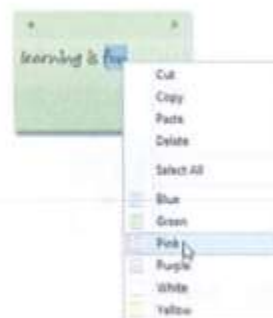
    A. Color of selected text will get change.

    B. Color of all the text will get changed.

    C. Color of Sticky notes will get changed.

    D. Color of desktop will get changed.

25. Unscramble the given word and select the statement which is CORRECT about it.

    <div align="center">DARERAHW</div>

    A. It is the name of a term used for describing physical equipment of a computer system.
    B. It is the name of a system used for scanning the paper documents.
    C. It is the name of a program used to access websites.
    D. It is the name of a device that converts analog signals to digital signals.

26. Your teacher has asked you to write a short passage on Emerging Technologies using information from internet. Which of the following would not be required in this task?

    A.       B.       C.       D. 

27. Select the odd one out.

    A. RELIANCE Communications      B. airtel      C. vodafone      D. 

28. Which of the following options is used for converting Picture-1 into Picture-2 in MS-Paint of Windows 7?

    A.       B. 

    C.       D. 

    Picture-1      Picture-2

SPACE FOR ROUGH WORK

29. What is a smart city?

A. A city in which use of traditional TVs is replaced by Smart TVs.

B. A city in which majority of its population possess smartphones.

C. A city that implements information and communication technologies in particular areas to provide better quality services to its citizens.

D. Both A and B

30. You have accidentally deleted one of your important files while moving it to another folder. To recover the file you should first access the _____ in Windows 7.

A.     B.     C.     D. 

## ACHIEVERS SECTION

31. Observe the snapshot given in Image-1 and Image-2. How would the text in Image-2 look, if following steps are performed in sequence in MS-Word 2010?

| The Mahabharata **is a story** about **a** great **battle.** | The battle was fought in Kurukshetra near Delhi. |
| Image-1 | Image-2 |

(i) Select all the text shown in Image-1.

(ii) Click on .

(iii) Click and drag the mouse over all the text shown in Image-2.

A. **The** battle was fought in Kurukshetra near Delhi.

B. **The battle was fought in Kurukshetra near Delhi.**

C. The battle **was** fought **in** Kurukshetra **near** Delhi.

D. The **battle** was **fought** in Kurukshetra near **Delhi.**

32. Which of the following statements hold true about the given device?

Statement 1 : It is used for reading data from optical storage devices.

Statement 2 : It is a multi-function device that incorporates the function of a fax machine.



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

33. Which of the following is an artificial intelligence based program of Windows Phone 8.1 operating system that responds to natural language voice commands?

A. 
DuckDuckGo

B. 
SECURITY

C. 
Cortana

D. 
CorelDRAW

34. Windows Explorer is one of the most important file managing application in Windows 7, which lets you view and manage the files and folders present on your computer. There are several methods to open this program. Which among the following is INCORRECT?

A. Press  and ⌨E keys simultaneously on the keyboard.

B. Go to Start button→All Programs→Accessories→Windows Explorer

C. Type winx in Run dialog box and press Enter ⏎ key.

D. Both A and B

35. The given diagram shows a representation of LAN in a company. The device at center is responsible for providing data to all PCs connected in the network. Which of the following terms can be used to refer this device?

A. Browser

B. DNS

C. Server

D. Folder



SPACE FOR ROUGH WORK

# SOF
## SCIENCE OLYMPIAD FOUNDATION

Inspiring Young Minds
Through Knowledge Olympiads

# CLASS
# 5
## SET-B

Name:

Section: ............... Roll No.: ...............

Contact No. ...............

Total Questions: 50          Time: 1 hr.

# NCO

## 16TH SOF NATIONAL CYBER OLYMPIAD

### Guidelines for the Candidate
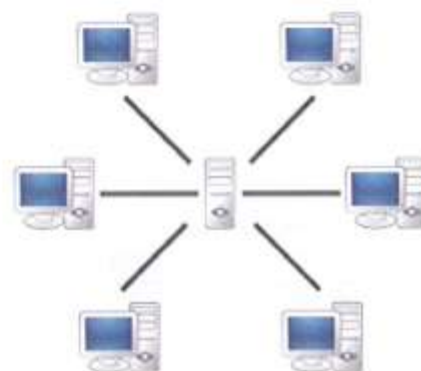
1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.

2. Write your **Name, School Code, Class, Section, Roll No.** and **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.      16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

1. If 'Moon' is called 'Star', 'Star' is called 'Earth', 'Earth' is called 'Sun' and 'Sun' is called 'Mars', then where do we live?
   A. Moon
   B. Star
   C. Earth
   D. Sun

2. Select the CORRECT match.

   | Figures | Figures after $4\frac{1}{4}$ anticlockwise rotation |
   |---|---|



3. Find $P$ and $Q$ respectively in the given number pattern.



   A. 22, 34
   B. 34, 22
   C. 34, 20
   D. 22, 19

4. Which of the following words CANNOT be formed from the letters of the given word?

   CHOREOGRAPHER
   A. GRAPH
   B. CRAP
   C. CAMERA
   D. OGRE

5. There is a certain relationship between figures (i) and (ii). Establish a similar relationship between figures (iii) and (iv) by selecting a suitable figure from the given options which will replace the (?) in fig. (iv).
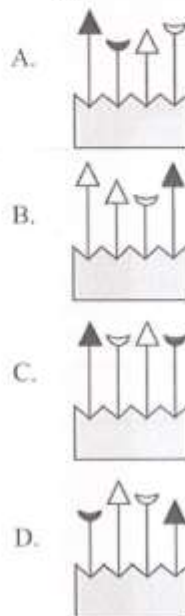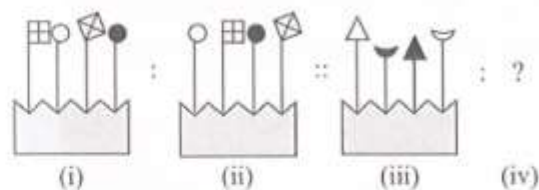


6. Some names of students and types of pens are given below. How many different combinations of 1 kind of pen and 1 student can be formed?



   | Name of Student |
   |---|
   | Megha |
   | Beena |
   | Garima |
   | Latika |
   | Priya |
   | Mini |

   A. 30
   B. 35
   C. 42
   D. 49

7. Study the following information carefully.
   • Trishika, Sidak and Sanchi likes ice-cream.
   • Sidak and Sanchi likes burger.
   • Trishika and Sidak likes pizza.
   • Only Trishika likes burger and chowmein.
   Who among the following likes all the four food items?
   A. Trishika
   B. Sidak
   C. Sanchi
   D. Can't be determined

8. Which of the following figures have atleast 2 lines of symmetry?

A. 

B. 

C. 

D. 

9. If in each of the following numbers, 1 is added to the middle digit, then which number will be the third highest?

488   514   425   435   587

A. 488
B. 514
C. 435
D. 425

10. Find the odd one out.

A. 8 (34) 9
B. 5 (34) 12
C. 7 (144) 11
D. 9 (48) 15

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Identify the following :

– It was a working model of a proposed mechanical computer.
– Its design incorporated Input unit, Output unit, Store and a Mill.
– Mill was used to do all the arithmetic operations.

A. Tabulating Machine
B. Pascaline
C. Analytical Engine
D. Leibniz Calculator

12. Which of the following hardware devices generate characters or graphics on a paper by striking cluster of pins on an ink soaked ribbon?

A. Dot matrix printer
B. Flatbed plotter
C. Daisy wheel printer
D. Inkjet printer

13. Whenever we open an application program, it is loaded into the computer's temporary memory from where CPU can very quickly access the information about the program currently being run. Which amongst the following provides the temporary storage to active program in a computer?

A. 

B. 

C. 

D. 
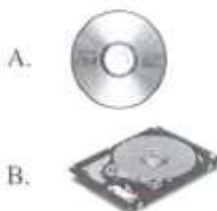
14. Which of the following statements hold true about the given logo?



Statement 1 : It is a system for connecting electronic devices to each other or to internet using fiber optics.
Statement 2 : It is a wireless medium for exchanging data in a small network.

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

15. Select the INCORRECT match.

A.  – Pointing device found mainly in laptop and notebook computers.

B.  – Requires less space than a mouse for operation.

C.  – It is a special type of optical scanner.

D.  – It converts analog information into digital form.

16. A device is installed in Yuvika's school which helps students who cannot speak properly, to type the information they want to speak and then the device converts it into spoken words. Which type of system has been installed in her school?

A. Optical Character Reader
B. Speech Synthesizer
C. Voice Reproduction System
D. Optical Mark Reader

17. Which of the following options would replace letters P, Q and R to complete the table given below?

| 1 Byte | = P |
|--------|-----|
| Q | = $2^{20}$ bytes |
| 1TB | = R |

A. P-1024 bits, Q-1 KB, R-1024 MB
B. P-8 bits, Q-1 MB, R-1024 GB
C. P-4 nibbles, Q-1 KB, R-1024 MB
D. P-1024 bits, Q-1 MB, R-1024 MB

18. How would the text in the given snapshot display after selecting the [A≣] option from the Drop Cap drop-down list in MS-Word 2010?

You shall practice it daily

A. **Y**ou shall practice it daily

B. **You** shall practice it daily

C. You shall practice it daily

D. **Y**ou shall practice it daily

19. Which of the following is an electronic device that reads data printed in the form of black and white lines and then sends the information to the system connected with it?

A. 

B. 

C. 

D. 

20. Avika has drawn a text box in a document and now she wants to change its shape from rectangle to cloud. Which of the following options can be used to do so in MS-Word 2010?

A. 
B. 
C. 
D. 
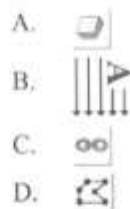
21. In which of the following views of MS-PowerPoint 2010, there are several panes and each pane has its own scroll bar so that you can move around in one pane independently of the other panes?

A. Normal
B. Slide Sorter
C. Notes Page
D. Reading View

22. Clicking on which of the following options will display a rectangular frame with a magnifier in center, as shown in the given snapshot of MS-Paint of Windows 7?



A. 
B. 
C. 
D. 
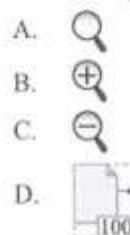
23. The given set of options can be seen in lower left corner of the screen while viewing a presentation in Slide Show view. Which among these (labelled by numbers 1, 2, 3 and 4) when clicked, will open the slide navigation menu in MS-PowerPoint 2010?



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

24. Select the odd one out.

A. 
B. 
C. 
D. fedora

25. Using the  option in MS-Paint, you can _____.

    A. Switch between the Colors and Black and White mode

    B. Add a Customised fill pattern in a shape

    C. Change the size of drawing canvas

    D. None of these

26. You have inserted header in a document and also want to use this header content in other documents. Which of the following options would replace "?" in the given sequence of steps if you want to display that header in the Header gallery for future use in MS-Word 2010?

Select the header content → In the Design tab of Header & Footer tools, click on [?] → Click on Save Selection to Header Gallery

    A.

    B.

    C.

    D.

27. Which of the following options will you select to stretch or elongate an image in MS-Paint of Windows 7?

    A.

    B.

    C.

    D.

28. Which of the following statements is CORRECT about multimedia?

    A. Multimedia applications can only store digital data they cannot process it.

    B. A multimedia application with large set of audio and video take lesser time to launch than the one which contains text and static images.

    C. Video, animations and audio are the continuous form of multimedia elements.

    D. Both A and B

29. You want to connect a USB mouse with your system, you should plug it in the port which has _____ symbol above it.

    A.

    B.

    C.

    D.

30. Some smartphones allow the users to use some hand motions to perform certain tasks. Such as, a user can answer a call by just waving his hands over the sensor instead of touching the device, as depicted in the diagram. This technology is called _____.

    A. Passcode

    B. Air Blow

    C. Air Gesture

    D. Wave Interface

User : Inputs a gesture

Sensor detects the gesture, deduce it into signals and passes it to the device

Incoming call is answered — Performs the task as conveyed by the gesture

31. Clicking on _____ separates the paragraph from the left margins using blank spaces in MS-Word 2010.

    A.

    B.

    C.

    D.

32. Given below are few initial steps to create a shortcut on the desktop for a folder saved in D drive of your computer. Which among the following is CORRECT?

    A. Right click on desktop → New → Folder

    B. Right click on desktop → New → Shortcut

    C. Click on Computer icon on desktop

    D. Right click on taskbar → Go to Toolbars

33. Today, mostly all organizations create their own web sites on Internet to distribute timely information about corporate achievements, new announcements, etc. This statement shows that internet is used for _____.

    A. Organizational promotion

    B. Customer support service

    C. Resource sharing

    D. Remote connections

34. Which among the following key combinations, when pressed, will maximize a restored window in a computer running Windows 7?

A. Alt + M

B. Alt + Tab

C. Alt + Spacebar + X

D. Alt + Spacebar + M

35. Which of the following statements hold true about the given icon of Format tab which gets active when you insert pictures in MS-PowerPoint 2010?

Statement 1 : It can be used when we want to treat several graphical objects as a single entity.
Statement 2 : Clicking on it opens the selection pane which displays list of all graphical objects in the current slide.
A. Only Statement 1
B. Only Statement 2
C. Both Statement 1 and Statement 2
D. Neither Statement 1 nor Statement 2

36. Personal assistants are programs that can be used to schedule meetings, book movie tickets, store and retrieve personal information such as contacts, birthdays etc. Which among the following is one such program?

A. Cortana

B.

C.

D.

37. You can use internet to get information about any topic, but you need a web client to access any kind of information available via internet. Which of the following software serve as a web client?

A.

B.

C.

D. hike

38. The given diagram shows connection of various networking devices to the internet. Which among the following will replace "?" in the given diagram?

Internet

? 

Enable computers to send and receive data

Connects together individual computers
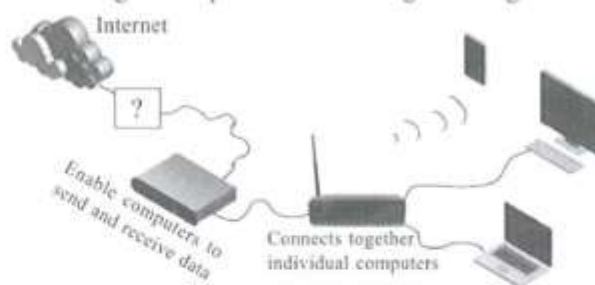
A. NIC
B. Modem
C. ISP
D. Server

39. Identify the following :
   – It serves as a medium in a communication system.
   – It is a type of wired transmission media.
   – It is most widely used communication medium for a telephone company network.
A. Twisted cables
B. Coaxial cables
C. Wi-Fi
D. Infrared rays

40. Which of the following is NOT an in-built entertainment application in Windows 7?

(i) LINE          (ii)

(iii)             (iv)

A. Only (i)
B. Only (ii)
C. Both (iii) and (iv)
D. Only (ii), (iii) and (iv)

41. Videos can be stored using the AVI format. What does AVI stand for?
A. Audio Video Interface
B. Audio Video Interleave
C. Audio Video Interaction
D. Audio Video Internet

42. Which of the following is NOT required for a multimedia project?
A. High speed memory device
B. CUI based system
C. A high resolution display screen
D. A Fast processor

43. Main board and logic board are alternative names of which computer component?

A. 

B. 

C. 

D. 
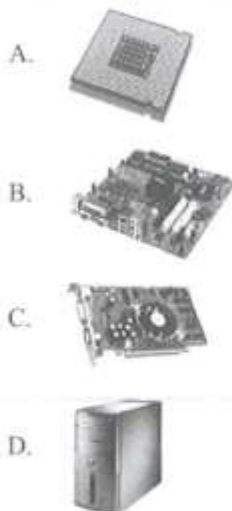
44. A _____ is the smallest computer which can function as a mobile phone, fax sender and internet browser. It combines computing, telephone, fax and networking features.

A. Laptop
B. Mainframe
C. PDA
D. Supercomputer

45. _____ is a set of routines that performs a variety of generalized operations such as sorting, searching, merging, copying, printing and maintenance on data files in your computer.

A. File utilities
B. File activator
C. File concerner
D. FTP

## ACHIEVERS SECTION

46. You have created a lengthy document and inserted some pictures and text boxes in it. You want to quickly edit the text of the document and for that you want that the graphical elements shall not appear during the editing process. Which of the following views shall you enable for this purpose in MS-Word 2010?

A. 

B. 

C. 

D. 

47. When does the given dialog box get displayed in MS-PowerPoint 2010?



A. When you run a slide show of a presentation.
B. When you save a presentation in one of the graphics formats.
C. When you convert a SmartArt graphic to a shape.
D. When you create duplicate slides in a presentation.

48. Observe the given diagram, which shows the relationship among hardware, software and users of a computer system in the form of layered architecture. Which of the following layers does the task of coordinating operations of various hardware devices to optimize the performance of all devices?
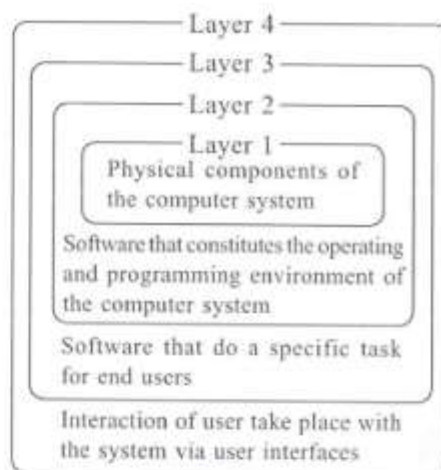


A. Layer 1
B. Layer 2
C. Layer 3
D. Layer 4

49. Select the INCORRECT match.

| | | |
|---|---|---|
| A. | George Boole | – First person to design a computer which had memory to store results. |
| B. | Howard Aiken | – Developed the first automatic sequence controlled calculator, the Mark I. |
| C. | Blaise Pascal | – Invented a mechanical calculator that used gears, wheels and dials. |
| D. | John Atanasoff | – Invented the first electronic digital computer. |

50. Match the icons given in Column-I with the task they perform given in Column-II with respect to Windows 7.

| Column-I | Column-II |
|---|---|
| (a)  | (i) You can use it to check the Product ID of edition of Windows installed. |
| (b)  | (ii) Allows you to change the resolution of your system. |
| (c)  | (iii) Let you access utilities like disk defragmenter service. |

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

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SPACE FOR ROUGH WORK

# SOF
**SCIENCE OLYMPIAD FOUNDATION**

Inspiring Young Minds
Through Knowledge Olympiads

## CLASS
# 6

## SET-B

Name:

Section: ................ Roll No.: ................

Contact No. ................

Total Questions: 50                                       Time: 1 hr.

# NCO

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.      16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

1. Four different positions of a dice are shown below. Which of the following coloured face is not adjacent to the face coloured white?
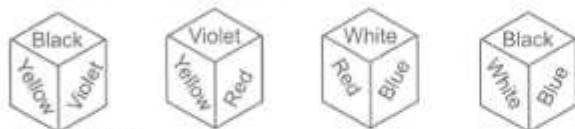


   A. Violet
   B. Yellow
   C. Red
   D. Black

2. Which of the following options will replace the (?) to complete the pattern in Fig. (X)?



   Fig. (X)

   A.    B. 

   C.    D. 
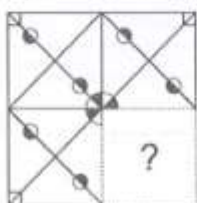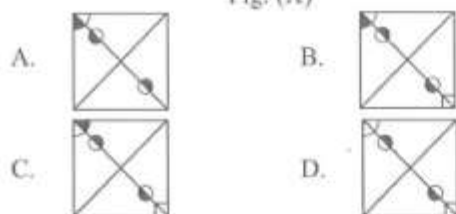
3. Some friends A, M, D, P, R, T, B and H are sitting around a circle, facing the centre. M is third to the left of A, who is second to the left of T. D is second to the right of H, who is second to the right of T. R is second to the right of B, who is not an immediate neighbour of T. Then, who is second to the left of B?

   A. D
   B. H
   C. M
   D. Data inadequate

4. There is a certain relationship between figures (i) and (ii). Establish the same relationship between figures (iii) and (iv) by selecting a suitable figure from the options that will replace the (?) in fig. (iv).



   (i)    (ii)    (iii)    (iv)

   A.    B. 

   C.    D. 
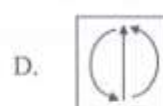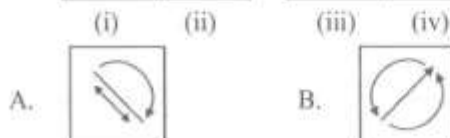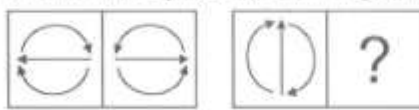
5. How many even numbers are there in the following sequence of numbers which are immediately followed by an odd number as well as immediately preceded by an even number?

   8 5 8 6 7 6 8 9 3 2 7 5 3 4 2 2 3 5 5 2 2 8 1 1 9 3 1 7 5 1

   A. 2
   B. 3
   C. 4
   D. 5

6. Atul walks 20 metres towards South. Turning to the left he walks 30 metres, then turning right he walks 10 metres, then turning right he walks 40 metres, then turning right he walks 30 metres and stops. In what direction is he with respect to his starting point?

   A. South-West
   B. West
   C. North-West
   D. North

7. This question consist 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. Find the option that most closely resembles the unfolded form of Fig. (Z).



   X    Y    Z

   A.    B. 

   C.    D. 
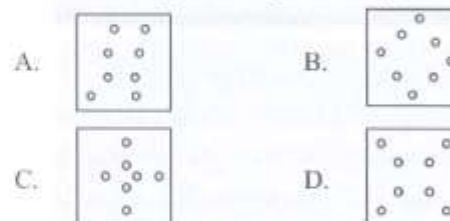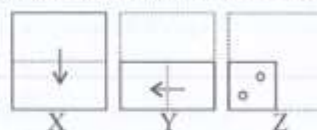
8. Pointing to a girl, Arun said, "She is the only daughter of my grandfather's only son". How is the girl related to Arun?

   A. Daughter
   B. Sister
   C. Cousin sister
   D. Data inadequate

9. Select the correct mirror image of Fig. (X).

Fig. (X)    Mirror

A.    B.

C.    D.
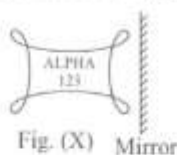
10. In a certain code language, OCTOBER is written as OCtObEr and NOVEMBER is written as nOvEMbEr. How is FEBRUARY written in that language?

A.  fEbruAry          B.  FEbrUArY
C.  fEbrUArY          D.  fEbrUarY

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Every computer contains an internal clock that regulates the rate at which instructions are executed and synchronises all the different computer components. The faster the clock ticks, the more instructions the CPU can execute per second. Clock speeds are expressed in _____ or _____.

A.  Megahertz, Gigahertz
B.  Megabyte, Terabyte
C.  Nibble, Bits
D.  Bits, Nibble

12. Select the CORRECT match.

A.  Bit    –  It is an elementary unit of the memory, there are only two possibilities for each digit, either 0 or 1.
B.  Byte   –  A group of 4 bits is called Byte.
C.  Nibble –  It is a group of 8 bits. It is the smallest unit which can represent a meaningful data item in a computer.
D.  1024 Bytes – It is equal to 1024 KiloByte.

13. Which of the following options represents the CORRECT example of the software numbered as (i), (ii) and (iii)?

(i)   Word Processor
(ii)  Interpreter
(iii) Presentation tool

A.  (i) – Lotus 123, (ii) – QBASIC, (iii) – MS-Word
B.  (i) – QBASIC, (ii) – MS-Word, (iii) – MS-PowerPoint
C.  (i) – C language, (ii) – Lotus 123, (iii) – MS-Word
D.  (i) – MS-Word, (ii) – QBASIC, (iii) – MS-PowerPoint

14. Identify the following :
 – It is a type of memory that cannot be directly accessed by the CPU, while processing information, data is transferred to primary memory when required.

 – It is used to store large amount of data permanently.

A.    B.

C.    D.  Both A and B

15. Which of the following statements hold true about the Command button-1 and Command button-2 regarding MS-PowerPoint 2010?

Button-1              Button-2

Statement 1 :  Button-1 is used to select sound to play between the transition of previous slide and the current slide.

Statement 2 :  Button-2 allows you to view or play the animations that you have applied on the current slide.

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

16. Which of the following is a CORRECT method to hide the Slides and Outline tab in Normal View in MS-PowerPoint 2010?

A.  Point the cursor at the extreme right side of the Slides Pane window → then mouse cursor turns into splitter ←||→ → drag the splitter to the extreme left.

B.  Change the view of the presentation from Normal View to Reading View.

C.  Change the view of the presentation from Normal View to Notes Page View.

D.  Change the view of the presentation from Normal View to Slide Master View.

17. Select the odd one out (regarding the Operating System Interface – GUI & CUI).

A.   MS DOS

B.   (Android)

C.   (Windows)

D. iOS

18. Which of the following statements is CORRECT about the ENIAC computer?

A. It was a first programmable machine designed by Charles Babbage that had same basic elements as the modern computer- input, output and memory devices.

B. It was an electronic computer that was built using 18,000 (approx) vacuum tubes which looked like small bulbs.

C. It filled an entire room and was successor of EDSAC.

D. It belongs to second generation of computers and was much faster than today's PCs due to the presence of thousands of vacuum tubes.

19. Which of the following states the CORRECT difference between Impact and Non-Impact Printer?

| | Impact Printer | Non-Impact Printer |
|---|---|---|
| (i) | In this, there is a contact between the print head and the paper during the printing process. | In this, there is no contact between the print head and the paper. |
| (ii) | They are slow, noisy and are not used for high quality printing. | They are less noisy, faster and give much better print quality than impact printers. |
| (iii) | For e.g. Laser printer. | For e.g. Dot matrix printer. |

A. Only (i)  B. Both (i) and (ii)
C. Only (iii)  D. Both (ii) and (iii)

20. _____ super computer was the first machine to defeat the world chess champion, Garry Kasparov.

A. PARAM 8000  B. Deep Blue
C. Yuva II  D. ANURAG

21. Match the viruses in Column-I with their examples in Column-II.

| | Column-I | | Column-II |
|---|---|---|---|
| (a) | Boot sector virus | (i) | Sunday |
| (b) | File virus | (ii) | Stoned |
| (c) | Macro virus | (iii) | Melissa |

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

**Direction (22-23)** : Observe the given snapshot carefully and answer the questions that follow regarding MS-Word 2010.

Table-1

| Name | Class | Roll Number |
|---|---|---|
| Anu | 5th | 1 |
| Ajay | 4th | 2 |

Table-2

| Name | Class | Roll Number |
|---|---|---|
| Anu | 5th | 1 |
| Ajay | 4th | 2 |

22. What is the function of the buttons marked as ❶ and ❷ in Table-1?

A. 1- Selects the entire table, 2- Used to resize the entire table manually

B. 1- Selects the entire table, 2- Used to delete the entire table manually

C. 1- Resize the entire table manually, 2- Selects the entire table

D. 1- Delete the entire table manually, 2- Resize the entire table manually

23. Which of the following options would make the text 'Roll Number' automatically fit into the 3rd column as shown in Table-2?

A. 

B. 

C. 

D. Both A and B

24. Observe the QBASIC statements shown here.
PRINT "type your name";
INPUT name$
The given QBASIC statements can also be written as:

A. INPUT "type your name"; name$

B. LET$ type your name$ ; "name"

C. LET$ type your name$ , name

D. INPUT type your name, $name;

25. How would the pointer shape appears in the document when you click on the Split option ⬚ in MS-Word 2010?

A. ⇵

B. I≡

C. 

D. I

26. Which of the following statements is INCORRECT about iPad Air 2?

 A. It is the 6th generation iPad tablet computer.
 B. It is powered by iOS 8.1 operating system.
 C. Its default online storage service is Dropbox.
 D. It comes up with built-in apps such as FaceTime, iTunes Store, etc.

27. Numbers 1, 2, 3 and 4 in the given image represent the different animations that have been applied to it in MS-PowerPoint 2010. Complete the given steps by replacing the question mark (?) to remove all the animations at once from the given image.
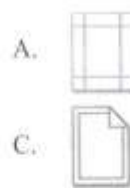


```
? → Animations tab → Animation group
→ Select ★
          Note
```

 A. Select the image.
 B. Select the buttons 1, 2, 3 and 4 simultaneously by pressing SHIFT key.
 C. Select the buttons numbered as 1, 2, 3 and 4 simultaneously by pressing CTRL key.
 D. All of these

28. Which of the following statements hold true about the Shut down option in Windows 7?

 Statement 1 : In the process of shut down, operating system files are sent back to the hard disk properly so that no damage is caused to the files.

 Statement 2 : If you switch off the computer without giving a proper shut down command then there are very high chances of losing data and it may also damage the Windows operating system.

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

29. What is 'Retina 5K Display'?

 A. A display technology by Apple Inc.
 B. A display technology by Microsoft.
 C. A display technology by Google.
 D. A display technology by Samsung.

30. Which of the following features of Page Layout tab would change the background of a page from the one shown in Text-1 into Text-2 in MS-Word 2010?
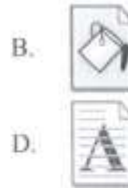
National Cyber Olympiad Text-1     National Cyber Olympiad Text-2

 A.    B. 
 C.    D. 

31. Which of the following QBASIC statements will generate an error?

 A. CLS
    INPUT name$
    PRINT "I am" ; name$
 B. LET name$ = "David"
    PRINT name$
 C. PRINT "Hello friends"
    PRINT
    PRINT "Enjoying QBASIC"
 D. LET A= "National" + "Olympiad"
    PRINT A

32. Which of the following is an enhanced feature of the advanced forms of Instant Messaging software used now-a-days?

 A. You can share hyperlinks to your favourite websites.
 B. You can share real-time news and updates.
 C. You can use internet instead of phone to actually talk with friends.
 D. All of these

33. Arrange the given steps in CORRECT order to show how the two computers having different operating system, are able to communicate with each other through the commonly used protocols i.e TCP and IP.

 Step 1 : The TCP arranges the packets in the order of their serial number. Thus, the original data is obtained. If any packet is lost during the transmission, it is demanded again.

 Step 2 : Data (messages or files) is broken down into small packets. Each packet has a serial number and an address called IP address on it. Each computer connected to the internet has a unique IP address.

 Step 3 : All these packets are then sent to the address of the destination computer one by one. They are passed from one computer to another until they reach their destination.

 A. Step 2 → Step 3 → Step 1
 B. Step 1 → Step 2 → Step 3
 C. Step 1 → Step 3 → Step 2
 D. Step 2 → Step 1 → Step 3

34. In Windows 7, when you click _____ from the Start button,
    – It ends the current Windows 7 session.
    – It closes all windows, programs and documents.
    – It displays the Log In screen.

    A. Lock
    B. Log off
    C. Shut down
    D. Switch user

35. The image shown here represents all the five components of communication, (Sender, receiver, message, medium and protocol) between two devices connected via Bluetooth and sharing music file. Among the following identify the component:

    • That governs data communication between the devices.
    • Without which, two devices may get connected but do not communicate, just as a person speaking Russian cannot be understood by the person who speaks only French.

    

    A. Medium
    B. Message
    C. Protocol
    D. Receiver
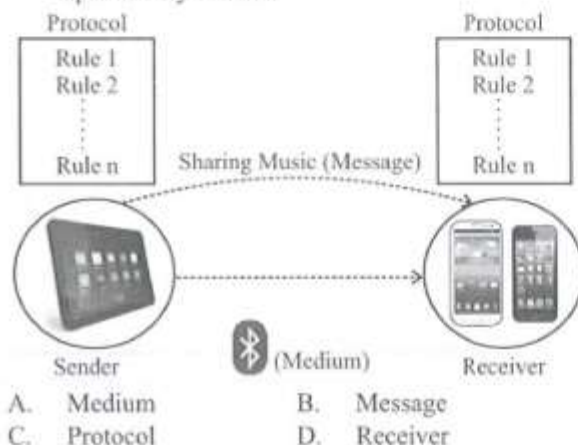
36. Match the internet terms in Column-I with their descriptions in Column-II.

    | Column-I | Column-II |
    |---|---|
    | (a) Web Feed | (i) Web service that provides users with frequently updated content. |
    | (b) Blogs | (ii) It relies on sharing computing resources rather than having local servers or personal devices to handle application and data. |
    | (c) Cloud Computing | (iii) A website that contains an online personal journal with reflections, comments and often hyperlinks provided by users. |

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

37. Select the odd one out (Regarding the features of Windows 7).

    A. Windows Easy Transfer
    B. Windows Fax and Scan
    C. Remote Desktop Connection
    D. Adobe Photoshop

38. Which of the given statements will add comments in a QBASIC program?

    (i) REM To print a statement
    (ii) 'To accept the value
    (iii) REM *****************

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

39. Select the odd one out.

    A. mailbird
    B. THUNDERBOLT.
    C. Outlook
    D. Ask

40. Identify the following :
    – It is a program capable of reproducing and spreading itself to another computer system, usually by means of computer network and spread without any human action.
    – It can create copies of itself to other computers, infect them, and then uses the address book of the infected computer to spread further.
    – It consumes large amount of memory, thus slowing down the computer and making it almost impossible for the user to work.

    A. Firewire
    B. Worm
    C. Spam
    D. Trojan Horse

41. Which of the following devices can be infected by the computer virus?

    A. CD-ROM
    B. Monitor
    C. Mouse
    D. None of these

42. Which of the following options would replace the "?" in the given step to enable you access the setting that resume the same page from where you left off whenever you open Google Chrome program?

    ? → Settings → On startup → Continue where you left off

    A. (home icon)
    B. (menu icon)
    C. g+
    D. ::: Apps

43. Which of the following features of Control Panel of Windows 7 collects security, maintenance and troubleshooting related information of a system in a single window and displays message in the notification area when the computer's security need attention?

A. 

B. 

C. 

D. 

44. Mohit typed size:<=1 MB in search box of Windows Explorer of Windows 7. It searched all the files whose size was less than or equal to 1 MB. It can also be written as _____.

A. size:0 MB..1 MB

B. size<>1MB

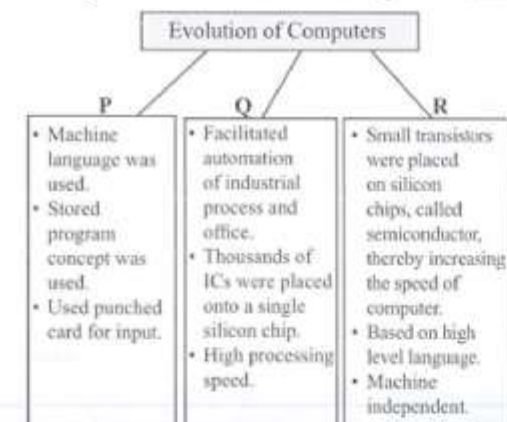C. size=<>:0 MB-1MB

D. size<=0 MB/1MB

45. In Column-I categories of printer is given, in Column-II, their examples are given. Match the categories of printers with their examples.

| Column-I | Column-II |
|---|---|
| (a) Impact printer | (i) Dot matrix printer |
| (b) Non-Impact printer | (ii) Daisy wheel printer |
| | (iii) Line printer |
| | (iv) Laser printer |
| | (v) Inkjet printer |

A. (a) – (i), (ii), (v); (b) – (iii), (iv)
B. (a) – (ii), (iii), (iv); (b) – (i), (v)
C. (a) – (i), (v); (b) – (ii), (iii), (iv)
D. (a) – (i), (ii), (iii); (b) – (iv), (v)

## ACHIEVERS SECTION

46. In the given diagram, features of generations of computers are given in boxes marked as P, Q and R. Identify the device used in these generations.

| Evolution of Computers | | |
|---|---|---|
| **P** | **Q** | **R** |
| • Machine language was used. <br> • Stored program concept was used. <br> • Used punched card for input. | • Facilitated automation of industrial process and office. <br> • Thousands of ICs were placed onto a single silicon chip. <br> • High processing speed. | • Small transistors were placed on silicon chips, called semiconductor, thereby increasing the speed of computer. <br> • Based on high level language. <br> • Machine independent. |

A. P - , Q - , R - 

B. P - , Q - , R - 

C. P - , Q - , R - 

D. P - , Q - , R - 

47. Suppose you want to change the color of your window borders, start menu and taskbar in Windows 7, which can be achieved by going to **Control Panel → Personalization → Window color,** but instead of showing the color ranges, the dialog box as shown here, is displayed, that makes you unable to change the color. This dialog box appears when _____.
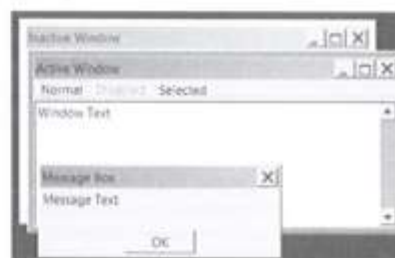


A. You are not using an aero theme.
B. You are not using Basic and High Contrast theme.
C. You have turned off your computer speaker.
D. You didn't configure your desktop icons.

48. Which of the following statements hold true about the given software?



Statement 1 : It is a Cloud Computing service that allows you to use MS-Office apps on Windows devices.

Statement 2 : It is a Word processing software and a successor of MS-Office 2013.

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

49. In the given diagram, computers in Main Office building can share data between them, and outside the main office building, only Partners building can access the data of Main Office building. Which of the following statements is INCORRECT regarding the given type of network?
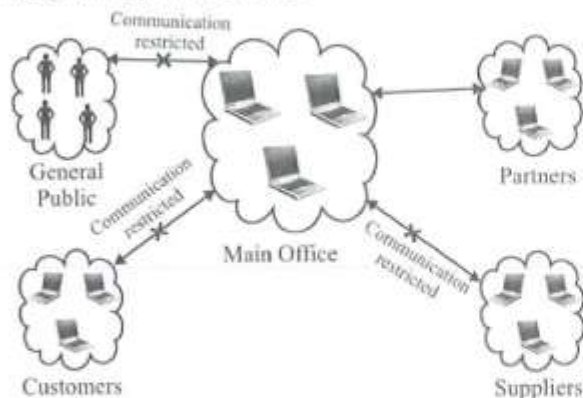


A. It represents the EXTRANET.
B. "Partners" can access the data of Main Office only if they have a valid username and password.
C. It is a super network that can also be seen as an advance form of WAN.
D. Both A and B

50. Select the CORRECT elements with their examples in QBASIC.

A. Numeric constant — 12,345.34
B. String constant — "502, Rohini"
C. Variable — %marks
D. Keyword — METHOD

SPACE FOR ROUGH WORK

# SOF

SCIENCE OLYMPIAD FOUNDATION

**Inspiring Young Minds
Through Knowledge Olympiads**

## CLASS
# 7

## SET-B

Name:.................................................

Section:........................... Roll No.:.......................

Contact No..................................................

Total Questions: 50                          Time: 1 hr.

# N C Q

## 16TH SOF NATIONAL
## CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.    `16. Ⓐ Ⓑ ● Ⓓ`

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

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



(1)  (2)       (3)  (4)
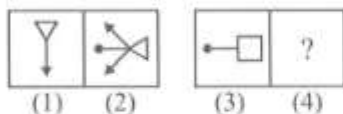
A. 

B. 

C. 

D. 

2. If P denotes '×', T denotes '−', M denotes '+' and B denotes '÷', then 28 B 7 P 8 T 6 M 4 = ?

A. −3/2

B. 30

C. 32

D. 34

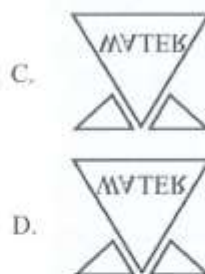3. Find the missing number, if a certain rule is followed row-wise or column-wise.

A. 10

B. 12

C. 13

D. 20

| 5 | 5 | 2 |
|---|---|---|
| 2 | 4 | 1 |
| 8 | 3 | 10 |
| 40 | 30 | ? |

4. Select the correct water image of Fig. (X).
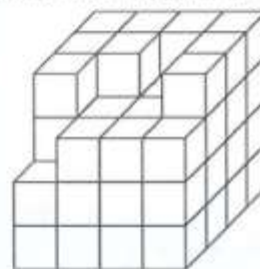


Fig. (X)

A. 

B. 

C. 

D. 

5. How many such 1's are there each of which is immediately followed by 2, and 2 is not immediately followed by 3?

1 2 1 3 4 5 1 2 3 5 2 1 2 6 1 4 5 1 1 2 4 1 2 3 2 1 7 5 2 1 2 5

A. 2

B. 4

C. 5

D. 7

6. Count the number of cubes in the given figure.



A. 58

B. 55

C. 53

D. 56

7. Five persons are standing in a line. One of the two persons at the extreme ends is a professor and the other a businessman. An advocate is standing to the right of a student. An author is to the left of the businessman. The student is standing between the professor and the advocate. Find the position of the advocate from the left end.

A. 1$^{st}$

B. 2$^{nd}$

C. 3$^{rd}$

D. 4$^{th}$

8. Select the figure from the options which satisfies the same conditions of placement of the dots as in Fig. (X).



Fig. (X)

A.

B.

C.

D.
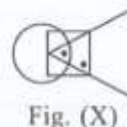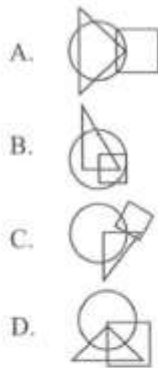
9. Find the odd one out.

    A. BFJNRV
    B. DGJMPS
    C. MORTXY
    D. PRTVXZ

10. Group the given figures into three classes on the basis of their identical properties using each figure only once.

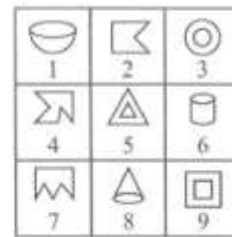| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 |
| 7 | 8 | 9 |

    A. 1,5,9; 2,4,7; 3,6,8
    B. 3,5,9; 1,6,8; 2,4,7
    C. 1,4,5; 2,6,8; 3,7,9
    D. 3,5,9; 1,4,8; 2,6,7

## COMPUTERS AND INFORMATION TECHNOLOGY

11. _____ generation of computers used magnetic disks as backing store medium and introduced programming languages such as COBOL and BASIC.
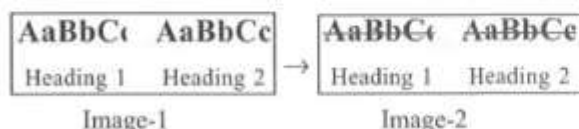
    A. First
    B. Second
    C. Third
    D. None of these

12. Compiler is used to convert High-level language to the Machine-level language, as shown in the given block diagram. Which of the following terms can also be used in the place of High-level language and Machine-level language respectively?

    High-level language → Compiler → Machine-level language

    A. Source program, Editor program
    B. Object program, Editor program
    C. Source program, Object program
    D. Editor program, Object program

13. Which of the following first two steps are CORRECT if you want to modify the formatting of built-in heading styles of Quick Styles gallery by applying strikethrough effect on it (as the formatting changes shown here in the images from Image-1 to Image-2) in MS-Word 2010?

    AaBbCc  AaBbCc
    Heading 1  Heading 2  →  AaBbCc  AaBbCe
                              Heading 1  Heading 2

    Image-1                   Image-2

    A. Right click the style in Quick Styles gallery→Modify

    B. Right click the style in Quick Styles gallery→Format
    C. Double click the style in Quick Styles gallery →Format
    D. Double click the style in Quick Styles gallery →Edit

14. Which of the following options would come in the place of Step (iv) if you want to copy the Slide Master theme to another presentation in MS-PowerPoint 2010?

    (i) Open both the presentations
    (ii) In the presentation that contain the theme, enter Slide Master View by going to : View→Master Views→Slide Master
    (iii) Select the Slide Master and press Ctrl + C
    (iv) ?
    (v) Enter Slide Master View by going to : View→Master Views→Slide Master and press Ctrl + V

    A. Switch to other presentation by going to: View→Window→Switch Windows
    B. Press CTRL + W, to switch to new window
    C. Preserve the Slide Master View
    D. Both A and B

15. Which of the following operating systems is/are based on 'WIMP' interface?

    (i)          (ii)          (iii)

    A. Both (i) and (ii)
    B. Both (ii) and (iii)
    C. Only (iii)
    D. (i), (ii) and (iii)

16. Which of the following statements hold true about the given feature of MS-PowerPoint 2010?



Statement 1 : To use this feature you need an internet connection.

Statement 2 : While using this feature, you can easily edit your presentation or mark it with highlighter or pen.

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

17. What is the function of the button found at the right edge of the horizontal scroll bar marked as ❶ in the given snapshot of MS-Excel 2010?



A. It is used for splitting the worksheet window into upper and lower panes.
B. It is used for splitting the worksheet window into right and left panes.
C. It automatically shifts the Zoom slider button to the left.
D. It is used to hide the Status bar.

18. What would be the output of the given QBASIC code?

```
LET X = 10
WHILE X > 0
PRINT X;
LET X = X - 2
WEND
END
```

A. 10 8 6 4 2
B. 10 8 6 4 2 1
C. 10 9 8 7 6 5
D. 8 7 6 5 4 3 2 1

19. Holographic computing is one of the emerging technology in IT world. It is used for presenting laser generated 3D images of objects in a real environment. Which of the following is the name of the handset being developed by Microsoft that let you see, hear and interact with holograms within an environment?

A. HoloLens
B. HoloSet
C. MS-Headset
D. MS-HoloBox

20. After selecting the data shown in Table-1, which of the following shortcuts would enable the filters in the data headers as shown in Table-2 in MS-Excel 2010?

| Name | Marks |
|------|-------|
| Arun | 45 |
| Shayana | 48 |
| Swati | 23 |

→

| Name ▾ | Mark ▾ |
|--------|--------|
| Arun | 45 |
| Shayana | 48 |
| Swati | 23 |

Table-1        Table-2

A. Ctrl + Alt + M
B. Ctrl + ⇧ Shift + L
C. Ctrl + M
D. ⇧ Shift + Alt + F

21. Select the odd one out.

A. 
B. 7ZIP
C. 
D. ⟷ TeamViewer

22. In MS-Excel 2010, cell A1 contains the value : **123**, when you select the cell and drag its fill handle to cell A4, you would see an option with a drop-down button, which when clicked, displays the four options (as shown here). What values would appear in cell A1 to A4 when "Fill without formatting" option is selected?

- Copy Cells
- Fill Series
- Fill Formatting Only
- Fill Without Formatting

A.
| ◢ | A |
|---|---|
| 1 | **123** |
| 2 | 123 |
| 3 | 123 |
| 4 | 123 |

B.
| ◢ | A |
|---|---|
| 1 | *123* |
| 2 | *123* |
| 3 | *123* |
| 4 | *123* |

C.
| ◢ | A |
|---|---|
| 1 | 123 |
| 2 | 123 |
| 3 | 123 |
| 4 | 123 |

D.
| ◢ | A |
|---|---|
| 1 | 123 |
| 2 | *123* |
| 3 | *123* |
| 4 | *123* |

23. Which of the following connections represents serial transmission?

A. USB memory stick —connected via USB port to→ Computer

B. Keyboard —connected via PS/2 connector to→ Desktop

C. Printer —connected to→ Centronics port

D. Both A and B

24. Which of the following QBASIC code will print multiplication table of 2 and 3?

A. FOR A = 2 TO 3
FOR B = 1 TO 10
PRINT B;   "Times" ;    A; "is" ; A * B
NEXT B
NEXT A

B. NEXT A = 2 TO 3
NEXT B = 1 TO 10
PRINT B;   "Times" ;    A; "is" ; A * B
FOR B
FOR A

C. WHILE A = 2 TO 3
WHILE B = 1 TO 10
PRINT B;   "Times" ;    A; "is" ; A * B
FOR B
FOR A

D. WHILE A = 2 TO 3
WHILE B = 1 TO 10
PRINT B;   "Times" ;    A; "is" ; A * B
FOR B
EXIT A

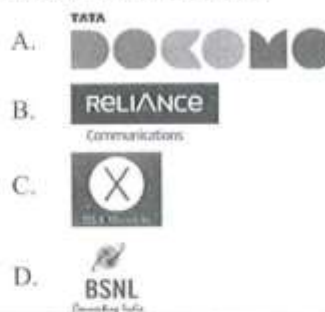25. Hard disk is an electromagnetic device because _____.

A. Reading and writing data is electrical but the positioning of the disk head to the correct track and waiting for disk to rotate are mechanical process

B. Reading and writing data is mechanical but the positioning of the head to the correct track is electrical process

C. It uses ICs to store data

D. It is not susceptible to shock

26. In the given example of URL, which part (marked as ❶, ❷, ❸ and ❹) would represent the link to computer/server?
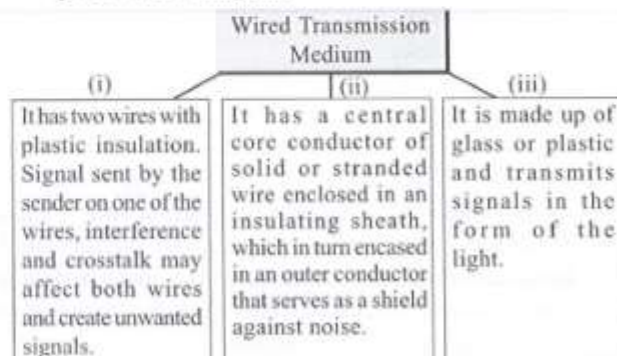
http://Cbseindia.org/Datesheet-seventh/seventhnew.htm
❶          ❷          ❸          ❹

A. ❶

B. ❷

C. ❸

D. ❹

27. Select the odd one out.

A. TATA DOCOMO

B. RELIANCE Communications

C. (X)

D. BSNL

28. Replace (i), (ii) and (iii) by identifying the wired transmission medium with the help of description given in the diagram.

| | Wired Transmission Medium | |
|---|---|---|
| (i) | (ii) | (iii) |
| It has two wires with plastic insulation. Signal sent by the sender on one of the wires, interference and crosstalk may affect both wires and create unwanted signals. | It has a central core conductor of solid or stranded wire enclosed in an insulating sheath, which in turn encased in an outer conductor that serves as a shield against noise. | It is made up of glass or plastic and transmits signals in the form of the light. |

A. (i) - Twisted pair cable, (ii) - Coaxial cable, (iii) - Fiber–Optic cable

B. (i) - Coaxial cable, (ii) - Twisted pair cable, (iii) - Fiber–Optic cable

C. (i) - Fiber–Optic cable, (ii) - Twisted pair cable, (iii) - Coaxial cable

D. (i) - Fiber–Optic cable, (ii) - Coaxial cable, (iii) - Twisted pair cable

29. Match the following Message Security services in Column-I with their descriptions in Column-II.

| Column-I | | Column-II |
|---|---|---|
| (a) Message Confidentiality | (i) | In this, the sender and receiver expects privacy. The transmitted message must make sense to only the intended receiver, for others, the message must be a garbage. |
| (b) Message Integrity | (ii) | It means, message/data must arrive at the receiver as it was sent. There must be no changes in the transmission, neither accidentally nor maliciously. |
| (c) Message Authentication | (iii) | In this, the receiver needs to be sure of the sender's identity and that an imposter has not sent the message. |

A. (a) - (i), (b) - (ii), (c) - (iii)

B. (a) - (ii), (b) - (i), (c) - (iii)

C. (a) - (i), (b) - (iii), (c) - (ii)

D. (a) - (iii), (b) - (ii), (c) - (i)

30. Which of the following is a replacement technology for magnetic strip card which stores data in microchip of the card rather than on magnetic stripes?

    A. Stripe-pin technology
    B. Chip-and-pin technology
    C. Micro-IC-pin technology
    D. IC-Micro-pin technology

31. Which of the following features has been explained below?

    > Simply drag the title bar to the top of the screen to maximize it, or drag the title bar away from the top edge to restore it in Windows 7.

    A. Aero Peek
    B. Aero Shake
    C. Aero Snap
    D. Aero Jump

32. _____ is a piece of source code that hides itself within a legitimate computer program like a game or screen saver that the user himself has installed. However, when a pre-set trigger event, like a particular date or time occurs, it unleashes the malicious program to wreak havoc on the computer.

    A. Melissa
    B. Trojan horse
    C. Computer worm
    D. Sunday

33. Which of the following features of Windows 7 would enable the transfer of files from 32-bit version of Windows to a 64-bit version?

    A. 
    B. 
    C. 
    D. All of these

34. Select the INCORRECT match.

    A. Macro virus – It is a piece of code that can be embedded in a data file such as word processors and spreadsheet applications.
    B. Stealth virus – While active, it hides the modifications it has made to files.
    C. Polymorphic virus – It produces the varied copies of itself, due to which it can easily be detected by any virus scanner.
    D. Boot Sector virus – It copies its own malicious code in the Master Boot Record of a PC.

35. In some cases, a program written for an earlier version of Windows might install successfully but still not run well. Which of the following wizard of Windows 7 will fix this issue and let the older program to run in the current version of Windows?

    A. Windows Remote Assistance
    B. Program Compatibility
    C. Ease of Access Center
    D. Resource monitor

36. In the given snapshot a word NCO has been linked to a webpage of sofworld.com with the help of Hyperlink option in MS-Excel 2010. Which of the following options would take you to the 'sofworld' webpage?

    

    A. Holding Ctrl key, press on the link NCO
    B. Holding Shift key, press on the link NCO
    C. Simply press once on the link NCO
    D. Both A and B

37. While working on Mail Merge in MS-Word 2010, you have placed a merge field code : <<Company>> in your document. Now you want to see how the actual data look like in the merged document. Which of the following features would toggle between the merge field code and actual data?

    A. 
    B. 
    C. 
    D. All of these

38. You have inserted two action buttons (Previous and End) at the bottom of the slide as shown here. Which of the following actions can be added to these action buttons in MS-PowerPoint 2010?

    

    A. They can be used to go to the previous or next slide.
    B. They can be used to run a program like Google Chrome.
    C. They can be used to end a slide show.
    D. All of these

39. Select the odd one out (Regarding automatic data entry device).

    A. Barcode reader
    B. OMR
    C. OCR
    D. Keyboard

40. In the given hierarchical diagram (showing the categorization of Application Software with examples), which of the following options can replace the numbers '❶' and '❷' respectively?

Application Software



For e.g. Inventory control software     For e.g. ❷
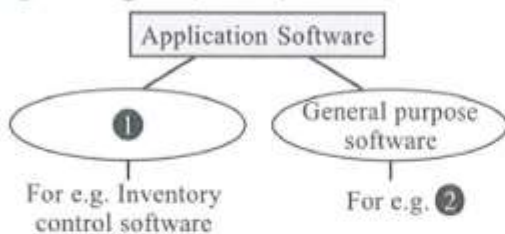
A. Special purpose application software, MS-Word
B. Special purpose application software, MS-PowerPoint
C. Utility software, MS-Excel
D. Both A and B

41. With the help of which software the following tasks (given in steps) can be done on a PC?

At first, the document is scanned→then, captured as an image→software then process the image→converts its content into separate text characters→which can be editable by Word processing software

A. OMR
B. MICR
C. OCR
D. IMR

42. For which of the following reasons, ROM is suitable for storing the program instructions, the computer needs for its start-up process?

A. The content of this memory cannot be changed.
B. Software on the ROM memory, called bootstrap loader, is written in machine language.
C. ROM can also be suitable for auxiliary storage.
D. All of these

43. Two different ways of using DO LOOP statements in QBASIC are given. In which of the following case, statement would run atleast once, no matter what the statement inside the loop is?

Case (i)
DO WHILE <CONDITION>
    STATEMENTS
LOOP

Case (ii)
DO
    STATEMENTS
LOOP WHILE <CONDITION>

A. Only Case (i)
B. Only Case (ii)
C. Both Case (i) and Case (ii)
D. Neither Case (i) nor Case (ii)

44. What is the name given to the temporary storage area between the hard disk and the processor, which is used when there is speed mismatch between the speed of the data processing and Input/Output?

A. Laser
B. Buffer
C. Jitter
D. Converter

45. Which of the following statements hold true about CD-R and CD-RW?

Statement 1 : Both CD-R and CD-RW can read many times, and CD-R can be used for backup/archiving data.

Statement 2 : Both CD-R and CD-RW can only read once, and none of them can be used for backup/archiving data.

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

## ACHIEVERS SECTION

46. You have performed the given steps in MS-Word 2010.

(i) Inserted two figures with the caption 'figure1' and 'figure2'.
(ii) Inserted cross reference link in the document as: see figure1 see figure2
(iii) Deleted the figure1 along with its caption
(iv) Go to the area where you have inserted cross reference link i.e see figure1
(v) Select and update the figure1 field in the cross-reference link.

What message will it show after performing these steps?

A. Error! Reference source not found.
B. figure1 is deleted. Insert new figure!
C. Insert another Cross-Reference of name figure1!
D. Error! Change the reference of figure1

47. Observe the given snapshot carefully. What will happen when a user click on highlighted portion "show 2" in the given drop-down menu of MS-PowerPoint 2010?



A. Slides contained in this custom show will get displayed in Normal view.
B. Custom Shows dialog box will get displayed.
C. It will start a full screen slide show of selected custom show i.e. "show 2".
D. It will create a copy of show 2 ppt.

48. Cell A1 contains a date in system's date format, i.e. MM/DD/YY : 3/15/2016. What would be the result if you enter =A1+5 in cell A2 in MS-Excel 2010?

A. 8/15/2016
B. 3/20/2016
C. 8/20/2021
D. 8/20/2016

49. Which of the following statements would replace the "?" in QBASIC code in which user has to enter 10 positive numbers, if the user enters a negative number, the program control should come out of the loop and execute rest of the statements?

```
SUM = 0
FOR i = 1 TO 10
INPUT N
?
SUM = SUM + N
NEXT i
PRINT SUM
```

A. IF N <> 0 THEN EXIT
B. IF N < 0 THEN EXIT FOR
C. IF N = 0 THEN EXIT
D. FOR N < 0

50. Which of the following statements hold true about the Wireless Transmission media?

Statement 1 : When antenna transmits Radio Waves, it sends out the signals in all directions, thereby making it suitable for long distance broadcasting.

Statement 2 : Bluetooth LAN can be connected to the internet if one of the gadget has this capability.

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

# SOF

## SCIENCE OLYMPIAD FOUNDATION

Inspiring Young Minds
Through Knowledge Olympiads

## CLASS

# 8

## SET-B

Name: .............................

Section: .................... Roll No.: ....................

Contact No. ..............................

Total Questions: 50                    Time: 1 hr.

# NCO

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.    16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.
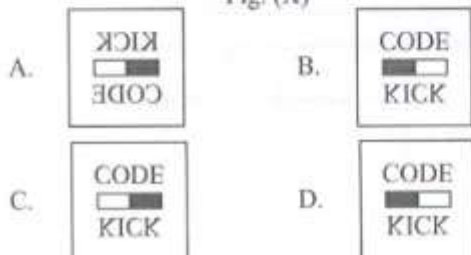
1. A man walks 7 km towards North. Then he turns to East and walks 12 km. After this, he turns to North and walks 8 km. Again he turns towards East and walks 8 km. How far is he from the starting point?
   A.   10 km
   B.   23 km
   C.   15 km
   D.   25 km

2. Which of the following options most closely resembles the water image of Fig. (X)?

   KICK
   CODE
   Fig. (X)

   A.   KICK / CODE (inverted)
   B.   CODE / KICK
   C.   CODE / KICK
   D.   CODE / KICK

3. In the given diagram, circle represents people who live in joint family, triangle represent school teachers and square represent married people. Then by which letter the married people who live in joint family but are not school teachers are represented?
   A.   C
   B.   F
   C.   D
   D.   A
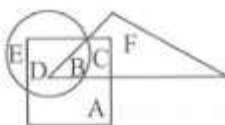
4. Find the figure which will replace the (?) in Fig (X).
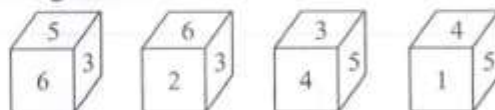
   A.
   B.
   C.
   D.
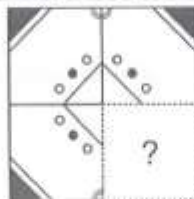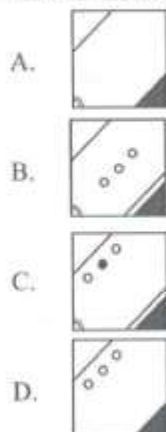
   Fig. (X)

5. Five girls are sitting on a bench facing North. Megha is to the left of Beena and to the right of Priya. Latika is to the right of Beena. Garima is between Beena and Latika.

   Who is sitting in the middle?
   A.   Garima
   B.   Latika
   C.   Megha
   D.   Beena

6. Four different positions of a dice are shown. Which number will be on the face opposite to the face having number 3?

   A.   1
   B.   2
   C.   4
   D.   5

7. Pointing to a photograph Mr. X said to Mr. Y, "She is the only daughter of the father of my mother". How is X related to the person in the photograph?
   A.   Sister
   B.   Son
   C.   Nephew
   D.   Brother

8. The question consist 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 the figure from the options which would most closely resembles the unfolded form of fig. (Z).

   X    Y    Z

   A.
   B.
   C.
   D.
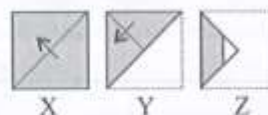
9. If the digits of each of the following numbers are written in reverse order and the obtained numbers are written in decreasing order. Then, what will be the unit digit of the fourth number?
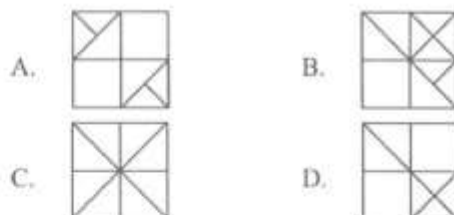
   476   629   357   184   536   863
   A.   6
   B.   5
   C.   4
   D.   3

10. In which of the following options, Fig. (X) is exactly embedded as one of its part?

Fig. (X)

A. 
B. 
C. 
D. 

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Which of the following actions will help you to free up space for new programs and documents in your computer with Windows 7?

    (i) Transfer the content (which is no longer needed) to Recycle Bin.
    (ii) Move some content to another storage medium such as pendrive.

    A. Only (i)
    B. Only (ii)
    C. Both (i) and (ii)
    D. Neither (i) nor (ii)

12. You want to access an audio file which is physically located at the end in the memory of the storage device. Which of the following storage devices will allow you to access that audio file directly without having to play the previous files?

    A. 
    B. 
    C. 
    D. Both A and B

13. Complete the given diagram by replacing "?". The diagram represents the "Structure of a National ISP", in which local ISPs are connected to "?"(which you are required to identify) and "?" is further connected to National ISP.

    (Note: ⊗ in the image represents ROUTER)
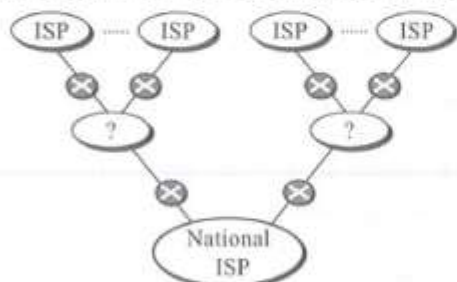
    

    A. Country ISP
    B. World ISP
    C. Regional ISP
    D. Both A and B

14. I have enabled a feature in MS-Word 2010 document, such that whenever I press TAB key, an arrow is displayed instead of TAB space. Which of following Word Options would convert the TAB space into the symbol as shown here?

    Hi ⟶ I am ⟶ Berry

    A. General
    B. Display
    C. Language
    D. Proofing

15. In MS-PowerPoint 2010, which of the following features would convert the smiley and arrow symbols into special symbols as shown here?

    A. AutoForm
    B. AutoSymbol
    C. AutoInterchange
    D. AutoCorrect

    :-) $\xrightarrow[to]{Converted}$ ☺

    ==> $\xrightarrow[to]{Converted}$ →
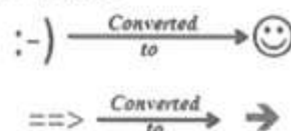
16. Which among the following is an example of real time operating system?

    A. Windows
    B. LINUX
    C. UNIX
    D. LynxOS

17. _____ are like multiple film strips stacked on top of one other, each containing a different image that appears on the stage in Flash CS6.

    A. Animations
    B. Timelines
    C. Layers
    D. Keyframes

18. Select the INCORRECT match regarding the formula of MS-Excel 2010 referring to the values shown in the snapshot (on left hand side) with their results (on right hand side).

    | | A | B |
    |---|---|---|
    | 1 | 28 | 14 |
    | 2 | 10 | |

    A. =IF(A1/2=0,"even","odd")  —  even
    B. =IF(A1=28,B1-A1)  —  -14
    C. =IF(A1<B1,TRUE, IF(B1<A2,"False","OK"))  —  OK
    D. =IF(A1=28,A1-B1," ")  —  14

19. In a university, students who need to access the university resources needs to be authenticated during the logging process, to protect the interests of the university and the students. This process of verifying a user is called _____.

A. Message Authentication
B. User Identification
C. User Integrity
D. Both A and B

20. This is the snapshot of a notification that informs the user that a new removable drive is attached in Windows 8.
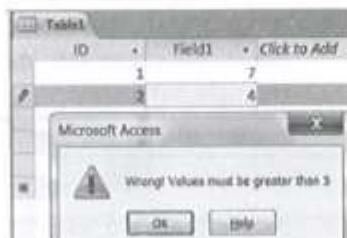
KINGSTON (E:)
Tap to choose what happens with removable drives.
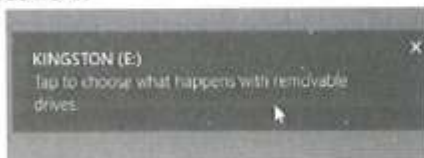
Which of the following statements is CORRECT about this type of notification?

A. It is known as notification bubbles or desktop notification.
B. It usually disappears automatically after a short amount of time.
C. It does not force the user to react to this notification immediately.
D. All of these

21. What would be the result if you type a formula: =COUNT(A1:B3) regarding the data given in the MS-Excel 2010 snapshot?

A. 3
B. 4
C. 5
D. 6

| | A | B |
|---|---|---|
| 1 | "Divine" | 2 |
| 2 | abc | 5 |
| 3 | #DIV/0! | 3 |

22. A rule is set in Field1 of a table, such that whenever a number less than 5 is typed in it, an error message (as shown here) is displayed. Which of the following features would let you set that rule i.e only number greater than 5 is allowed in Field1 of MS-Access 2010?

A.
B.
C.
D. AB

Table1
ID • Field1 • Click to Add •
1 7
2 4

Microsoft Access

Wrong! Values must be greater than 5

OK    Help

23. Suppose you have opened Documents library and typed ~??v in the Search box of Windows Explorer in Windows 7, then which of the following document's name would be displayed as the result?

(i) saved          (ii) level
(iii) invoice      (iv) voice-over
(v) voice

(Assume, these documents have already been saved in your computer)

A. (i), (ii) and (iii)
B. Both (iv) and (v)
C. Both (i) and (ii)
D. Only (v)

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

A. Yes/No
B. General
C. Currency
D. Memo

| Field1 ▾ |
|---|
| ✔ |
| ✔ |
| ✔ |

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

```
<html>
<body>
<h2><b><i><u>Ordered List</u></i></b></h2>
<ol>
<li>Milk</li>
<li>Yoghurt</li>
<li>Butter Milk</li>
</ol>
</body>
</html>
```
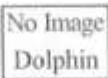
A. **_Ordered List_**
1.Milk
2.Yoghurt
3.Butter Milk

B. **_Ordered List_**
1.Milk
2.Yoghurt
3.Butter Milk

C. **_Ordered List_**
i. Milk
ii. Yoghurt
iii. Butter Milk

D. *Ordered List*
i. Milk
ii. Yoghurt
iii. Butter Milk

26. Which of the following shortcuts is used to italicized the selected text in Flash CS6?
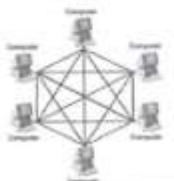(Note: Assume that the Font Family is: Times New Roman)

A. [⇧ Shift] + [I]
B. [Ctrl] + [I]
C. [Ctrl] + [⇧ Shift] + [I]
D. [Ctrl] + [J]

27. What would be the output of the given HTML code if there is no image file, named as "Dolphin" in the system in which the file is hosted?

    `<img src="Dolphin.jpg" alt="Dolphin" border="5">`

    A. [image] Dolphin    B. [image] Dolphin

    C. **Dolphin**    D. No Image
       [image]         Dolphin

28. Which of the following topologies use a multi-point connection in which a terminator is added at ends of central cable, to prevent bouncing of signals and it interrupt all the transmission between the devices if a fault or break occur?

    A.     B. 

    C.     D. All of these

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

    ```
    <html>
    <body>
    <!--Welcome back-->
    <h1> <b> hello </b> </h1>
    <h2> hello </h2>
    <h3> hello </h3>
    </body>
    </html>
    ```

    A. **hello**          B. hello
       **hello**             hello
       hello                hello
                            !-Welcome back-

    C. **hello**          D. hello
       hello hello          hello
                            hello

30. The given snapshot indicates the following settings:
    - Whenever you insert any cells in the table it will be highlighted with light blue color.
    - Whenever you delete any cells in the table it will be highlighted with pink color.

    Why such settings are required in MS-Word 2010?

    | Inserted cells: | Light Blue ▼ |
    | Deleted cells: | Pink ▼ |

    A. To combine the latest version of file with their previous version.
    B. To highlight the changes that have been made to a table in a document.

C. To restrict the people from doing normal changes.
D. To preserve the latest version of document for future use.

31. Which among the following statements marked as (i), (ii), and (iii) holds true regarding, why we cannot use infrared waves outside the building?

    (i) Because the sun rays contain infrared waves that can interfere with the communication.
    (ii) Because infrared waves, having high frequencies can penetrate walls.
    (iii) Because infrared waves are uni-directional.
    A. Only (i)
    B. Only (ii)
    C. Both (i) and (ii)
    D. Both (i) and (iii)

32. Which of the following output is CORRECT if you type the given formula in MS-Excel 2010?

    (Note: Cell A1 = 2015)
    =REPLACE(A1,3,2,"16")
    A. 2016
    B. 1620
    C. 16
    D. 0216

33. The process of buying and selling of goods and services through wireless handheld devices is called _____.

    A. M-Commerce
    B. H-Commerce
    C. Short-commerce
    D. Metro-commerce

34. Observe the given snapshot found in Settings options of Google Chrome browser. It shows that first page of www.sofworld.org is set as the home page in Google Chrome. What will happen when you click on the area marked with circle?

    Appearance

    | Get themes | Reset to default theme |

    ☑ Show Home button
    www.sofworld.org Change

    A. It will open a dialog box that let you change the home page of the browser.
    B. It will open a dialog box that let you change the case of URL from lower case to upper case.
    C. You can change the appearance of the Home button.
    D. All of these

35. Select the odd one out.

A. Tango

B. LINE

C. 

D. 

36. In Windows 7 you can install the Windows without any license key for 30 days. This time period is called Grace Period. But you can extend the grace period by additional 30 days if you are not ready to activate Windows. Rearrange the given steps in CORRECT order to extend your activation grace period by 30 days in Windows 7?

   (i)   Restart your computer.
   (ii)  Open Command Prompt window using Run As Administrator option.
   (iii) Type slmgr – rearm

   A.   (i) → (ii) → (iii)
   B.   (ii) → (iii) → (i)
   C.   (iii) → (ii) → (i)
   D.   (i) → (iii) → (ii)

37. What does the icon marked as ❶ represent in the given snapshot of MS-Access 2010?
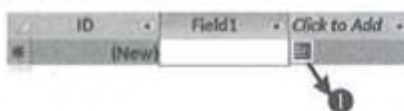


   A.   The data type of Field1 is of Date/Time.
   B.   The data type of Field1 is of Yes/No.
   C.   Only currency values can be entered.
   D.   Only hyperlinks can be entered.

38. Match the devices in Column-I with their applications in Column-II :

   Column-I | Column-II
   | |
   (a) Speech recognition system | (i) For authentication of a user by a computer system based on speech input.
   (b) Voice reproduction system | (ii) Automatic answering machine that tells about vacancy status of a flight or train.
   (c) Speech synthesizer | (iii) Foreign tourist who don't understand hindi, would enter the text in the system, to communicate, then the system converts it into spoken words in Indian language.

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

39. Which of the following features of Windows 7 will allow you to set the following settings in a laptop?

   • To adjust the brightness of your computer.
   • To increase/decrease the volume of your computer.
   • To turn on/off the presentation settings when the system is connected with projector.

   A. 

   B. 

   C. 

   D. 

40. Identify the type of virus from the given symptoms:

   – It attempts to attack both the boot sector and the executable or program files at the same time.
   – This virus may also take different actions on an infected computer.
   – This type of virus spreads in multiple ways.
   – It may also depend on the existence of certain files on the PC.

   A.   Multipartite virus
   B.   Sabotage virus
   C.   Web scripting virus
   D.   Tunneling virus

41. The snapshot given here shows that the word "Unit" is being dragged from one place to another in MS-PowerPoint 2010. Which of the following options will replace the "?" in the given steps if you want to disable this dragging and dropping of words in MS-PowerPoint 2010?

   # UNIT
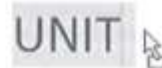
   File tab→ Options→? → Editing options → Clear the checkbox named as: Allow text to be dragged and dropped

   A.   Click on "Advanced" in PowerPoint Options window
   B.   Click on "Language" in PowerPoint Options window
   C.   Click on "Display" in Proofing dialog box
   D.   Click on "General" in Format dialog box

42. Select the INCORRECT match.

   A. LINUX  - UNIX like operating system designed for personal computer.
   B. Solaris - iOS like operating system, developed by Apple Inc.
   C. Android - Mobile operating system, owned and maintained by Google. Its releases are nicknamed after sweets and desserts items.
   D. Symbian - An operating system which was primarily used by Nokia.

43. Which of the following statements hold true about OMR?

Statement 1 : It is capable of detecting alphabetical and numeric characters on a page of typed or handwritten text.

Statement 2 : It transcribes the marks (made on the paper with dark pencil) into electrical pulses that are transmitted to the computer.

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

44. Letter quality printers prints characters that have the same quality as that produced by a typewriter. Which among the following produces letter quality prints and is an impact printer?

A. Daisy wheel printer
B. Dot matrix printer
C. Laser printer
D. Inkjet printer

45. In the given block diagram, '⊗' is a type of memory that even if stores about 1% of the data, stored in primary memory, the average memory access time reduces significantly thus improving the overall performance of the computer. Identify '⊗'.

CPU → ⊗ → Primary memory

A. Memory stick
B. Blu-ray disc
C. Cache
D. Control unit

## ACHIEVERS SECTION

46. The given snapshot is a kind of reminder that is displayed in the backstage view, by 'Check for Issues' feature, indicating that you have some hidden text in your document. Which of the following Check for Issues options (displayed when its drop-down button is clicked) would remove the hidden text, if you don't want those text to share publically in MS-Word 2010?

Check for Issues ·  
**Prepare for Sharing**  
Before sharing this file, be aware that it contains:  
* Characters formatted as hidden text

A. Inspect Document
B. Check Accessibility
C. Check Compatibility
D. All of these

47. When you start recording the slide show in MS-PowerPoint 2010, the dialog box shown here is displayed which gives you the option whether you want to record the slide or animations timings and narration and laser pointer. Which of the following statements holds true about the given dialog box?

Record Slide Show  
Select what you want to record before you begin recording.  
☑ Slide and animation timings  
☑ Narrations and laser pointer  
Start Recording   Cancel

Statement 1 : This dialog box is displayed only if you have animation or narrations inserted in your slide.

Statement 2 : It is displayed only when we start recording from the first slide, in any other case, it will not be displayed.

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

48. The image shown here represents the downloading of audio/video file from the web server. The process of communication is shown by numbers marked as ❶, ❷ and ❸ in the image, which are explained below:

Browser ⇄ Web server  
❶ ❷  
❸  
Media Player
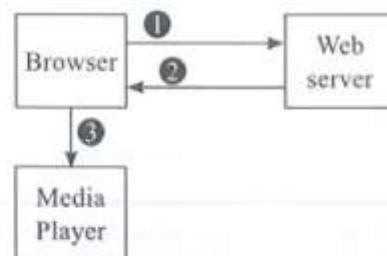
❶ Browser sends the requests to the web server to download audio/video file.

❷ Web server sends the response back to the web browser by sending compressed audio/video files.

❸ Then, Browser use Media Player to play the downloaded file.

Which of the following protocols is used in this approach?

A. NNTP
B. Media Secure Protocol
C. HTTP
D. TELNET

49. Which of the following statements holds true about the given HTML statement?

    `<ol type="square">`

    Statement 1 : Type="square" in `<ol>` tag is used to mark the items of the list with square symbol, such as: □ Wireless

    Statement 2 : The given statement is not correct because type="square" is associated with `<ul>` tag.

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

50. Observe the given snapshot of MS-Excel 2010, which shows you price of an item named Jacket and its discount/reduction rates in different months. It also shows you a formula written in cell B9.

| | A | B | C | D |
|---|---|---|---|---|
| 1 | Product | Price | | |
| 2 | Jacket | 50 | | |
| 3 | | | | |
| 4 | | | | |
| 5 | Month | Jan | Feb | March |
| 6 | Reduction | 20% | 40% | 80% |
| 7 | | | | |
| 8 | Price-month | Jan | Feb | March |
| 9 | Jacket | =$B$2*(1-B$6) | | |

What would be the result in cells B9, C9 and D9 respectively, after you press Enter in cell B9 and then drag the formula across cells C9 and D9?

A.  30,60,10
B.  40,30,10
C.  60,50,70
D.  10,20,50

---

SPACE FOR ROUGH WORK

# SOF
SCIENCE OLYMPIAD FOUNDATION

**Inspiring Young Minds Through Knowledge Olympiads**

# CLASS
# 9
## SET-B

Name: ..................................................................

Section: ....................... Roll No.: ...........................

Contact No. ........................................................

Total Questions: 50                                    Time: 1 hr.

# N C O

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.

   16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

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

Problem Figures



A.    B. 

C.    D. 

2. Y is to the East of X, which is to the North of Z. If P is to the South of Z, then P is in which direction with respect to Y?
   A. North
   B. South
   C. North-East
   D. South-West

3. A, B, C, D, E, F, G and H are sitting in a circle facing the centre. E and G always sit next to each other. D sits third to the right of C. F sits second to the left of H. C never sits next to A while D never sits next to G. H is not the neighbour of D and C.

   Three of the following four are alike in a certain way based on their positions in the seating arrangement and so form a group. Which is the one that does not belong to that group?
   A. CH
   B. BA
   C. DG
   D. AC

4. If in each of the given words, each of the consonants is changed to previous letter and each vowel is changed to next letter in the English alphabetical series, in how many words thus formed will no vowels appear?

   RAG   FIN   PUT   LOW   SUE
   A. None
   B. One
   C. Three
   D. More than three

5. Select a figure from the options, which when placed in the blank space of Fig. (X) would complete the pattern.

A. 

B. 

C. 

D. 



Fig. (X)
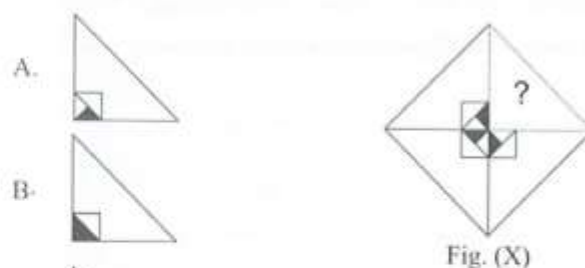
6. Count the number of triangles in the given figure.
   A. 9
   B. 10
   C. 11
   D. None of these
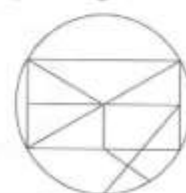


7. In a certain code language, YOUNGSTER is written as UYNOTGRSE. How is EXPENSIVE written in that language?
   A. PEXEINESV
   B. PEEXNIESV
   C. PEEXINESV
   D. PEEXNIVSE

8. The question consists of a set of four figures P, 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).



P      X      Y      Z

A.    B. 

C.    D. 
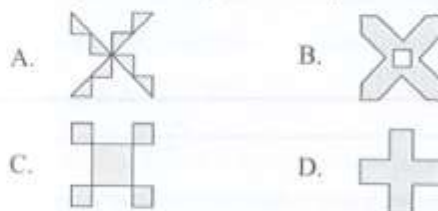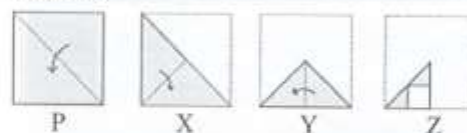
9. In a row of girls, Purnima is eighth from the right and Bhavana is twelfth from the left. When Purnima and Bhavana interchange their positions, Bhavana becomes twenty-first from the left. Which of the

following will be Purnima's new position from the right?

A. 8th
B. 17th
C. 21st
D. Data inadequate

10. If ambitious is equivalent to circle, females to triangle and sincere to rectangle. Which number will represent female members who are sincere but not ambitious?
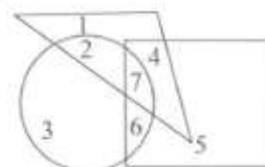


A. 3
B. 4
C. 5
D. 6

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Given text shows the Cross Reference link to the Figures, named as Figure 1, Figure 2 and Figure 3 in your document in MS-Word 2010.

    **See    Figure 1    Figure 2    Figure 3**

    After pointing the cursor on the Figure 1 in the given Cross-Reference link, which of the following keys would take you to the image, named as Figure 1 in your document?

    A. Ctrl + Click
    B. Shift + Click
    C. Alt + Shift + Click
    D. Shift + Ctrl + A

12. In which of the following types of printer, a scanned image of file to be printed is written on a copier drum as shown in the given printing mechanism?
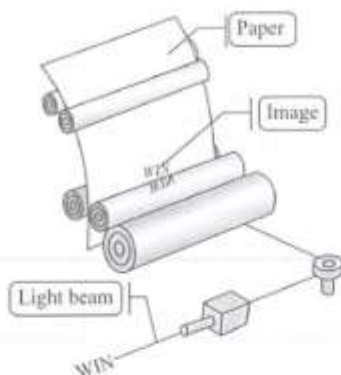


    A. Chain Printer
    B. Drum Printer
    C. Laser Printer
    D. Daisy Wheel Printer

13. Which of the following kind of lost document (marked with (i), (ii) and (iii)) can be recoverable in MS-Word 2010?

    (i) Document lost due to some error that forces you to quit word document.
    (ii) Document lost due to power interruption while editing.
    (iii) If you close the document without saving changes.

    A. Both (i) and (ii)
    B. Only (iii)
    C. Both (ii) and (iii)
    D. (i), (ii) and (iii)

14. Select the INCORRECT match.

| Application Software Packages | Commonly Supported Features |
| --- | --- |
| A. Word-Processing package | Entering and editing text, formatting text, importing text, searching and replacing text string |
| B. Spreadsheet package | Rows and columns, relative and absolute cell addresses |
| C. Graphics package | Draw designs, present graphs, drag and drop objects, screen capture, import objects |
| D. Personal assistance package | Checking boot programs, fixing error for operating system |

15. The icon marked as circle is of Paste Options that appears when you copy and paste the text in MS-PowerPoint 2010.

    Accent



    Which of the following options would replace the question mark (?) in the given steps to hide this Paste Options button?

    File tab → Options → ⑦ → Cut, copy, and paste → Uncheck "Show Paste Options button when content is pasted"

    A. General
    B. Advanced
    C. Language
    D. Proofing

16. Identify the following standard organization.

    − It is a multinational body whose membership is drawn mainly from the standards creation committees of various governments throughout the world.

    − It promotes development of standardisation to facilitate cooperation on scientific and technological aspects.

    A. ISO (International Organization for Standardization)
    B. ANSI (American National Standards Institute)
    C. RFC (Request For Comment)
    D. NAP (National Access Point)

17. In the given snapshot, Cell B1 contains a formula: = A1+A2. Trace the relationship among these cells (if exist) by using Trace Precedents for cell B1 and Trace Dependents for cells A1 and A2 in MS-Excel 2010.

| | A | B |
|---|---|---|
| 1 | 5 | 11 |
| 2 | 6 | |

**Trace Precedents**    **Trace Dependents**

A. 

B. 

C. 

D. No precedents and dependents are found.

18. Toner is a powder used to form the printed text and images on the paper. Which of the following is an example of toner-based printer?

A. Inkjet printer
B. Thermal printer
C. Laser printer
D. Dot-matrix printer

19. Which of the following formulas can be used to calculate the sum of data of cell A1 of Sheet1 and cell B1 of Sheet2 into any selected cell of Sheet3 of same workbook in MS-Excel 2010?

A. =SUM(Sheet1!A1,Sheet2!B1)
B. =SUM(Sheet1+Sheet2,A1,B1)
C. =SUM(Sheet1,Sheet2,A1+B1=C1)
D. =SUM(Sheet1,Sheet2!A1+B1)

20. Which of the following flowcharts is CORRECT for the given programming instruction?

IF Condition
   THEN Process 1
   ELSE Process 2
ENDIF

A. 

B. 

C. 

D. 
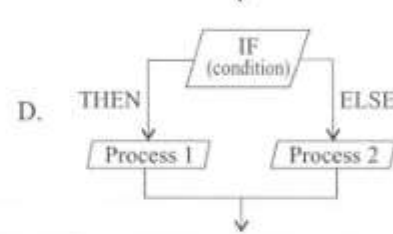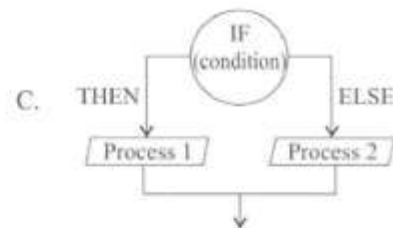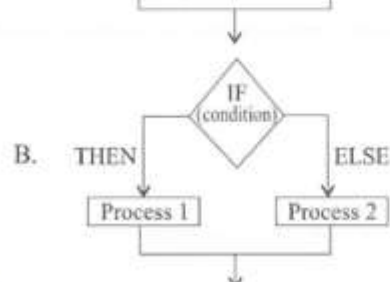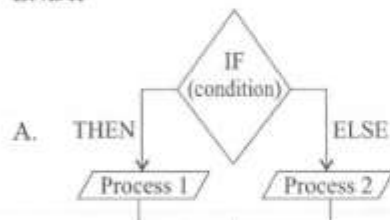
21. What would be the output of the given Visual Basic code?
Private Sub Command1_Click()
Print "Hello" + "World"
Print "Hi" & " " & "Friends"
End Sub

A. HelloWorld
   Hi Friends
B. Hello World
   Hi Friends
C. HelloWorld
   HiFriends
D. Hello World
   HiFriends

22. What would be the output of the given HTML code?
```
<table border="1" cellspacing="10">
  <tr>
    <th>Name</th>
    <th>Class</th>
  </tr>
  <tr>
    <td>Anu</td>
    <td>8<sup>th</sup></td>
  </tr>
</table>
```

A. 

B. 

C. Name    Class
   Anu    $8_{th}$

D. 

23. It is one of the major problem faced by new animators, where they end up making the one half of an animated character's body to move and behave like its other half, making the character appearance unnatural. What is it called?

A. Twinning
B. Morphing
C. Scaling
D. Tuning

24. Which of the following statements hold true regarding unguided transmission medium?

Statement 1 : It is referred as wireless communication, i.e, the signals are normally broadcasted through free space and thus are available to anyone who has a device capable of receiving them.

Statement 2 : Twisted-pair, coaxial cable and fiber-optic cable are the examples of it.

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

25. Given below are two shapes drawn using rectangle tool in Flash CS6. Which of the following properties of rectangle tool was modified to change the appearance of corners from Shape 1 to Shape 2 as shown here?

A. Stroke
B. Style
C. Scale
D. Join

Shape 1   Shape 2
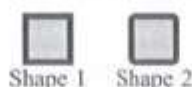
26. What does the icon marked as "⊗" indicate in the given snapshot of Slide Master view in MS-PowerPoint 2010?
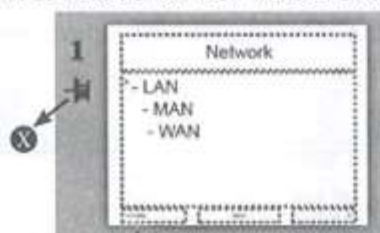


A. It ensures that the Slide Master would not be deleted even if it is not in use.
B. It ensures that the slide is locked and editing has been turned off.
C. It indicates that the slide cannot be used in future.
D. Both A and B

27. Identify the type of protocol with the help of given diagram and description.

   – It is a stateless protocol, in which client computer sends a request message and server replies by sending a response message.
   – It is like SMTP because data transferred between client and server look like SMTP messages.
   – It functions as a combination of FTP and SMTP.

Request Message

Client Computer   Reply back   Server
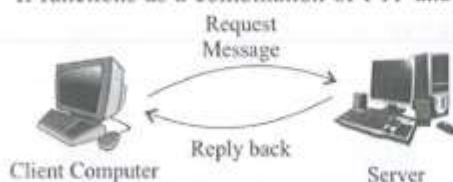
A. NNTP
B. HTTP
C. POP
D. IMAP

28. What does the address of websites Google and Yahoo in the given dialog box of "Startup pages" of Google Chrome represent?



A. It means that they have been set as startup pages, i.e, Google and Yahoo pages will appear whenever you open Google Chrome browser window.
B. It means, either Google or Yahoo page will appear when you open Google Chrome window.
C. It means whenever you open Yahoo or Google homepage, the Google Chrome browser will show a message: "Access Denied!"
D. All of these

29. Select the odd one out.

A.    B.  Opera Mini

C.    D. solaris

30. _____ is a computer worm that propagates by e-mail from Microsoft Windows systems, that begins with the line of text: "I send you this file in order to have your advice" and has an attachment consisting of the worm's executable with some file from infected computer.

A. Boot Sector
B. Sircam
C. Trojan Horse
D. Acid Rain

31. Which of the following effects can be achieved by Windows aero feature of Windows 7?
(i) Transparent window frames
(ii) Live previews of running programs via buttons on the taskbar
(iii) Smoother window dragging

A. Only (i)
B. Only (ii)
C. Both (i) and (ii)
D. (i), (ii), and (iii)

32. What would be the output of the given Visual Basic statement?

Print Mid("Administration",2,3)

A. dmi
B. Dmi
C. str
D. Str

33. Which of the following line of code would display the given dialog box in Visual Basic?



A. MsgBox "Hello students" & " Welcome!!"
B. InputBox "Hello students" & " Welcome!!"
C. MessageBox "Hello students" & "Welcome!!"
D. ProjectBox "Hello students" & "Welcome!!"

34. Which of the following HTML statements specifies the language of the linked document?
A. `<a href="http://www.sofworld.org" hreflang="en">Olympiad</a>`
B. `<a href="http://www.sofworld.org" ilang="en">Olympiad</a>`
C. `<a href="http://www.sofworld.org" language="en">Olympiad</a>`
D. `<href="http://www.sofworld.org" language="en">Olympiad</href>`

35. You have enabled a feature which shows a warning message as shown here, whenever you type anything in any cell of the worksheet. Which of the following features will prompt this warning message in MS-Excel 2010?

⚠ The cell or chart that you are trying to change is protected and therefore read-only.

A. 
B. 
C. 
D. All of these
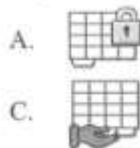
36. Which of the following shapes should be included in the statements (marked as ①, ② and ③) in the given flowchart?
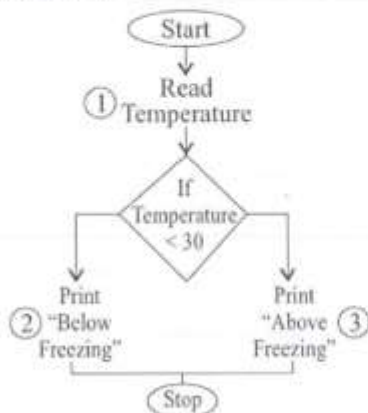


A. ①-▱ , ②-▱ , ③-▱

B. ①-⬭ , ②-◇ , ③-▭

C. ①-▭ , ②-▭ , ③-▭

D. ①-◇ , ②-▭ , ③-▭

37. Which of the following statements hold true regarding HTML?
Statement 1 : To show the outside border on all four sides of the table, use `<table frame="box">`
Statement 2 : To specify the width of a table in pixels or percentage "wide" attribute is used.
A. Only Statement 1
B. Only Statement 2
C. Both Statement 1 and Statement 2
D. Neither Statement 1 nor Statement 2

38. Earlier, to print a document, you need to copy it to USB flash drive and then carry it to the computer to which the printer is attached. Which of the following features of Windows 7 would eliminate this approach and help you to share resources among your computer at home?

A. 
B. 
C. 
D. All of these

39. Select the odd one out regarding random access storage.
A. Hard disk
B. RAM
C. Flash drive
D. Magnetic tape

40. Which of the following statements is CORRECT regarding fifth generation computer?
A. ICs with ULSI technology is used
B. IBM notebooks are the examples
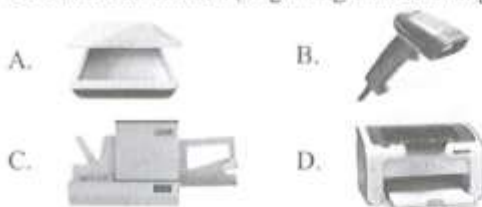C. ICs with MSI technology was introduced
D. Both A and B

41. Which of the following options marked by numbers 1, 2 and 3 indicate the current frame number of playhead in Flash CS6?



A. 1
B. 2
C. 3
D. None of these

42. Select the odd one out. (Regarding data scanning device).

A.    B. 

C.    D. 

43. Which of the following statements hold true regarding the difference between compiler and interpreter?

   Statement 1 : Interpreters are slower than compilers when running a finished program.

   Statement 2 : Interpreters require less space for execution than compilers.

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

44. Select the INCORRECT match regarding the given icons with their corresponding use in MS-PowerPoint 2010.

   A.  — To change the laser pointer color that can be displayed while playing slide show.

   B.  — If you want to keep the slides with supplementary information hidden while presenting slide show and you can continue with your presentation without visibly skipping over slides.

   C.  — Enables you to have the several shows within the same presentation.

   D.  — You can record a narration, and run through the presentation and record each slide, and can pause and resume recording any time.

45. When using image scanners for inputting text documents, it is not possible to do any word processing of the document, since the computer cannot interpret the stored documents as letters, numbers. Which of the following technology overcomes this limitation of image scanner?

   A. OMR         B. OCR
   C. MICR        D. VCR

## ACHIEVERS SECTION

46. To find e-mail messages you received in between September 2015 and October 2015, you should type _____ in Start menu search box of Windows 7.

   (Assume your system date format is in the form of: MM/DD/YY)

   A. received:9/1/2015 .. 10/31/2015
   B. Get: from September 2015 to October 2015
   C. email: from September to October 2015
   D. email: from Sep to Oct- 2015

47. What would be the output of the given Visual Basic code?

```
DIM I, N As Integer
N = 1
For I=10 To N Step – 2
Print I
N = N + 1
Next I
Print "Programs Ends"
End sub
```

   A. 10          B. 10
      8              9
      6              Program Ends
      4
      2
   Program Ends

   C. 10          D. 9
      9              Program Ends
      8
   Program Ends

48. Observe the given snapshot of Watch Window of MS-Excel 2010. It shows that the cell B1 of the current worksheet has been added there for inspection. Which of the following statements hold true regarding this?
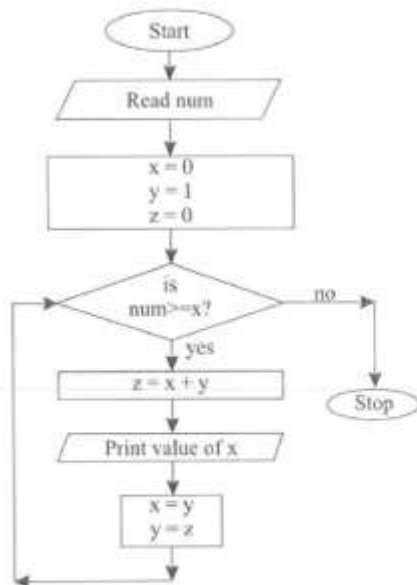


| Book | Sheet | Name | Cell | Value | Formula |
|------|-------|------|------|-------|---------|
| Book1 | Sheet1 | | B1 | 15 | =A2+9 |

   Statement 1 : If you change the formula of cell B1 from "=A2+9" to "=A2+4", then the formula tab of Watch Window will display an error.

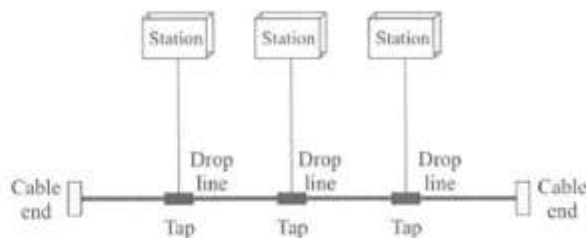   Statement 2 : You can edit the formula used in cell B1 in the Watch Window.

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

49. What would be the output of the given flowchart if value of num is 10?



A. 0112358    B. 2345678
C. 0146810    D. 1135810

50. In the given bus topology, what happen when there is fault or break in the bus cable?



A. It stops all transmission between the devices.
B. Data transmission will be stopped only for the first station and last station, it will not affect the intermediate stations.
C. Only first and last stations can transmit data.
D. Both A and B

SPACE FOR ROUGH WORK

# SOF
## SCIENCE OLYMPIAD FOUNDATION

**Inspiring Young Minds**
**Through Knowledge Olympiads**

# CLASS
# 10
## SET-B

Name:

Section: ............................ Roll No.: ....................................

Contact No. ...................................................................

Total Questions: 50                                Time: 1 hr.

# NCO

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.    16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

1. If the letters of the given below series are written in reverse order, then which letter will be third to the left of eighteenth letter from the right end ?

   I X Y A N O F M P B L Q R D S T W C K G U V E J Z

   A. O
   B. U
   C. V
   D. S

2. Find the option which will complete the series as established by the Problem Figures.
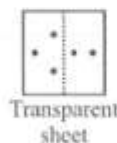
   Problem Figures

   A.

   B.

   C.

   D.

3. If 'When' means '×', 'You' means '÷', 'Come' means '–' and 'Will' means '+', then what will be the value of '8 When 12 Will 16 You 2 Come 10'?

   A. 94
   B. 112
   C. 45
   D. 96

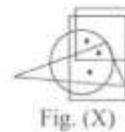4. Find the options as to how the pattern would appear when the transparent sheet is folded along the dotted line.

   Transparent sheet

   A.

   B.

   C.

   D.

5. Out of the five car manufacturing companies A, B, C, D and E, the production of company B is more than that of company A but not more than that of company E. Production of company C is more than the production of company B but not as much as the production of company D. Considering the information to be true, which of the following is definitely true?

   A. Production of company D is highest of all the five companies.
   B. Company C produces more number of cars than Company E.
   C. The numbers of cars manufactured by companies E and C are equal.
   D. Company A produces the lowest number of cars.

6. Select the option which satisfies the same conditions of placement of the dots as in Fig. (X).

   Fig. (X)

   A.

   B.

   C.

   D.

7. In the following question, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the question below the rows of numbers is to be answered. The operations of numbers progress from left to right.

**Rules:**

(i) If a two-digit odd number is followed by a two-digit odd number they are to be added.

(ii) If a two-digit even number is followed by a two-digit odd number which is a perfect square, the even number is to be subtracted from the odd number.

(iii) If a three-digit number is followed by a two-digit number the first number is to be divided by the second number.

(iv) If a prime number is followed by an even number the two are to be added.

(v) If an even number is followed by another even number the two are to be multiplied.

$$16 \quad 8 \quad 32$$
$$132 \quad 11 \quad X^2$$

If X is the resultant of the first row, then what is the resultant of the second row?

A. 192
B. 128
C. 132
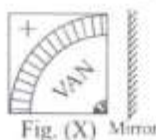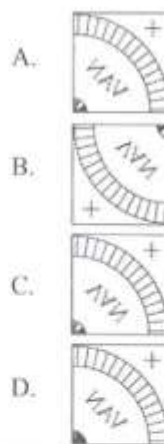D. 144

8. Select the correct mirror image of Fig. (X).



Fig. (X) Mirror



9. Pointing to a photograph a woman says, "He is the son of the wife of my husband's father". How is the man related to the woman?
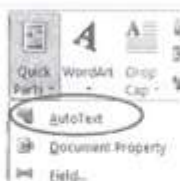
A. Son
B. Brother-in-law
C. Brother
D. Son-in-law

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



A. 15
B. 16
C. 18
D. None of these

## COMPUTERS AND INFORMATION TECHNOLOGY

11. What does the option (marked with circle) in the given feature, i.e., Quick Parts of MS-Word 2010 represent?
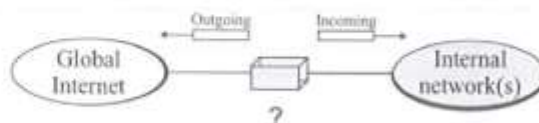


A. Reusable content that you can store and access again and again.
B. Deleted content that you can store and access again and again.
C. Preformatted text box that is used to change the orientation of text.
D. Both A and B

12. What would happen when you select a primary key field named as ID in a Table (in Datasheet view) of MS-Access 2010 and click on button?

A. It will get deleted.

B. It would display an information message that : You can't delete the ID column at this time.
C. It would delete all the columns except the selected column.
D. It would display a confirmation dialog box.

13. Which of the following options in the given image, when installed between the internal network of an organization and the rest of the internet (Global internet) can be used to deny access to a specific host or specific service in the organization in order to implement security measures?



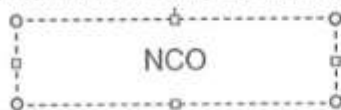A. Hub
B. Firewall
C. Encrypt
D. Cipher

14. Suppose you are viewing the presentation in Grayscale mode. Which of the following options will not show the selected picture i.e Image-1 when printing in black and white in MS-PowerPoint 2010?
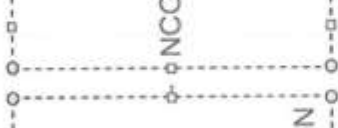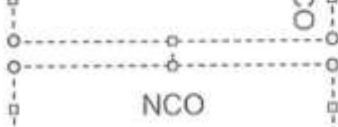


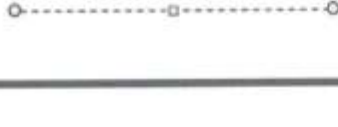Image-1

A. 

B. 

C. 

D. Both A and B

15. An organisation needs to develop a website for their business. Through the website, it will enable its customer to buy products and make payments via online transactions. Which of the following is a security technology, that can be used by the organisation to protect all the online transactions done on their website?

A. SSL
B. IMAP
C. TCP
D. DHCP

**Direction (16-17):** Observe the given text in title placeholder in MS-PowerPoint 2010 and answer the questions that follow. (Assume text is aligned in middle)



16. What would be the result if you select the text and click on the drop-down button of ∥ā̂ ▾ and then select "Rotate all text 90°"?

A. 

B. 

C. 

D. 

17. After following the steps (as in question no. 16) and considering its result, what would be the next result if you click on the drop-down of ⬛ ▾ and then select

 Right option?

A. 

B. 

C. 

D. 

18. Suppose you want to focus on a specific range of cells that you have selected. Which of the following features of MS-Excel 2010 when clicked once will automatically zoom the selection so that it almost fills the entire window?

A. 

B. 

C. 

D. 

19. Select the INCORRECT match regarding the task performed in Google Chrome with their keyboard shortcuts.

A. Clear Browsing data – Ctrl + Shift + Del
B. Opens Downloads tab – Ctrl + J
C. Opens Task Manager-Google Chrome window – Ctrl + Shift + A
D. Exit from Google Chrome – Ctrl + Shift + Q

20. What would be the result of the given formula if cell A1 contains the value: Nanny Nvgovem, in MS-Excel 2010?
=FIND("N",A1,2)

A. 8
B. 7
C. 1
D. 5

21. Which of the following networking features is available in Windows 8.1?

A. Miracast Wireless Display
B. Wi-Fi Direct wireless printing
C. Wi-Fi Tethering
D. All of these

22. What is the function of the option that is encircled in the given snapshot of MS-Access 2010?

Data Type: Number
Format: Standard
$ % , (⁰⁰⁄₀₀) .⁰⁰
Formatting

A. Increase Decimals
B. Decrease Decimals
C. Delete Decimals
D. Add Percentage

23. Whenever you make any formatting changes in a document, Word displays a box (marked with ❶ in the given image) that shows the formatting details. Which of the following features of MS-Word 2010 will enable these details to be displayed?

used today — Formatted: Font: Bold, Complex Script Font: Not Bold → ❶

A. Track changes
B. Comment
C. Language
D. Show changes

24. Identify the type of topology.
  – It does not allow direct traffic between the devices as the devices are not directly linked to one another.
  – Each device needs only one link and one I/O port to connect.
  – Whole topology is dependent on a single point.

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

25. _____ is a navigation system used to locate objects or people inside a building using radio waves or sensory information collected by mobile devices.
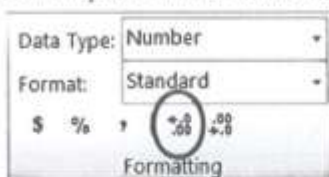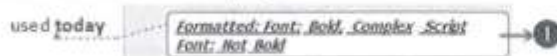
A. Indoor Positioning System
B. Intelligent Access System
C. Mobile Planetary System
D. Space Position System

26. Which of the following statements hold true regarding the area marked as "❶" in the given snapshot of Navigation Pane of MS-Word 2010?

Navigation ▾ ✕
Search Document 🔍 ▾
[icons] ❶ ← ▲ ▾

Statement 1 : It helps you to search figures, equations, etc. in your document.
Statement 2 : It helps you to navigate between previous and next page.

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

27. Observe the following steps of MS-PowerPoint 2010.
  (i) Select a picture (say Picture 1) and apply "Split" animation effect on it.
  (ii) Select Picture 1 and press Alt+Shift+C.
  (iii) Click on another picture (say Picture 2) in the same slide.

What would be its result?

A. Picture 2 gets deleted.
B. "Split" animation effect will be applied on Picture 2.
C. Picture 2 is replaced by Picture 1 and "Split" animation effect will be applied to Picture 1.
D. Picture 1 is replaced by Picture 2 and "Split" animation effect will be applied to Picture 2.

28. _____ defines abbreviation or acronym in HTML.

A. <abbr>
B. <abr>
C. <abv>
D. <acro>

29. Which of the following options would replace the "?" in the given steps if you want to change the color of the gridlines in MS-Excel 2010?

File tab → Options → Excel Options dialog box → ? → 'Display options for this worksheet' →

Gridline color [🎨 ▾]

A. Advanced
B. General
C. Save
D. Proofing

30. Match the viruses in Column-I with their descriptions in Column-II :

| | Column-I | | Column-II |
|---|---|---|---|
| (a) | Macro virus | (i) | It is virus written in a program-ming language which is embedded inside a software application such as MS-Word. |
| (b) | Ransomware | (ii) | It prevents you from using your PC normally, and demands that you pay money to get access to your PC. |
| (c) | Stealth virus | (iii) | It uses various mechanism to avoid detection by anti-virus software. |

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

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

```
<table rules="rows">
<tr>
   <th>Punjab</th>
   <th>Delhi</th>
</tr>
<tr>
   <td>Chandigarh</td>
   <td>Rohini</td>
</tr>
</table>
```

A.

| Punjab | Delhi |
|---|---|
| Chandigarh | Rohini |

B.

| Punjab | Delhi |
|---|---|
| Chandigarh | Rohini |

C.

| Punjab | Delhi |
|---|---|
| Chandigarh | Rohini |

D.

| Punjab | Delhi |
|---|---|
| Chandigarh | Rohini |

32. Select the odd one out.

A. iCloud

B. Dropbox

C. mozy

D. Google wallet

33. Arrange the following storage system in ascending order of their access time (from faster to slower).
   (i) Sequential access storage device
   (ii) Hard disk
   (iii) Main memory
   (iv) Cache memory
   A. (iv) → (iii) → (ii) → (i)
   B. (iii) → (ii) → (i) → (iv)
   C. (iv) → (i) → (ii) → (iii)
   D. (iii) → (ii) → (iv) → (i)

34. Select the odd one out (Regarding graphical browser).
   A. Apple Safari       B. Opera Mini
   C. Microsoft Edge     D. Lynx

35. Why machine language programs written for one computer will generally not run on another computer with different CPU?
   A. Because each processor has a unique set of machine instructions.
   B. Because machine instructions can only be executed in Network environment.
   C. Because machine instructions can be executed in Distributed network environment only.
   D. All of these

36. Which of the following technology is NOT related to Fourth generation of computer?
   A. GUI technology
   B. Apple II computer
   C. IBM notebooks
   D. UNIX operating system

37. In the given diagram of "Basic organization of computer system", the area marked as "?" actually does not perform any actual processing of jobs. It obtains instructions from a program stored in main memory, interprets the instructions and issues signals causing other units of the system to execute them. Identify it.
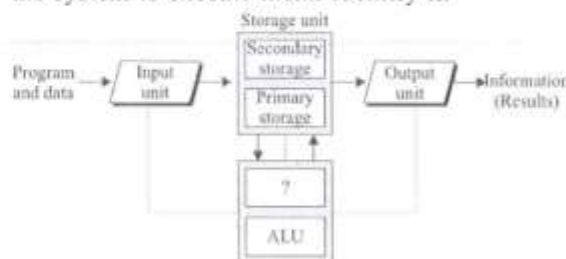


   A. Buffer
   B. Control unit
   C. Cache
   D. Registers

38. Which of the following tasks (marked with (i), (ii) and (iii)) require Speech recognition device?
   (i) For authentication of a user by a computer system based on speech input.
   (ii) For limited use of computers by individuals with physical disabilities.
   (iii) For data input by dictation of long text or passage for later editing and review.
   A. Both (i) and (ii)
   B. Only (i), (ii) and (iii)
   C. Both (ii) and (iii)
   D. Only (iii)

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

```
<html>
<body>
<p>OLYMPIAD</p>
<p><bdo dir="rtl">OLYMPIAD</bdo></p>
</body>
</html>
```

   A.  OLYMPIAD
       DAIPMYLO

   B.  OLYMPIAD
       OLYM PIAD

   C.  OLYM PIAD
       PIAD OLYM

   D.  DAIPMYLO
       OLYMPIAD

40. Match the following icons of Control Panel of Windows 7 in Column-I with their functions in Column-II.

Column-I                Column-II

(a)      (i) Controls how notifications area appears on the taskbar

(b)      (ii) Changes the size of text and other item on screen making it easier for you to read what's on screen

(c)      (iii) Personalizing Start menu

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

41. A blind person wants to know the latest information published in a book as soon as it is printed, rather than waiting for the book to appear in Braille, this can be done by scanning a recently published book using a scanner, then convert it into text using the OCR software. Now, which of the following software would be required to read out that text information to the blind person?

A. Voice Reproduction System
B. Speech Synthesizer
C. Speech OCR
D. Flatbed Scanner

42. Which of the following is a hosted online version of the Microsoft office with access to Word, Excel, PowerPoint, etc?

A. Office 460         B. Office 365
C. Office 565         D. Office 2015

43. Which of the following is/are the advantages of database management?

A. Data sharing
B. Enhanced data security
C. Enforcement of standards
D. All of these

44. Which of the following statements hold true about data scanning device?

Statement 1 : They eliminate the need for manual entry of data by human beings, thus, improving data accuracy and timeliness of the data processed.

Statement 2 : Laser printers and touchscreens are examples of it.

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

45. Which of the following is NOT a mobile operating system?

A. Apple iOS
B. Novell Netware
C. Windows Phone
D. Google Android

## ACHIEVERS SECTION

46. In which of the following manner Assembly language programming (introduced in 1952) overcomes the limitations of Machine language programming?

A. By using alpha-numeric codes instead of numeric codes (that is being used by machine language) for instructions. For example, using ADD instead of 1110, SUB instead of 1111.

B. By using decimal codes instead of numeric codes. For example, using 14 instead of 1110, 15 instead of 1111.

C. Assembly language is machine-independent, that means you can execute assembly language program on many different types of computers with very little or practically no effort of porting it on different computers, whereas machine language program is machine dependent.

D. All of these

47. Identify the following feature of Windows 7 :

- It makes it easy to share resources (printers, files, documents) among your computers at home.

- You no longer need to remember on which computer you stored a batch of pictures. With this feature, you can search a particular library, or you can search across all computers accompanied together with this feature.

- It makes files on other computers as easily accessible as if they were on your own computer.

A.      B. 

C.      D.

48. Which of the following formulas is CORRECT if you want to display *--*--*--*-- in MS-Excel 2010?

    A. =REPETITION("*--",4)
    B. =REPETITION("*","-",4)
    C. =REPT("*--",4)
    D. =REPT("star", "dash",4)

49. Given diagram shows a Private network in which Site A and Site B (within the same organization) are connected to each other by using leased line and the data transmission between these sites is totally secure from outsiders. Which of the following statements hold true regarding this network?



    Statement 1 : Site A and Site B can be connected to one leased line by using router at their end.
    Statement 2 : The connection between these two sites behave as a private internet.

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

50. Compilers are large programs residing permanently on secondary storage. Arrange the following steps in CORRECT order to execute the object program by the compiler.

Source Program $\xrightarrow{\text{Compiler}}$ Object Program

   (i) To translate a source program, a computer loads the compiler and the source program from secondary storage into its main memory.
   (ii) It generates the equivalent object program as its output, which is normally saved in the file on secondary storage.
   (iii) To execute the program, the computer loads the object program into main memory from secondary storage and executes it.
   (iv) The computer then execute the compiler with the source program as its input data.

A. (iv) → (iii) → (ii) → (i)
B. (iii) → (ii) → (i) → (iv)
C. (i) → (iv) → (ii) → (iii)
D. (iii) → (ii) → (iv) → (i)

SPACE FOR ROUGH WORK

# CLASS

# 11

## SET-B

**SCIENCE OLYMPIAD FOUNDATION**

Inspiring Young Minds
Through Knowledge Olympiads

Name: ................................................................

Section: ..................... Roll No.: .........................

Contact No. ........................................................

Total Questions: 50                                Time: 1 hr.

# N C O

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.          16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

1. Study the following information carefully and answer the question.

   'A $ B' means 'A is wife of B'.

   'A # B' means 'A is son of B'.
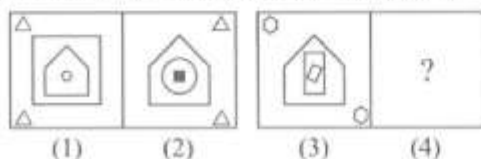
   'A % B' means 'A is father of B'.

   'A * B' means 'A is sister of B'.

   Which of the following expressions represent 'T is brother of H'?

   A. H*T%K
   B. T*H%K
   C. H#K%T
   D. H*K%T

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

   

   (1)   (2)   (3)   (4)

   A.   B.

   C.   D.

3. The house of Reena is to the East of Sumer's house and the house of Mitali is to the North of Reena's house. The house of Purnima is to the East of Mitali's house. In which direction is Sumer's house with respect to Purnima's house?

   A. South-West
   B. South-East
   C. North-East
   D. North-West

4. Among P, Q, R, S and T, (i) R ranks as the second wealthiest person; (ii) Q is richer than only S. To decide the wealthiest among them, which of the following statements is (are) necessary?

   1. P is wealthier than Q.
   2. P, though wealthier than Q, is not as wealthy as T.
   3. T is wealthier than Q.
   4. R is wealthier than both P and Q.

A. Only 2 or only 1 and 3 together
B. Either 2 alone or 1 and 3 together
C. Only 3
D. Either 2 alone or 4 alone

5. There is 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 which would most closely resembles the unfolded form of Fig. (Z).

   

   X   Y   Z
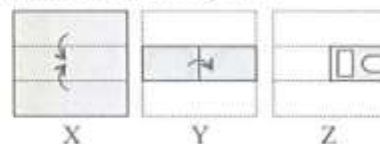
   A.   B.

   C.   D.

6. A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of an input and its rearrangement.

   Input    : boundary 25 17 earlier 32 desk party 80
   Step-I   : party boundary 25 17 earlier 32 desk 80
   Step-II  : party 17 boundary 25 earlier 32 desk 80
   Step-III : party 17 earlier boundary 25 32 desk 80
   Step-IV  : party 17 earlier 25 boundary 32 desk 80
   Step-V   : party 17 earlier 25 desk boundary 32 80
   Step-VI  : party 17 earlier 25 desk 32 boundary 80
            and Step VI is the last step.

   As per the rules followed in the above steps find which of the following will be step IV for the given below input.

   Input : ordinary tight 62 84 35 victory move 28

   A. victory 28 35 ordinary move 62 tight 84
   B. victory 28 tight 35 ordinary 62 84 move
   C. victory 28 ordinary 35 move tight 62 84
   D. victory 28 tight 62 ordinary 84 35 move

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

   A. 15
   B. 18
   C. 19
   D. 24

   | 3 | 15 | 4 |
   |---|----|---|
   | 7 | 64 | 5 |
   | 3 | ?  | 5 |

8. Group the given figures into three classes on the basis of their identical properties by using each figure only once.
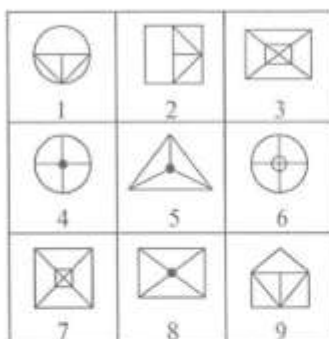


A.  1, 3, 8; 4, 5, 9; 2, 6, 7
B.  1, 2, 9; 3, 4, 5; 6, 7, 8
C.  1, 4, 9; 2, 3, 6; 5, 7, 8
D.  1, 2, 9; 4, 5, 8; 3, 6, 7

9. If it is possible to make a meaningful word with the first, second, third, fifth and tenth letters of the word PUSILLANIMOUS using each letter only once, which of the following will be the second letter of that word? If no such word can be formed give 'X' as the answer and if more than one such word can be formed give 'Z' as the answer.

A.  L
B.  X
C.  U
D.  Z

10. Three different positions of a dice are shown below. Find the number of dots on the face opposite to the face having 3 dots.



A.  4
B.  5
C.  6
D.  Cannot be determined

## COMPUTERS AND INFORMATION TECHNOLOGY

11. A computer system is made up of many units and different connections are used to connect these units. In the given diagram, a single bus is shared by three units that are I/O unit, Processor and Main memory. In the given connection, data transfer can take place only between two units at a time and at a time either processor or I/O unit can use the bus. What type of connection is shown here?
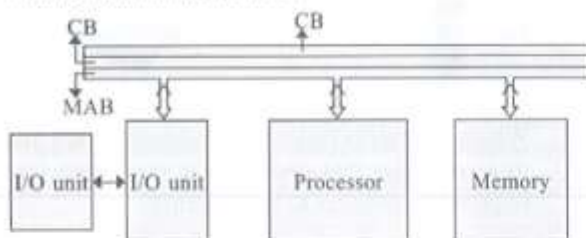


A.  DMA Connection
B.  Multibus Interconnection
C.  UNIBUS Connection
D.  InvertedBus Connection

12. The Control Unit of a computer receives instructions from memory and executes them after decoding them. The ALU of Control Unit has to perform two functions: fetch the instruction to be executed and execute the instruction, as shown in the given diagram.
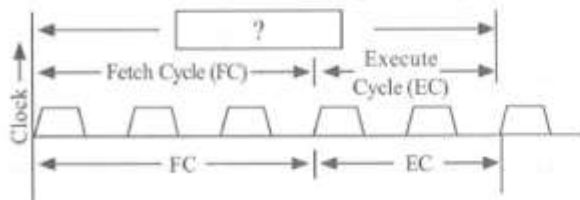


The total time consisting of fetch cycle and execution cycle is called _____ .

A.  Instruction cycle
B.  Address cycle
C.  Occurrence cycle
D.  Machine cycle

13.  $(5B3D)_{16} = ($ ____ $)_8 = ($ ____ $)_{10}$

A.  75475,23357
B.  75474,31549
C.  55475,23357
D.  55375,31549

14. Given here is an architecture of a multicore system. This architecture is being used in almost all modern computers to provide multiprocessing capability. Which of the following statements can be true if one of the core in a processor gets idle in such system? (L1 is local cache and L2 is shared cache)
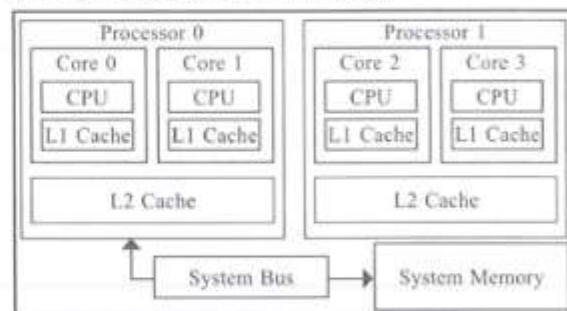


A.  The system will get halt and no operation could be performed.
B.  If one core gets idle then other core will be able to use its local cache only.
C.  All the shared cache can be utilized by one core if another gets idle.
D.  Both A and B

15. Recognize the machine given here and select which of the following statements is INCORRECT about it?

(i) It was designed to automatically calculate and tabulate polynomial functions.

(ii) It was developed by IBM's engineers.

(iii) Input to this machine was provided through keyboard.

(iv) It was developed in the 19$^{th}$ century.

A. Only (i)
B. Both (i) and (ii)
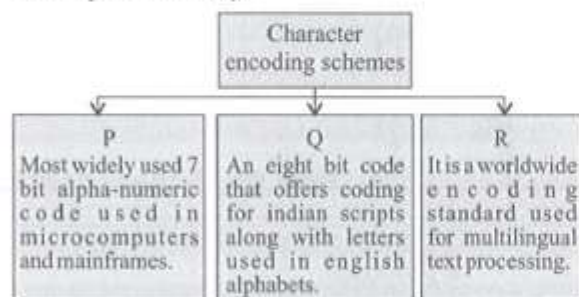C. Both (iii) and (iv)
D. Only (ii), (iii) and (iv)

16. Observe the given diagram (regarding C++ data variables) and answer the question that follow.

| Memory Address → | 2350 | 2351 | 2352 | 2353 | 2354 |
|---|---|---|---|---|---|
| Data value of variable | | 10 | 25 | | 25 |
| Variable's name → | | A | B | | C |

What would be the lvalue of variable B?

A. 2350
B. 2351
C. 25
D. 2352

17. Select the CORRECT match.

A. Firewire port - Transfer large amount of data among high bandwidth digital devices.

B. VGA port - Three pin connector found on routers and modems.

C. PS/2 port - It is also called as printer port.

D. SATA - Serial connector for connecting scanners and printers.

18. Identify P, Q and R with the help of information given in the diagram, representing encoding schemes in computer memory.

| Character encoding schemes | | |
|---|---|---|
| P | Q | R |
| Most widely used 7 bit alpha-numeric code used in microcomputers and mainframes. | An eight bit code that offers coding for indian scripts along with letters used in english alphabets. | It is a worldwide encoding standard used for multilingual text processing. |

A. P-UNICODE, Q-ASCII, R-ISCII
B. P-ASCII, Q-ISCII, R-UNICODE
C. P-ISCII, Q-UNICODE, R-ASCII
D. P-ASCII, Q-UNICODE, R-ISCII

19. A utility program that combines several separately compiled modules into one and resolves any internal difference between them and combines them into single executable file is called as _____.
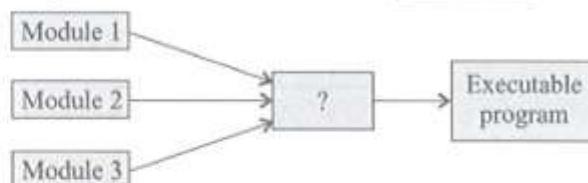
A. Compiler
B. Linker
C. Debugger
D. Interpreter

20. Which of the following is NOT a way to enter text in a SmartArt graphic in MS-Word 2010?

A. Click in the SmartArt Item and start typing.

B. Click the ┇ at the left end of the diagram and enter text in Text Pane.

C. Select the graphic and press F1 key and type text.

D. Click on Text Pane in Create Graphic group of Design tab and then type text in Text Pane.

21. Identify the following :

– It is a solid state device.
– It is capable of performing arithmetic operations.
– It is capable of performing logical operations.

A.
B.
C.
D.
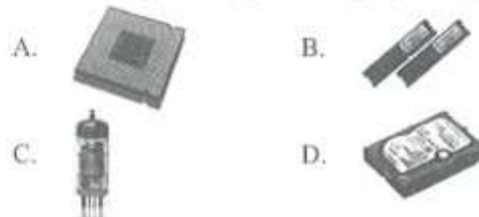
22. Which among the following is a circuit board installed in a computer that contains the electronic circuitry required to connect to the Internet?

A. Router
B. Hub
C. NIC
D. Bridge

23. A computer receives data and instruction in binary form. Data is received from input devices or from memory and then flows to the processor through a data bus and placed in a 'Special register' which is the destination of all data. The flow of data in the CPU is illustrated in the given diagram. In which of the following types of register the data received from data bus is placed?
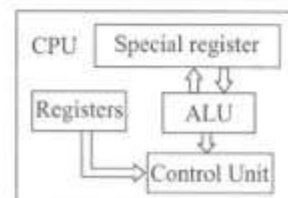
A. Program counter
B. Index register
C. Accumulator
D. Address register

24. Identify the following :
    - It is a type of non-volatile primary memory.
    - Its contents are programmed by the integrated circuit manufacturer and permanently recorded by metallization process.
    - It is mostly used for storing the finalized code of a project.
    
    A. Masked ROM
    B. PROM
    C. RAM
    D. EPROM

25. Match the following :

    Column-I                    Column-II
    (a) [image]          (i)   A place in computer in which operating system is loaded temporarily after the computer is started.
    (b) [image]          (ii)  A rigid stable mass storage device.
    (c) [image]          (iii) Writing data to it is called burning.

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

26. Which of the following types of FTP server allows general public to access files without an account or a special password?

    A. Archive FTP
    B. Common FTP
    C. Anonymous FTP
    D. Auto FTP

27. Which of the following functions when applied to a cell for the given data, will result in #VALUE! error in MS-Excel 2010?

    | ▲ | A | B | C |
    |---|------|----------|--------|
    | 1 | P_Id | Quantity | Rate |
    | 2 | a1k | 20 | $ 5.00 |
    | 3 | a2k | 35 | $ 7.00 |
    | 4 | | | |

    A. =HCF(B2,B3)
    B. =SUM(A1:B3)
    C. =B2/B1
    D. =PROPER(LEFT(A2,2))

28. Which of the following virus infects executable files such that when an infected file gets executed, it infects all other executable files in the current directory and the text strings like "programs too big to fit in memory", "*.exe *.com" were found in infected files?

    A. Acid
    B. CIH
    C. Commwarrior
    D. Bomber

29. Which of the following is a wireless technology that can be used by a digital wallet service to make secure and fast payments through mobile?

    A. FTP
    B. WEP
    C. FCN
    D. NFC

30. Which of the following statements hold true about the given icon with respect to MS-Word 2010?

    [icon]

    Statement 1 : It is used to insert information about a source (book, article) in the document.
    Statement 2 : Information added through this feature gets inserted into the footer area of a document.

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

31. Which of the following is the CORRECT HTML code, to start the list item from number 10 in an ordered list?

    A. <ol> <li value = "10" >NCO</li> </ol>
    B. <li value = "10"> NCO</li>
    C. <ol> <li number = "10" >NCO</li> </ol>
    D. <li number = "10" >NCO</li>

32. You have created a document in MS-Word 2010, you need to share it with your friends and for that you want your friends can see the contents of the document, but, shall not be allowed to edit or format some specific part of it. Which of the following options can be used to do so?

    A. [image]
    B. [image]
    C. [image]
    D. [image]

33. What would be the output of following HTML statement?

    <p>He said: <q>where are you going</q></p>

    A. He said: where are you going?
    B. He said: "where are you going"
    C. He said: **where are you going**"
    D. He said: *where are you going*!

34. Which of the following statements is INCORRECT about <tbody> tag in HTML?

    A. It is a container element.
    B. It can only be used inside <head>....</head> tags.
    C. Some of its attribute are align, valign, char, etc.
    D. None of these

35. In an electronic mail system, a special software package is used that lets the user of an e-mail service to perform various tasks, for e.g. it may help a user to compose an e-mail by providing a template on the screen to be filled in by the user. The various services of this software is shown in the diagram given here. What is the name of this program?
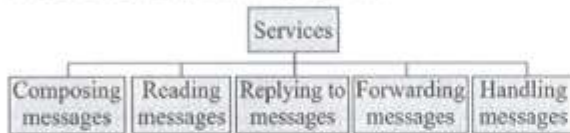


A. Message Transfer Agent
B. Message Access Agent
C. User Agent
D. MIME

36. What would be the output of following C++ code?

```
void main()
{
int a,b=10;
if((a=b=1)==1)
cout<<a<<":"<<b;
}
```

A. 10:10        B. 1:1
C. 0:0          D. 10:0

37. What would be result of following formula for the given data in MS-Excel 2010?

=SMALL(A1:C1,COUNT(A1:C1))

| ▲ | A | B | C |
|---|---|---|---|
| 1 | 97000 | 98000 | 134000 |
| 2 | | | |

A. 97000       B. 98000
C. 134000      D. #REF!

38. Which of the following statements hold true about Denial of Service attack?

Statement 1 : It is a type of cyber threat which makes a machine or resources on a network unavailable to its users.

Statement 2 : It increases the traffic on targeted system either by sending bulk e-mail messages or by sending over-sized data packets.

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

39. When we plug-in any USB device to a system running Windows 7 operating system then Windows automatically identify the plugged device and install the driver for it and display the progress in the pop-up message in the notification area as shown in the given image. How this auto installation of driver takes place in Windows 7?
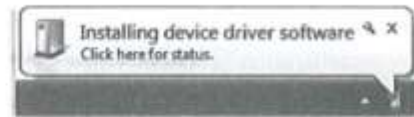


A. Windows read the plug and play identification tag in the hardware's BIOS or firmware and then matches it with master list of tags drawn from setup information file and then install the correct driver.

B. User installs a list of plug and play identification tag into the system and then Windows compare the plugged in device identification tag with installed list and then install the driver.

C. The plug and play identification tag of installed device is read from the motherboard of the system and then the associated driver is installed by the Windows.

D. None of these

40. Which of the following statements is CORRECT about the given component of Windows operating system?



(i) It notifies and blocks the malware that try to install themselves.
(ii) It automatically scans a system for installed malware on regular basis.
(iii) It regularly checks for software and hardware updates.

A. Only (i)              B. Only (iii)
C. Both (i) and (ii)     D. Both (ii) and (iii)

41. How many bytes would be required to store a 2D array of double data type in C++, if it consists of 9 rows and 5 columns?

A. 360        B. 320
C. 180        D. 240

42. Which of the following options is used for sending a request to gain control of the novice's desktop during a Windows Remote Assistance session in Windows 7?

A.        B. 
C.        D. 

43. Select the odd one out.

A.        B. 
C.       D.

44. You have inserted a table in a document and then clicked on  ≡ icon and selected commas options in 'Convert Table To Text' dialog box. How would the given table be displayed now in MS-Word 2010?

| Name | Class | Marks |
|------|-------|-------|
| Bhawna | VII | 89 |
| Sarika | VII | 88 |

A. Table would not be converted to text as there are no commas in table data.

   Name, Class, Marks

B. Bhawna, VII, 89

   Sarika, VII, 88

    Name Class Marks

C. Bhawna, VII, 89

   Sarika, VII, 88

    Name   Class   Marks

D. Bhawna  VII    89

   Sarika   VII    88

45. What would be the signed magnitude form of -25 in 8 bit?

A. 00011001      B. 10011001

C. 11100110      D. 11100111

## ACHIEVERS SECTION

46. RAM is the main memory of a computer. Communication between RAM and its architecture is achieved through data input and output lines, address lines and control lines, that specify the direction of transfer. If $n$ input lines are supplied to a memory unit which has $k$ address lines as shown in the given block diagram then how many bits per word would be available?



*n* data input lines

*k* address lines →

read →

Memory Unit

write →

*n* data Output lines
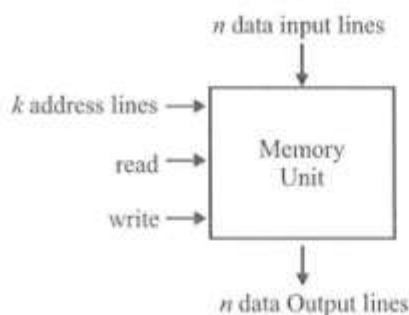
A. $2^k$ bits      B. $k$ bits

C. $n$ bits      D. $k \times n$ bits

47. Remove duplicates is a feature in MS-Excel 2010 that let you delete duplicate rows from a worksheet. In the given snapshot, from the selected cell range, two data headers have been unchecked. How would the remove duplicate feature work when OK button will be clicked?



A. Only the columns which have been checked would be checked for duplicate values and a record would be deleted if any duplicates are found.

B. Only the columns which have been checked would be checked for duplicate values and only the cells containing the duplicate values would be deleted.

C. Only the columns which have not been checked would be checked for duplicate values and a record would be deleted if any duplicates are found.

D. Only the columns which have not been checked would be checked for duplicate values and only the cells containing the duplicate values would be deleted.

48. The operating system of a computer is most important program. It also acts as a processor management and implements various scheduling techniques to decide which process among the various should be passed on the processor. One such technique is shown in the given diagram. Identify it.



CPU

Selects jobs to run that are residing in main memory | Low-level scheduler

Swap-in the process that have not run for a long time

Disk

High-level scheduler

Memory

Swap-out the process that have run for a long fime
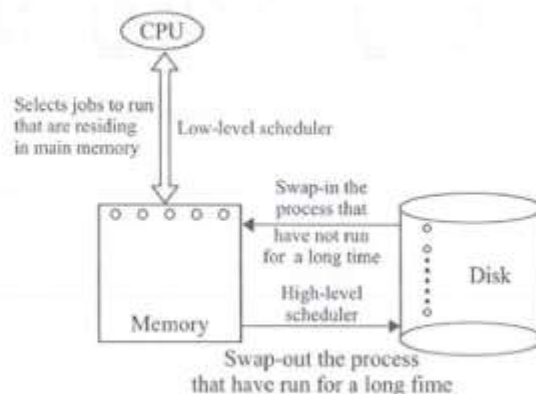
A. Multilevel queue

B. Two level scheduling

C. Real time scheduling

D. Guaranteed scheduling

49. Given here is a code snippet written in C++, which contain some syntactical error. Identify the line number which has an error.

```
            struct rec_data
            {
Line 1      char title[15];
Line 2      char rec_type;
Line 3      int price=150;
Line 4      }rec_data;
```

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

50. Predict the output of given HTML code.

```
<table>
<tr>
<td>
    <li><del>Autoplay</del></li>
    <li>Sync center</li>
</td>
<td>
    <li><ins>Folder option</ins></li>
    <li>Default settings</li>
</td>
</tr>
</table>
```

A. 
- 
- Sync center

- Folder option
- Default settings

B. 
- ~~Autoplay~~
- Sync center

- Folder option
- Default settings

C. 
- Autoplay
- Sync center

- **Folder option**
- Default settings

D. 
- **Autoplay**
- Sync center

- *Folder option*
- *Default settings*

# SOF
## SCIENCE OLYMPIAD FOUNDATION

Inspiring Young Minds
Through Knowledge Olympiads

# CLASS
# 12
## SET-B

Name: ................................................................

Section: ........................ Roll No.: ........................

Contact No. ....................................................

Total Questions: 50                          Time: 1 hr.

# N C O

## 16TH SOF NATIONAL CYBER OLYMPIAD

### 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 **% of marks/grade** in last class clearly on the **OMR Sheet** and do not forget to sign it.

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 in 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 in the OMR Sheet.     16. Ⓐ Ⓑ ● Ⓓ

7. Rough work should be done in the blank space provided in the booklet.

8. Return the OMR Sheet to the invigilator at the end of the exam.

9. Please fill in your personal details in space on top of this page before attempting the paper.

1. A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input : joy far 35 27 16 96 height star
Step-I : 96 joy far 35 27 16 height star
Step-II : 96 far joy 35 27 16 height star
Step-III : 96 far 35 joy 27 16 height star
Step-IV : 96 far 35 height joy 27 16 star
Step-V : 96 far 35 height 27 joy 16 star
And step V is the last step of the rearrangement.

As per the rules followed in the above steps, which step is the last step for the following input.

Input : organize 19 12 stable room 35 72 house

A. Fifth        B. Sixth
C. Seventh      D. Fourth

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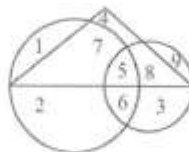
Problem Figures



A.     B. 

C.     D. 

3. In the given diagram, the triangle represents female graduates, small circle represents self-employed females and the big circle represents females with bank loan facility.
How many self-employed female graduates are with bank loan facility?

A. 5
B. 7
C. 12
D. 20



4. Select the option which most closely resembles the water image of Fig. (X).


Fig. (X)

A.     B. 

C.     D. 

5. If each symbol is replaced with a letter and each number is replaced with a new symbol, then how many letters will be there in the given below series?

B ⋏ 1 2 1 F ★ 5 • 6 7 C L M 8 O 9 E ✱ 1 4 D ✧ ¤ ◉ 1 8 A

A. 27        B. 16
C. 19        D. 8

6. Study the following information carefully.
   (i) 'P × Q' means 'P is father of Q'.
   (ii) 'P − Q' means 'P is sister of Q'.
   (iii) 'P + Q' means 'P is mother of Q'.
   (iv) 'P ÷ Q' means 'P is brother of Q'.
   Which of the following represents 'J is son of F'?
   A. J ÷ R − T × F      B. J + R − T × F
   C. J ÷ M − N + F      D. None of these

7. Which of the following options satisfies the same conditions of placement of the dots as in Fig. (X)?
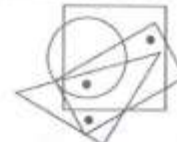

Fig. (X)

A.     B. 

C.     D. 

8. In the following question, two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the question below the rows of numbers is to be answered. The operation of numbers progress from left to right.

**Rules:**
   (i) If an odd number is followed by another composite odd number, they are to be added.
   (ii) If an even number is followed by an odd number, they are to be added.
   (iii) If an even number is followed by a number which is the perfect square, the even number is to be subtracted from the perfect square.

(iv) If an odd number is followed by a prime odd number, the first number is to be divided by the second number.

(v) If an odd number is followed by an even number, the second number is to be subtracted from the first number.

$$36 \quad 15 \quad 3$$
$$12 \quad 3 \quad n$$

If $n$ is the resultant of the first row, what will be the resultant of the second row?

A. 15/17       B. 32

C. 12/17       D. 36

9. Study the following information carefully and answer the question given below.

'A * B' means 'A multiplied by B'.

'A @ B' means 'A minus B'.

'A $ B' means 'A plus B'.

'A # B' means 'A divided by B'.

If 6 lemons cost ₹ 5, how many lemons can be bought with ₹100?

A. 6 * 5 # 100       B. 100 * 6 # 5

C. 100 $ 6 # 5       D. 6 * 100 @ 5

10. Find the option which will complete the given figure matrix.



A.        B. 

C.        D. 

## COMPUTERS AND INFORMATION TECHNOLOGY

11. Whenever you give a command to print a page or range of pages then some steps take place in background in the time interval, when you give a command and the printer prints the page. Those steps are illustrated below.
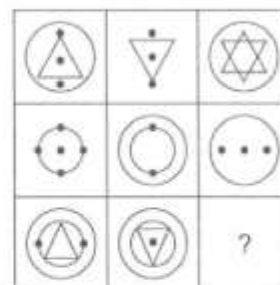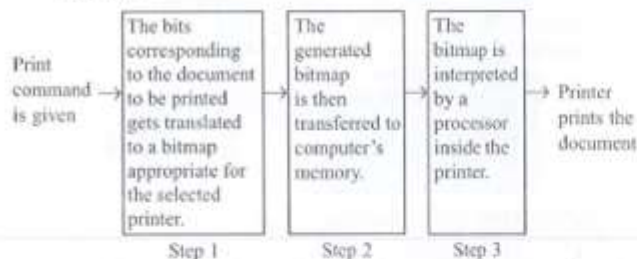


Which of the following performs the steps given in Step 1 of the given diagram?

A. Printer Spooler       B. Printer Driver

C. Print Queue       D. None of these

12. DRAM is a kind of random access memory which is most commonly used as main memory in various microcomputer used now-a-days. Which among the following is a kind of dynamic RAM that is synchronized with the clock speed of the microprocessor?

A. FPM DRAM       B. SDRAM

C. EDO RAM       D. eDRAM

13. In a process state diagram of a time sharing system when a process goes to terminated state from running state then it means that _____ .
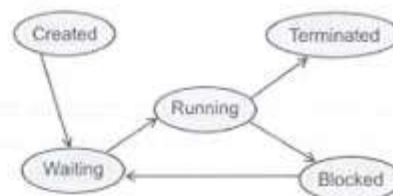


A. Process has moved out of main memory

B. The process gets allocated to CPU

C. Process is selected for execution

D. None of these

14. Identify the following :

– It was IBM's first commercial scientific computer.

– It was known as Defense Calculator.

– It was based on Von-Neumann machine.

A. EDSAC       B. IBM-701

C. UNIVAC I       D. IBM-650

15. Which of the following statements is CORRECT about dot matrix printers?

Statement 1 : They are also called serial printers and they make a direct contact with the paper being printed.

Statement 2 : Dot matrix printers with 24 pins could print near letter quality type prints.

A. Only Statement 1

B. Only Statement 2

C. Both Statement 1 and Statement 2

D. Neither Statement 1 nor Statement 2

33. What would be the output of following HTML code?

```
<table box="true">
<tr>
<th>Working Days</th>
<th>Leaves Taken</th>
</tr>
<tr>
<td>25</td>
<td>2</td>
</tr>
</table>
```

A. Working Days Leaves Taken
   25          2

B. **Working Days Leaves Taken**
   **25**          **2**

C. **Working Days Leaves Taken**
   25          2

D. 

| **Working Days** | **Leaves Taken** |
|------------------|------------------|
| 25 | 2 |

34. The Input/Output device management module of an operating system controls all I/O devices, keeps tracks of I/O requests and transfers data to and from I/O devices. It uses different methods to send data from input/output devices to memory via CPU. Which among these methods move data directly between main memory and the I/O device without any intervention from CPU?

    A. Programmed I/O
    B. Interrupt Initiated I/O
    C. Direct Memory Access
    D. Both A and B

35. Proprietary software is the software, which is neither open nor freely available. Which among the following is a proprietary software?

    A.  Skype
    B.  Adobe Illustrator
    C. 
    D. 

36. Predict the output of following C++ program.

```
#include<iostream.h>
void main()
{
  int a= 60, b=13, n1;
  n1=a&b;
  cout<<"Output\na="<<a<<" b="<<b<<" n1="<<n1;
}
```

    A. Output          a=60 b=13 n1= 780

    B. Output
       a=60 b=13 n1=780
    C. Output
       a=60 b=13 n1=12
    D. Output a=60  b=13   n1= 47

37. Computer virus are hazardous programs that cause damage to a computer system. To prevent a computer from a virus infection, antivirus program is used, but some virus use a special technique to prevent its detection from an antivirus program, it intercept the anitivirus software before getting detected by it. Such virus are called _____ virus.

    A. Clustering          B. Resident
    C. Polymorphic        D. Tunneling

38. Which of the following operations does NOT come in the DDL part of SQL?

    A. Creation of table    B. Renaming an object
    C. Creation of views    D. Deletion of data

39. A program written in high level language can be executed on any machine if it has a compatible compiler and the generated output of different machines would be same as shown in the given diagram. Which characteristic of high level language is described here?
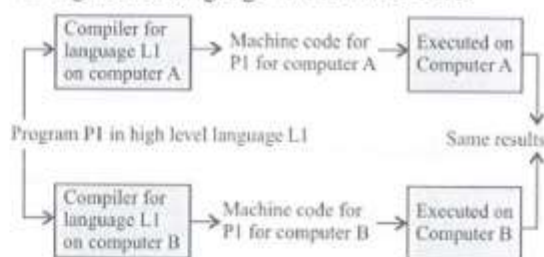


    A. Bug free
    B. Easy to learn
    C. Hardware/architecture independence
    D. Syntax free

40. Which of the following apps uses natural language user interface and speech recognition technologies to accomplish its tasks?

    A.     B. 

    C.     D. 

41. _____ is a workstation or PC without disk drives, that uses network booting to load its operating system from a server.

    A. Thick client       B. Diskless node
    C. Hard node          D. Softdisk node

42. Match the following terms in Column-I with their descriptions in Column-II.

| Column-I | | Column-II |
|---|---|---|
| (a) | Gopher | (i) Multimedia files that contains links to images or other multimedia documents. |
| (b) | NNTP | (ii) Newsgroup that are organized in a hierarchical structure. |
| (c) | HTTP | (iii) Text and binary files organized in a menu structure. |

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

43. Which of the following computing device can be both wireless and mobile?

A. PDA
B. Smartphone
C. Desktop computer
D. Both A and B

44. Whenever a program crashes or hangs, a dialog box similar to one shown here gets displayed in my system. I want that the dialog box shall also display an option to check solution of this issue using an online service. Which of the following options of Control Panel should I choose to change this setting in Windows 7?



A. 
B. 
C. 
D. 
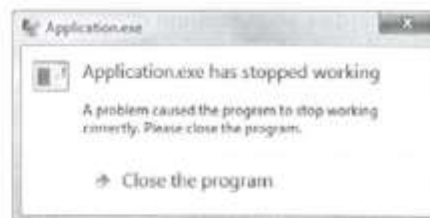
45. The diagram given here shows a cable layout for connecting computers of four buildings. In which of the four buildings, computers can be connected without placing any hub or switch between them?



A. Building 1
B. Building 2
C. Building 3
D. Building 4
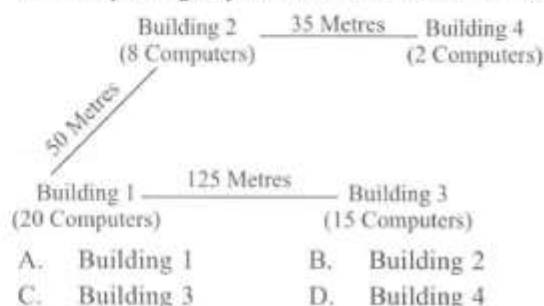
## ACHIEVERS SECTION

46. An HTML code and its corresponding output are shown here.

Line 1  <select>
Line 2  <option value="Delhi">Delhi</option>
Line 3  <option value="Gurugram">Gurugram</option>
Line 4  <option value="Noida">Noida</option>
Line 5  </select>

Output of above code : Delhi ▾

You want that instead of Delhi, Noida shall be displayed first in the drop-down list and hence you need to modify the code given in Line 4. Which of the following change shall be made to the code?

A. <option value="Noida" selected>Noida</option>
B. <option value="Noida" default="selected">Noida</option>
C. <option value="Noida" checked>Noida</option>
D. <option value="Noida" set="first">Noida</option>

47. I want to filter a data range in a worksheet using Advanced filter option and want to copy the result to a different worksheet of the same workbook and to do so I was instructed to perform following steps.

(i) Select the sheet which contains data.
(ii) Click on 'Advanced' option in the Data tab.
(iii) Select the Copy to another location option in 'Advanced Filter' dialog box.
(iv) Specify the data range and criteria range in 'Advanced Filter' dialog box.
(v) Select the sheet in which filtered data needs to be copied.
(vi) Specify the destination sheet range in the 'Copy to' field of Advanced Filter dialog box.

After performing these steps, I clicked on OK button and then the following message box got displayed.



Performing the given steps in a re-arranged order will solve this issue. Which of the following options is the CORRECT order of steps to do so in MS-Excel 2010?

A. (i)→(ii)→(iv)→(iii)→(v)→(vi)
B. (i)→(vi)→(ii)→(iii)→(v)→(iv)
C. (ii)→(i)→(iii)→(iv)→(v)→(vi)
D. (v)→(ii)→(iii)→(i)→(iv)→(vi)

48. Ethernet card is an electronic device that is used for connecting a computer to a computer network. It supports three types of connection that are: RJ-45, AUI and BNC connection. What is the full form of AUI and which types of cable can be used for this connection?

   A. Attachment Unit Interface and it can be used for attaching coaxial, fiber or twisted pair cable.
   B. Advance User Interface and it can be used for attaching coaxial cable.
   C. Automatic Unit Identity and it can be used for attaching coaxial, fiber or twisted pair cable.
   D. Automatic Unit Identity and it can be used for attaching fiber cable.

49. A table named Emp_detail has five fields : emp_id, e_name, desg, DOJ and DOB. Which of the following SQL query will display the details of all those employees who have joined the organisation after 13-Jan-2013 but before 1-Apr- 2016 from the Emp_detail table?

   A. Select * from Emp_detail
      where
      DOJ between '14-Jan-2013' – '31-Mar-2016';

   B. Select * from Emp_detail
      where
      DOJ between '14-Jan-2013' AND '31-Mar 2016';

   C. Select * from Emp_detail
      where
      DOJ after '13-Jan-2013' AND before '1-Apr-2016'

   D. Select * from Emp_detail
      where
      DOJ IS Either '14-Jan-2013' OR '31-Mar 2016';

50. Which of the following Boolean expression is represented with the help of given circuit diagram?



   A. X.Y′+ Z
   B. X+YZ
   C. (X+Y)′.Z
   D. (X+Z).(Y′+Z)

SPACE FOR ROUGH WORK

SOF
SCIENCE OLYMPIAD FOUNDATION

**Filling of all columns completely & accurately is compulsory**

**1. CANDIDATE NAME** (IN ENGLISH CAPITAL LETTERS ONLY)

**2. PARENT'S NAME** (IN ENGLISH CAPITAL LETTERS ONLY)

| 3. SCHOOL CODE | 4. CLASS | 5. ROLL NO. | 6. % of Marks or Grade in Last Class — Percentage OR Grade | 7. DATE OF BIRTH | 8. QUESTION PAPER SET |
|---|---|---|---|---|---|

Date of Birth: D D  M M  Y Y Y Y

Question Paper Set:
A ○
B ○
C ○
D ○

**9. GENDER**

MALE ○

FEMALE ○

**10. MARK YOUR ANSWERS WITH HB PENCIL / BALL POINT PEN (BLUE / BLACK)**

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

| # | A | B | C | D |
|---|---|---|---|---|
| 19 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 20 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 21 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 22 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 23 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 24 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 25 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 26 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 27 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 28 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 29 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 30 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 31 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 32 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 33 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 34 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 35 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |

**THIS COLUMN IS FOR CLASSES 5 & ABOVE**

| # | A | B | C | D |
|---|---|---|---|---|
| 36 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 37 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 38 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 39 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 40 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 41 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 42 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 43 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 44 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 45 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 46 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 47 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 48 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 49 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 50 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |

Signature of the Candidate & Date of Examination

Signature of the Invigilator

**★ ANSWER SHEETS WITHOUT SIGNATURE AND ADDRESS MAY BE REJECTED. IN CASE, STUDENT DOES NOT KNOW THE HOME ADDRESS, TEACHER SHOULD MAKE SURE THAT INFORMATION IS DULY FILLED FROM SCHOOL RECORDS.**

FILL UP ADDRESS / CONTACT NO. COLUMNS GIVEN BELOW. INFORMATION IS REQUIRED TO CONDUCT TELEPHONIC INTERVIEW FOR DETERMING RANKS.

**Residence Address**

**City**

**State**

**PIN Code**

**PHONE (with STD Code)**

**MOBILE**

**E-mail Address (In Capital Letters)**

## INSTRUCTIONS FOR USING THE ANSWER SHEET

**1. NAME :** If your name is SACHIT A. IYER, then you should write as follows:

| S | A | C | H | I | T | | A | | I | Y | E | R | | | | | | | | | | | | |

**2. PARENT'S NAME :** If your parent's name is SATISH KUMAR IYER, then you should write as follows.

| S | A | T | I | S | H | | K | U | M | A | R | | I | Y | E | R | | | | | | | | |

SCHOOL CODE + CLASS + ROLL marks your complete 11 digit roll no.

**3. SCHOOL CODE**
Write your school code i.e. if your school code is MH0547 darken as follows:

**4. CLASS**
If you are in Class 10, then you should darken as follows:

**5. ROLL NO.**
If your roll no. is 587, then you should write and darken the circle as follows:

**7. DATE OF BIRTH**
If your Date of Birth is 23-07-1997, then you should write and darken the circles as follows:

**8. QUESTION PAPER SET**
If your Set is B, then you should write and darken the circles as follows:



**6. % of Marks or Grade in Last Class**

**9. GENDER**
If you are a boy, then darken **MALE** circle.

| GENDER | |
|---|---|
| MALE ● | FEMALE ○ |

USE HB PENCIL

OR

USE BLUE/BLACK BALL POINT PEN

**10.** If your choice for Answer 1 is C, then you should darken the circle as follows :

| 1. | Ⓐ | Ⓑ | ● | Ⓓ |

Darken the circle

**11. Wrong Methods :**

| 1. | ● | Ⓑ | ● | Ⓓ |

CORRECT WAY TO DARKEN ☞ ●
THE CIRCLE

WRONG ☞
WAY TO DARKEN ⊙ Ｏ
THE CIRCLE ⊘ ⊗

# SOF

Filling of all columns completely & accurately is compulsory

**1. CANDIDATE NAME** (IN ENGLISH CAPITAL LETTERS ONLY)

**2. FATHER'S NAME** (IN ENGLISH CAPITAL LETTERS ONLY)

**3. SCHOOL CODE**

**4. CLASS**

**5. ROLL NO.**

**6. % of Marks or Grade in Last Class** — Percentage OR Grade

**7. DATE OF BIRTH**

**8. QUESTION PAPER SET**

A ○  B ○  C ○  D ○

**9. GENDER**

MALE ○  FEMALE ○

## 10. MARK YOUR ANSWERS WITH HB PENCIL / BALL POINT PEN (BLUE / BLACK)

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

| # | A | B | C | D |
|---|---|---|---|---|
| 19 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 20 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 21 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 22 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 23 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 24 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 25 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 26 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 27 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 28 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 29 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 30 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 31 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 32 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 33 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 34 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 35 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |

THIS COLUMN IS FOR CLASSES 5 & ABOVE

| # | A | B | C | D |
|---|---|---|---|---|
| 36 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 37 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 38 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 39 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 40 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 41 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 42 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 43 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 44 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 45 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 46 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 47 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 48 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 49 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| 50 | Ⓐ | Ⓑ | Ⓒ | Ⓓ |

Signature of the Candidate & Date of Examination

Signature of the Invigilator

★ ANSWER SHEETS WITHOUT SIGNATURE AND ADDRESS MAY BE REJECTED. IN CASE, STUDENT DOES NOT KNOW THE HOME ADDRESS, TEACHER SHOULD MAKE SURE THAT INFORMATION IS DULY FILLED FROM SCHOOL RECORDS.

**FILL UP ADDRESS / CONTACT NO. COLUMNS GIVEN BELOW. INFORMATION IS REQUIRED TO CONDUCT TELEPHONIC INTERVIEW**

Residence Address

City                                                            State

PIN Code          PHONE (with STD Code)                      MOBILE

E-mail Address (In Capital Letters)

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## INSTRUCTIONS FOR USING THE ANSWER SHEET

1. NAME : If your name is SACHIT A. IYER, then you should write as follows:

| S | A | C | H | I | T | | A | | I | Y | E | R | | | | | | | | | | |

2. FATHER'S NAME : If your father's name is SATISH KUMAR IYER, then you should write as follows.

| S | A | T | I | S | H | | K | U | M | A | R | | I | Y | E | R | | | | | | |

SCHOOL CODE + CLASS + ROLL marks your complete 11 digit roll no.

3. SCHOOL CODE
Write your school code i.e. if your school code is MH0547 darken as follows:

4. CLASS
If you are in Class 10, then you should darken as follows:

5. ROLL NO.
If your roll no. is 587, then you should write and darken the circle as follows:

7. DATE OF BIRTH
If your Date of Birth is 23-07-1997, then you should write and darken the circles as follows:

8. QUESTION PAPER SET
If your Set is C, then you should write and darken the circles as follows:



Darken the circle

9. GENDER
If you are a boy, then darken **MALE** circle.

GENDER

MALE ●      FEMALE ○

USE HB PENCIL

OR

USE BLUE/BLACK BALL POINT PEN

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10. If your choice for Answer 1 is C, then you should darken the circle as follows :

1.   Ⓐ   Ⓑ   ●   Ⓓ    Darken the circle

11. Wrong Methods :   1.   ●   Ⓑ   ●   Ⓓ

CORRECT WAY TO DARKEN THE CIRCLE ☞ ●

WRONG WAY TO DARKEN THE CIRCLE ⊙ ○ ⊘ ⊗