



Class  
**5**

## NATIONAL CYBER OLYMPIAD

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

Total Questions : 50

Guidelines for the Candidate

Time : 1 hr.

1. Additional 10 (Ten) minutes will be given to the students to fill up the students' information before the start of the exam.
2. The paper consists of three sections –  
Mental Ability (15 Questions), Logical and Analytical Reasoning (15 Questions) and Computers and Information Technology (20 Questions).
3. All questions are compulsory and carry equal marks. There is no negative marking. Use of calculator is not permitted.
4. Write your Name, Roll No., and Class clearly on the Answer Sheet and do not forget to sign.
5. There is only one correct answer hence mark one choice only.
6. Darken your choice with **HB Pencil** or **Blue/Black Ball Point Pen**. For Example:  
Q.16: 8 bits equal  
(A) 1 byte (B) 1 KB (C) 1 MB (D) 1 GB  
As the correct answer is option No. (A), the candidate should darken the circle (A)
7. Rough work should be done in the blank space provided in the booklet.
8. Return the answer sheet to the invigilator at the end of the exam. The question paper can be retained by the student.

16. ● (B) (C) (D)

Your Roll No.



SCIENCE OLYMPIAD FOUNDATION

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NATIONAL SCIENCE OLYMPIAD  
17<sup>th</sup> November, 2011



INTERNATIONAL MATHEMATICS OLYMPIAD  
8<sup>th</sup> December, 2011



INTERNATIONAL ENGLISH OLYMPIAD  
19<sup>th</sup> January, 2012

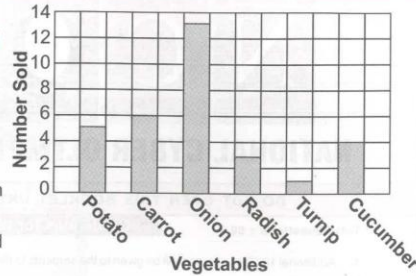
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**MENTAL ABILITY**

1. The given bar graph shows the number of vegetables sold in a grocery shop during the week.



Which of these statements is false from the information in the graph ?

- (A) Fewer cucumbers were sold than onions.
- (B) The same number of potatoes and carrots were sold.
- (C) More onions were sold than all other vegetables.
- (D) Turnips were sold the least.

2. In the cafeteria at a school, there are 8 tables for each grade.

Which grade can have exactly 9 students sitting at each table ?

Students in each grade at school

Kindergarten	71
First Grade	64
Second Grade	81
Third Grade	63
Fourth Grade	80
Fifth Grade	72

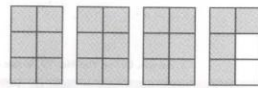
- (A) First Grade
- (B) Second Grade
- (C) Third Grade
- (D) Fifth Grade

3. On Saturday, 2,759 people went to the afternoon concert and 6,387 people went to the night concert. About how many people went to the concert on Saturday ?

- (A) 4,000
- (B) 6,000
- (C) 8,000
- (D) 9,000

4. Which mixed fraction represents the shaded parts of the model ?

- (A)  $3\frac{2}{6}$
- (B)  $3\frac{4}{6}$
- (C)  $4\frac{2}{6}$
- (D)  $4\frac{4}{6}$



5. Mohit has 30 tokens to use on games at the video games parlour. For each game he plays, he uses the same number of tokens. If Mohit plays 5 different games, which number sentence could be used to show the number of tokens he can use on each game ?

- (A)  $30 + 5$
- (B)  $30 - 5$
- (C)  $30 \times 5$
- (D)  $30 \div 5$

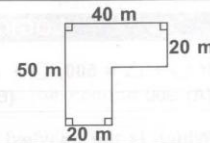
6. Which list contains only one prime number ?

- (A) 3, 4, 5, 6
- (B) 6, 9, 10, 11
- (C) 4, 10, 12, 21
- (D) 7, 11, 13, 17

7. John drew a robot using only rectangles and hexagons. Which could be John's drawing ?



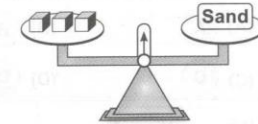
8. A drawing of Misha's garden is shown here. What is the perimeter of the garden?



- (A) 130 m
- (B) 150 m
- (C) 160 m
- (D) 180 m

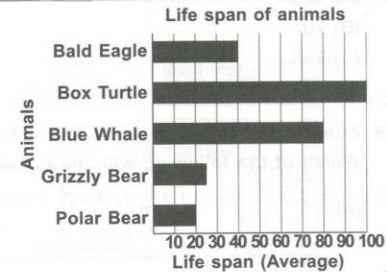
The scale shown here is balanced.

The bag of sand weighs 18 kg. Each of the cubes has the same weight. How many kg does one cube weigh ?



- (A) 3 kg
- (B) 4 kg
- (C) 5 kg
- (D) 6 kg

10. The given bar graph shows the average life span of some animals. Which animal has an average life span that is five times longer than the average life span of a polar bear ?



- (A) Bald Eagle
- (B) Box Turtle
- (C) Blue Whale
- (D) Grizzly Bear

11. The students at Maple Public School are selling flowers. Their goal is to sell 1500 flowers.

On the first day, the students sold 547 flowers.

On the second day, the students sold 655 flowers.

How many flowers must the students sell on the third day to meet their goal ?

- (A) 298
- (B) 308
- (C) 1202
- (D) 2702

12. What is the value of  $48 - 8 \times 4 - 6 \div 2$  ?

- (A) 5
- (B) 13
- (C) 19
- (D) 77

13. There are 20 red and 24 green pencils in a shop. The shopkeeper wants to distribute them equally in boxes. The largest number of pencils that can be put in each box is \_\_\_\_\_.

- (A) 4
- (B) 6
- (C) 12
- (D) 8

14. Manali was making the house number board for her house using Roman numbers. Which of the following cannot be her house number board ?  
 (A) VX (B) IXIV (C) XIIIV (D) All of these
15. Appu's school closed for summer vacations on April 26<sup>th</sup> and reopened on June 10<sup>th</sup>. Number of holidays are \_\_\_\_\_.  
 (A) 46 (B) 45 (C) 44 (D) 47

**LOGICAL AND ANALYTICAL REASONING**

16. If  $\bigcirc + \triangle = 500$ ,  $\bigcirc + \triangle + \triangle = 800$  then  $\triangle - \bigcirc$  equals \_\_\_\_\_.  
 (A) 900 (B) 100 (C) 300 (D) 700

17. Which is the heaviest ball ?



18. What is the missing number ?



19. Sona folds a piece of paper and cuts as shown in the figure. Which of the following will she get when she unfolds the paper?



20. What is the mirror image of ?  
 (A) R (B) R (C) R (D) R

21. If "WHOLE" is coded as "LEHOW" then "MONEY" will be coded as \_\_\_\_\_.  
 (A) EYNOM (B) YEONM (C) MEYON (D) EYONM

22. Anusha cycled from Tree B to Tree C. She then cycled from Tree C to Tree A. How far did she cycle altogether ?



23. How many squares are there in the given figure ?  
 (A) 5 (B) 6 (C) 8 (D) 4



24. What is the digit in the one's place for the product of 5<sup>th</sup> pattern ?

Pattern 1 : 2
Pattern 2 : 2 × 2
Pattern 3 : 2 × 2 × 2

- (A) 2 (B) 4 (C) 0 (D) 8

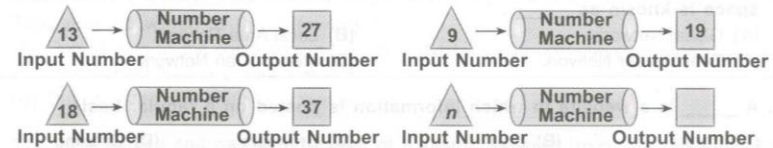
25. Samrat used a pattern for the given table.

What rules did he use to go from the first number to the second and from the second number to the third ?

- (A) Add 8, subtract 3  
 (B) Add 8, add 3  
 (C) Subtract 8, subtract 3  
 (D) Subtract 8, add 3

First Number	Second Number	Third Number
12	4	7
10	2	5
15	7	10
17	9	12

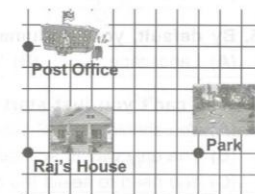
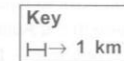
26. Aryan used the number machine shown below to create output numbers from input numbers. The number machine used the same rule each time to create the output number.



- If  $n$  is the input number, which expression could be the rule the machine used to create each output number?  
 (A)  $2n - 2$  (B)  $2n$  (C)  $2n - 1$  (D)  $2n + 1$

27. On the map, each side of each grid square represents 1 kilometre. How much farther does Raj live from the Park than he lives from the Post Office?

- (A) 3 km  
 (B) 5 km  
 (C) 8 km  
 (D) 13 km



28. Mr. Abhay drew this pattern of shapes on the chalkboard. He asked his class to find the rule for his pattern. Which answer is correct ?

- (A) All the figures have 1 less side each time  
 (B) All the figures have 1 less angle each time  
 (C) All the figures have 1 more acute angle each time  
 (D) Number of sides is increased by 1 in the following figure than the previous figure.



29. Kartik has an apple, an orange and a banana. He is only allowed to have 2 fruits for his snack. How many different combinations of 2 fruits could Kartik choose for his snack ?

- (A) 2 (B) 3 (C) 6 (D) 9

30. Roy made the given pattern :



If the pattern continues, which shape will be in the last blank ?

- (A) (B) (C) (D)

### COMPUTERS AND INFORMATION TECHNOLOGY

31. Meeku is setting up his new e-mail account. He needs to create a new password to ensure privacy and security. Which of the following should he do?

- (A) Pick a password used by another person.  
 (B) Use personal information for the new password.  
 (C) Pick random letters for the new password.  
 (D) Use a combination of words and numbers for the new password.

32. A network of computers and other devices that is confined to a relatively small space is known as \_\_\_\_\_.

- (A) Global Network (B) Local Area Network  
 (C) Peer-to-peer Network (D) Metropolitan Network

33. A \_\_\_\_\_ is a website in which information is posted on a regular basis.

- (A) Forum (B) Blog (C) Browsing (D) Chatting

34. Multimedia is a combination of a few components, which are \_\_\_\_\_.

- (A) Audio, video and animations (B) Coreldraw, MS-Access, Pagemaker  
 (C) Operating system, MS word, Text effect (D) None of these

35. By default, your documents print in \_\_\_\_\_ mode.

- (A) Landscape (B) Portrait (C) Page setup (D) Print view

36. Why can't you just start typing text on a blank PowerPoint slide?

- (A) You should use MS-Word if you want to type text.  
 (B) The only way to add text is through the Autocontent wizard.  
 (C) You need to select the Autotext button. (D) You must draw a textbox first.

37. What is a slide-show in PowerPoint?

- (A) A special effect used in slide transitions.  
 (B) A series of slides displayed in sequence.  
 (C) The term for an individual slide in PowerPoint.  
 (D) The button used to preview the slide you are currently working on.

38. Which of these mathematical expressions uses a superscript character ?

$$6^3, \frac{1}{4}, 36\%, \sqrt{5}$$

- (A)  $6^3$  (B)  $1/4$  (C) 36% (D)  $\sqrt{5}$

39. When viewing a video file, which button takes you to the final frame ?

- (A) 1  
 (B) 2  
 (C) 3  
 (D) 4



40. Multimedia is used in \_\_\_\_\_.

- (A) Education (B) Advertising (C) Playing Games (D) All of these

41. Which device is used as the standard pointing device in a Graphical User Environment?

- (A) Keyboard (B) Mouse (C) Joystick (D) Track ball

42. Victor Middle School purchased a single-user copy of a word processing program. They may do which of the following ?

- (A) Copy it onto all the computers in the lab. (B) Use it on only one computer in the lab.  
 (C) Use it on all the computers in the classroom.  
 (D) Duplicate the disk and give it to everyone in the class.

43. You have copied and pasted an image of a Tasmanian bird from the internet into a word processor document.

Which handle should you drag to keep the image in the same proportions while re-sizing it ?

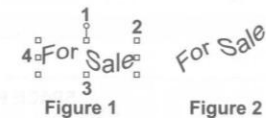
- (A) 1 (B) 2 (C) 3 (D) 4



44. Figure 1 was rotated to form Figure 2.

Which handle in Figure 1 was used to rotate the image?

- (A) 1 (B) 2  
 (C) 3 (D) 4



45. Your history assignment is over 30 pages long. You want to include the page number at the bottom of each page. What would be the best method to do this ?

- (A) Insert a reference line. (B) Type in each page number.  
 (C) Insert the page number in the footer. (D) Insert the page number in the header.

46. You are sitting at a computer waiting for a web page to load but it seems to be taking much longer than usual. What could you do to load the page faster ?

- (A) Click the Back icon (B) Turn off the computer  
(C) Click the History icon (D) Click the Refresh/Reload icon

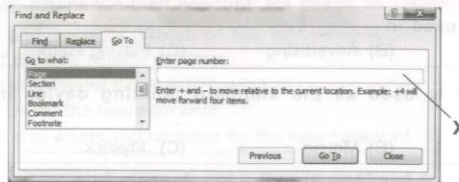
47. The following is a file path taken from the footer in a document.

F:\SCIENCE MATERIALS\year 10\reactions.doc

What is the name of the file that has been accessed?

- (A) F : (B) year 10  
(C) reactions. doc (D) SCIENCE MATERIALS

48. You are on page 2 of a word-processing document of 100 pages. You open this dialogue box.



If you type '60' in the box labelled X, what will happen when you click 'OK' ?

- (A) A new section will be created on page 60 (B) You will be taken to page 60  
(C) Page 60 will be deleted (D) Page 60 will be printed

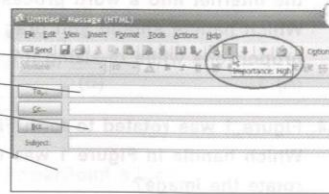
49. To open a disk you position the mouse pointer on the disk icon, and then \_\_\_\_.

- (A) Drag mouse while holding button down (B) Double click the mouse button  
(C) Roll mouse around (D) Roll and then click mouse

50. You are about to compose an e-mail.

Which section must be filled before 1  
the message can be sent?

- (A) 1  
(B) 2  
(C) 3  
(D) 4



SPACE FOR ROUGH WORK