

# National Cyber Olympiad

## Practice Test Paper

Choose the correct answer out of the four options given below each question. Mark your choice in the answer sheet given at the end of this Test Paper.

### Mental Ability

1. The steps given in which of the following statements will let you find the value of  $x$  in the following equation.

$$\frac{5}{6}x + 15 = 40$$

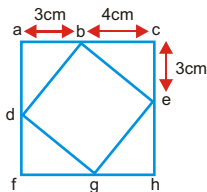
- Divide both sides by the reciprocal of  $5/6$ , then subtract 15 from both sides.
  - Multiply both sides by the reciprocal of  $5/6$ , then subtract 15 from both sides.
  - Subtract 15 from both sides, then multiply both sides by the reciprocal of  $5/6$ .
  - Subtract 15 from both sides, then divide both sides by the reciprocal of  $5/6$ .
2. This table shows some values of  $y$  for the corresponding input values of  $x$  for an equation.

$x$	$y$
-2	0
1	-3
2	0
3	5

Identify that equation from the ones given below:

- $y = -x - 2$
- $y = x^2 - 4$
- $y = x - 2$
- $y = x^2 - x$

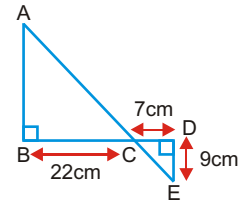
3. The given figure shows a square inscribed in a larger square. What is the area of the smaller square?



- 36 square cm
  - 64 square cm
  - 16 square cm
  - 25 square cm
4. In which of the following series are the numbers arranged in ascending order?
- $\frac{7}{10}, 7 \times 10^{-2}, 0.07\%, 0.007$
  - $0.07\%, 0.007, 7 \times 10^{-2}, \frac{7}{10}$
  - $7 \times 10^{-2}, \frac{7}{10}, 0.07\%, 0.007$
  - $0.07\%, 7 \times 10^{-2}, \frac{7}{10}, 0.007$

5. If  $\triangle ABC$  and  $\triangle CDA$  are similar triangles, then find the length of the side AB.

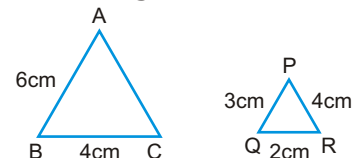
- AB = 23 cm (approx)
- AB = 18 cm (approx)
- AB = 23.8 cm (approx)
- AB = 28.3 cm (approx)



6. Which of these is another way of representing the expression,  $5x(y + 7z)$ .
- $5xy + 35xz$
  - $5x(y) + 7z$
  - $5x(y) + 5(7z)$
  - $(5x + y)(5x + 7z)$
7. Aman had 15 books. His friend Raman borrowed  $x$  books from him. After this Aman is left with just 9 books. Which of the following equations describes the above situation.

- $15 - x = 9$
- $15 - 9 = x$
- $x \times 9 = 15$
- $15/x = 9$

8. The triangles ABC and PQR shown below are similar triangles.

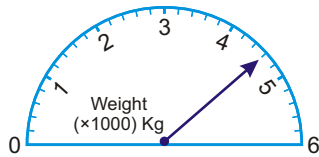


What is the length of the side AC in the  $\triangle ABC$ ?

- 4 cm
  - 12 cm
  - 6 cm
  - 8 cm
9. Which fraction lies between  $3/5$  and  $7/8$ ?
- $1/2$
  - $3/8$
  - $6/7$
  - $1/4$
10. In a class of 45 students,  $4/7$  are boys. How many girls are there in the class?
- 20
  - 25
  - 30
  - 18

## Logical and Analytical Reasoning

11. The following weight gauge is showing the weight of an object.



What is the weight of the object shown in the above weight gauge?

- a. 4 Kg
- b. 4.6 Kg
- c. 460 Kg
- d. 4600 Kg

12. The following figure shows the top, front and side views of a solid figure. Which solid would have these views?



- a. Sphere
- b. Prism
- c. Cylinder
- d. Cone

13. Which of the following transformation will be required to be performed on the figure A to get the figure B.



- a. Rotate left by 180°
- b. Rotate left by 90°
- c. Rotate right by 270°
- d. Flip horizontally

14. A man starts walking towards the North. After walking 1 Km, he turns to his left (at 90°) and walks and a 1/2 Km. Thereafter, he turns left again (at 90°) and walks 1 Km more. In what direction is he walking now and how far away he is from the starting point?

- a. East,  $3\frac{1}{2}$  Km
- b. South, 1 Km
- c. West,  $2\frac{1}{2}$  Km
- d. North,  $1\frac{1}{2}$  Km

15. If the 15th day after the 12th day of a month is a Wednesday, what was the first day of the month?

- a. Monday
- b. Friday
- c. Tuesday
- d. Saturday

16. Which number will come in place of the question mark (?) in the following series?

0, 1, 9, 36, 100, 225, ?

- a. 625
- b. 1000
- c. 441
- d. 596

17. Two positions of a dice are given below. When 1 is at the top, which number will be at the bottom?



- a. 5
- b. 3
- c. 6
- d. 4

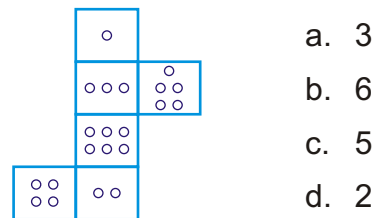
18. What is the mirror image of ?

- a.
- b.
- c.
- d.

19. Which of the following diagram best reports the relationship between: Notebooks, Pencils and Stationery.

- a.
- b.
- c.
- d.

20. If the following net is folded to form a cube, how many dots will be there opposite the face having four dots.



- a. 3
- b. 6
- c. 5
- d. 2

## Computers and Information Technology

21. WiMax is a wireless technology used for setting up wireless \_\_\_\_\_.

- a. LANs
- b. WANs
- c. MANs
- d. Cellphone Networks

22. The abbreviation PDF stands for

- a. Permanent Default Files
- b. Printable Draft Files
- c. Portable Document Format
- d. Printable Document Format

23. Which of the following software is used for reading and displaying a PDF File?

- a. Adobe Reader
- b. Cucusoft Converter
- c. Windows Files & Fax Viewer
- d. Text Maker

24. In context of a computer network, twisted pair cables, coaxial cables and the fibre optic cables are examples of \_\_\_\_\_.

- a. Data Collection Media
- b. Data Transmission Media
- c. Physical Infrastructure Media
- d. Information Infrastructure Media

25. In context of a User Interface, WIMP stands for:

- a. Windows, Icons, Menus and Pointers.
- b. Web, Icons, Members and Panes.
- c. Waste, Indent, Machines and Printers
- d. Wired, Index, Matching and Patches.

26. Using which software can you create a composite picture as shown below by merging two or more pictures:



- a. Adobe Flash
- b. Adobe Photoshop
- c. MS PowerPoint
- d. Paint

27. Which of these is the most famous Microblogging site on the Internet?

- a. twitter.com
- b. cn.wikipedia.org
- c. itunes.com
- d. blogadda.com

28. The present Internet, which has a global presence across the world, has evolved from the \_\_\_\_\_ which was commissioned by the US Defense Department in 1969.

- a. SERVENET
- b. NETSOFT
- c. USENET
- d. ARPANET

29. What does TCP stand for?

- a. Transfer Control Protocol
- b. Transfer Control Program
- c. Transmission Control Program
- d. Transmission Control Protocol

30. Which of these is not an object of an MS Access Database?

- a. Table
- b. Navigation
- c. Query
- d. Form

31. What is the Function of the Primary key in a database?

- a. to identify each record in a table uniquely.
- b. to help establish the relationship among tables.
- c. to help avoid redundancy in data.
- d. All the above

32. Which language will you use to create the application shown below:



- a. QBasic
- b. Visual Basic
- c. C++
- d. LOGO

33. Which control will you use to display an image in the Form in the Visual Basic language?

- a. Graphical Control
- b. Photo Control
- c. Label Control
- d. Image Control

34. Which of the following sites will you visit to search for the Hindi meaning of 'viewer'?
- thefreedictionary.com
  - askoxford.com
  - shabdkosh.com
  - en.wikipedia.com
35. Which tool in Photoshop allows you to cover a faulty part of an image?
- Cover tool
  - Stamp tool
  - Patch tool
  - Invert tool
36. The data type that allows a large amount of textual data to be placed in a field, in a database table is:
- Text
  - Auto Number
  - Memo
  - Lookup
37. As a CD is related to a DVD, a Floppy is related to a:
- Pen drive
  - Printer
  - Memory Disk
  - Hard Disk Drive

38. What DOS file extension does an Access database file have?
- .dbf
  - .dbs
  - .mdb
  - .mdf
39. Netscape Navigator, Internet Explorer, NCSA Mosaic, Netcom's Web Cruiser and Google Chrome are examples of:
- Antivirus Software
  - Operating System Software
  - Presentation Software
  - Browser Software
40. A shape, text or graphic that also acts as the hyperlink is known as a:
- hot spot
  - image map
  - interactive element
  - merged shape icon

### ANSWER SHEET

Darken your choice with a HB pencil

1.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	29.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	30.	(A) (B) (C) (D)
3.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	31.	(A) (B) (C) (D)
4.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)	32.	(A) (B) (C) (D)
5.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)	33.	(A) (B) (C) (D)
6.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)	34.	(A) (B) (C) (D)
7.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)	35.	(A) (B) (C) (D)
8.	(A) (B) (C) (D)	22.	(A) (B) (C) (D)	36.	(A) (B) (C) (D)
9.	(A) (B) (C) (D)	23.	(A) (B) (C) (D)	37.	(A) (B) (C) (D)
10.	(A) (B) (C) (D)	24.	(A) (B) (C) (D)	38.	(A) (B) (C) (D)
11.	(A) (B) (C) (D)	25.	(A) (B) (C) (D)	39.	(A) (B) (C) (D)
12.	(A) (B) (C) (D)	26.	(A) (B) (C) (D)	40.	(A) (B) (C) (D)
13.	(A) (B) (C) (D)	27.	(A) (B) (C) (D)		
14.	(A) (B) (C) (D)	28.	(A) (B) (C) (D)		