SOF
SCIENCE OLYMPIAD FOUNDATION

SAMPLE PAPER
2014-15

CLASS
12

NCO
NATIONAL CYBER OLYMPIAD

The actual test paper has 50 questions. Time allowed : 60 minutes. There are 3 sections : 15 questions in section I, 30 in section II, 5 in section III.

SYLLABUS

Section – I (Logical Reasoning) : Verbal and Non-Verbal Reasoning.

Section – II (Computers and IT) : Programming in C++, Database Concepts, SQL, Boolean Algebra, Networking & Topologies, Network Security Concepts, Cyber ethics, Viruses and Antiviruses, Open Source Terminologies.

Section – III (Achievers Section) : Syllabus as per Section   II.

NSO
NATIONAL SCIENCE OLYMPIAD

The actual test paper has 50 questions. Time allowed : 60 minutes. There are 3 sections: 25 questions in section I (Physics and Chemistry), 5 in section II (Achievers Section) and 20 questions in section III (Mathematics or Biology)

SYLLABUS

Section – I (Physics & Chemistry) : *Physics*: Electricity and Magnetism, Electromagnetic Induction, AC, E.M. Waves, Optics, Modern Physics, Solids & Semiconductor Devices, Communication Systems. *Chemistry*: Solid State, Solutions, Electrochemistry, Chemical Kinetics, Surface Chemistry, General Principles and Processes of Isolation of Elements, p-Block Elements (Group 15 to 18), d- & f-Block Elements, Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Amines, Biomolecules, Polymers, Chemistry in Everyday Life.

Section – II (Achievers Section) : Syllabus as per Section   I.

Section – III (Mathematics) : Relations and Functions, Inverse Trigonometric Functions, Matrices and Determinants, Continuity and Differentiability, Application of Derivatives, Integrals, Application of Integrals, Differential Equations, Vector Algebra, Three Dimensional Geometry, Probability, Linear Programming, Verbal and Non-Verbal Reasoning.

OR

Section – III (Biology) : Reproduction, Genetics and Evolution, Biology in Human Welfare, Biotechnology, Ecology.

IMO
INTERNATIONAL MATHEMATICS OLYMPIAD

The actual test paper has 50 questions. Time allowed : 60 minutes. There are 4 sections, 15 questions in section I, 20 in section II, 10 in section III and 5 in section IV.
Section I : Logical Reasoning, **Section II :** Mathematical Reasoning, **Section III :** Everyday Mathematics, **Section IV :** Achievers Section

SYLLABUS

Relations and Functions, Inverse Trigonometric Functions, Matrices and Determinants, Continuity and Differentiability, Application of Derivatives, Integrals, Application of Integrals, Differential Equations, Vector Algebra, Three Dimensional Geometry, Probability, Linear Programming, Verbal and Non-Verbal Reasoning.

IEO
INTERNATIONAL ENGLISH OLYMPIAD

IN ASSOCIATION WITH
BRITISH COUNCIL

OPEN SYLLABUS

LOGICAL REASONING

1. If × stands for 'addition'; < stands for 'subtraction'; > stands for 'multiplication'; + stands for 'division'; – stands for 'equal to'; ÷ stands for 'greater than'; = stands for 'less than'; then which one of the given alternatives is correct ?
   (A) 8 < 4 × 3 – 3 × 2 × 1
   (B) 8 > 4 < 3 – 3 > 2 < 1
   (C) 8 × 4 < 3 ÷ 3 < 2 < 1
   (D) 8 + 4 × 3 ÷ 3 > 2 × 1

2. Four persons Alok, Bhupesh, Chandu and Dinesh have a total of Rs. 100 among themselves. Alok and Bhupesh between them have as much money as Chandu and Dinesh between them but Alok has more money than Bhupesh, and Chandu has only half the money that Dinesh has. Alok has in fact Rs. 5 more than Dinesh. Who has the most money?
   (A) Alok
   (B) Bhupesh
   (C) Chandu
   (D) Dinesh

3. The letters *L, M, N, O, P, Q, R, S* and *T* in their order are substituted by nine integers 1 to 9 but not in that order. 4 is assigned to *P*. The difference between *P* and *T* is 5. The difference between *N* and *T* is 3. What is the integer assigned to *N* ?
   (A) 7
   (B) 5
   (C) 4
   (D) 6

4. Which one of the following Venn diagrams represents the relationship amongst "Musicians, Instrumentalists and Violinists"?

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

5. Six roads lead to a country. They may be indicated by letters *X, Y, Z* and digits 1, 2, 3. When there is storm, *Y* is blocked. When there are floods *X*, 1 and 2 will be affected. When road 1 is blocked, *Z* also is blocked. At a time when there are floods and a storm also blows, which road(s) can be used ?
   (A) *Z* and 2
   (B) Only *Z*
   (C) Only 3
   (D) Only *Y*

6. In a certain code language, 'nee muk pic' means 'grave and concern', 'ill dic so' means 'every body else' and 'tur muk so' means 'body and soul'. Which of the following would mean 'every concern'?
   (A) dic pic
   (B) pic nee
   (C) ill nee
   (D) Cannot be determined

COMPUTERS AND INFORMATION TECHNOLOGY

7. Which of the following benefits are offered by Homegroup Networking feature in Windows 7?
   (A) Easy sharing of libraries and other files throughout the homegroup in Windows Explorer.
   (B) Easy access to shared media libraries in Windows Media Player and Windows Media Center.
   (C) Ability to stream media to devices (other computers, media extenders and players, digital picture frames, and so on) using Play To.
   (D) All of these

8. _____ is a device that will only send a message to the device that needs or requests it rather than broadcasting it to all devices.
   (A) Router
   (B) Hub
   (C) Switch
   (D) Bridge

9. In OSI layer, end-to-end connectivity is provided from host-to-host in _____.
   (A) Data link layer
   (B) Session layer
   (C) Network layer
   (D) Transport layer

10. In object-oriented programming, _____ occurs when an object is stored in memory but cannot be accessed by the running code.
    (A) Heap
    (B) Stack
    (C) Memory Leak
    (D) Queue

11. _____ is a method of encryption that provides two different keys, a secret key and a public key.
    (A) Symmetric encryption
    (B) Asymmetric encryption
    (C) Authentication
    (D) Detection

12. Aero shake feature of Windows 7 requires _____ shakes only in order to perform the task.
    (A) 3   (B) 2   (C) 10   (D) 7

13. Find the minimized form of the following function.

$$x'y'z + x'yz + xy'$$

    (A) $xy + x'z$ (B) $x'z + xy'$ (C) $x'z' + yz$ (D) $xz' + x'y$

14. Which of the following statements about C++ are true?
    Statement 1 : C++ was developed by Bjarne Stroustrup in early 1980s
    Statement 2 : C++ provides following tokens (smallest individual unit in program) : keywords, identifiers, literals, punctuator, operators
    Statement 3 : C++ allows following literals: integer-constant (Decimal, Octal, Hexadecimal), character-constant, floating-constant, string-literal
    Statement 4 : C++ provides two types of data types: fundamental and derived data types.
    (A) 1 and 2 only
    (B) 1 only
    (C) 1, 3 and 4 only
    (D) All of these

15. **Assertion (A) :** Antivirus programs protect a computer from computer virus.
    Reason (R) : These programs work by examining all the files on a disk, looking for the tell-tale 'signatures' of virus code
    (A) A is true but R is false
    (B) Both A and R are true but R is not the correct reason of A
    (C) A and R are true and R is the correct explanation of A
    (D) A is false but R is true

N S Q National Science Olympiad

MATHEMATICS

1. A large watermelon weighs 20 kg with 98% of its weight being water. It is left to stand in the sun and some of the water evaporates so that now only 95% of its weight is water. What is its reduced weight?
   (A) 17 kg   (B) 19.4 kg   (C) 10 kg   (D) 8 kg

2. Four bags were to be weighed but the scale could weigh only weights in excess of 100 kg. If the bags were weighed in pairs and the weights were found to be 103, 105, 106, 107 and 109, then the weight of the lightest bag is
   (A) 50 kg   (B) 51 kg   (C) 49 kg   (D) 52 kg

3. A plane flies from A to B and back again with a constant engine speed. Turn-around time may be neglected. Will the travel time be more with a wind of constant speed blowing in the direction from A to B than in still air?
   (A) Yes
   (B) No
   (C) Depends on the engine
   (D) Insufficient data

4. Given four points in space which are not in a plane, the number of planes which are equidistant from all the four points is
   (A) 7   (B) 3   (C) 5   (D) 6

OR

BIOLOGY

1. Gametophytic self incompatibility differs from sporophytic self incompatibility in that
   (A) It allows germination of pollens
   (B) It occurs due to incompatibility of stigma
   (C) It occurs due to incompatibility of sporophytic tissues
   (D) It occurs due to incompatibility of pollens.

2. XO-chromosomal abnormality in human beings causes
(A) Turner's syndrome
(B) Down's syndrome
(C) Klinefelter's syndrome
(D) None of these.

3. The best definition of an ecosystem is
(A) The inter-relationship between producers, consumers and decomposers of an environment
(B) A stable co-existence of dominant species in an environment
(C) A natural unit including plants, animals and non-living constituent of the environment
(D) A number of population of organisms of different species

4. The main reason why antibiotics could not solve all the problems of bacteria mediated diseases is
(A) Insensitivity of the individual following prolonged exposure to antibiotics
(B) Inactivation of antibiotics by bacterial enzymes
(C) Decreased efficiency of the immune system
(D) The development of mutant strains resistant to antibiotics.

PHYSICS & CHEMISTRY

5. A metal x is prepared by the electrolysis of fused chlorides. It reacts with hydrogen to form a colourless solid from which hydrogen is released on treatment with water. The metal is
(A) Al
(B) Ca
(C) Cu
(D) Zn

6. Mortar is a mixture of
(A) $Ca(OH)_2$, Silica and Water
(B) $CaCO_3$ and SiO_2
(C) CaO and Silica
(D) $CaCO_3$, SiO_2 and Water

7. A ray of light passes from vacuum into a medium of refractive index μ, the angle of incidence is found to be twice the angle of refraction. Then the angle of incidence is
(A) $\cos^{-1}(\mu/2)$
(B) $2\cos^{-1}(\mu/2)$
(C) $2\sin^{-1}\mu$
(D) $2\sin^{-1}(\mu/2)$

8. What causes the tail of the comet?
(A) Centrifugal force pushes away the gases
(B) Lighter gases are left behind during the orbital motion
(C) Tail of comet always exists but becomes visible near the sun.
(D) The radiation pressure from the sun causes the tail

9. A ray of light in a liquid of refractive index 1.4, approaches the boundary surface between the liquid and air at an angle of incidence whose sine is 0.8. Which of the following statements is correct about the behavior of the light ?
(A) It is impossible to predict the behavior of the light ray on the basis of the information supplied
(B) The sine of the angle of refraction of the emergent ray will be less than 0.8
(C) The ray will be internally reflected
(D) The sine of the angle of refraction of the emergent ray will be greater than 0.8

10. For the circuit shown in figure, which of the following statements is true?
(A) With S_1 closed, $V_1 = 15$ V, $V_2 = 20$ V
(B) With S_3 closed, $V_1 = V_2 = 25$ V
(C) With S_1 and S_2 closed, $V_1 = V_2 = 0$
(D) With S_1 and S_3 closed, $V_1 = 30$ V, $V_2 = 20$ V.

S_1 $V_1{=}30V$ S_3 $V_2{=}20V$ S_2 $C_1{=}2pF$ $C_2{=}3pF$
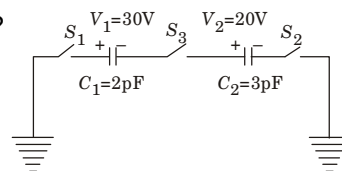
11. The IUPAC name of
$$CH_3{-}CH-CH_2-\underset{\underset{O}{\|}}{C}-CH_2-CH{-}CH_3 \text{ (with } CH_3 \text{ substituents) is}$$
(A) 2,4-dimethylhexanone-3
(B) 2,6-dimethylheptanone-4
(C) 2,6-dimethylhexanone-4
(D) 2,6-dimethylheptanone-5

LOGICAL REASONING

1. The "Golden Rectangle" of the ancient Greeks was considered to have the most pleasing proportion of any rectangle. The ratio of width (w) to height (h) of the rectangle is expressed in the following proportion and is shown in the drawing below.

$$\frac{w}{h} = \frac{2}{\sqrt{5} - 1}$$

Jason is planning to paint a rectangular mural using the proportions of the "Golden Rectangle." If the mural is 15 meters wide, how high should it be?
(A) 1.6 meters (B) 9.3 meters (C) 16.5 meters (D) 24.2 meters

2. The given table shows the boiling points in degrees Celsius for some different elements. Which of the following elements have boiling points that are lower than –190°C ?
(A) Chlorine and Oxygen
(B) Oxygen and nitrogen
(C) Chlorine, helium, and hydrogen
(D) Helium, hydrogen, and nitrogen

BOILING POINTS OF SOME ELEMENTS

Element	Boiling Point (in °C)
Chlorine	– 34.6
Helium	– 269.0
Hydrogen	– 252.9
Nitrogen	– 195.8
Oxygen	– 183.0

3. A certain radioactive element decays over time according to the equation $y = A\left(\frac{1}{2}\right)^{\frac{t}{300}}$, where A = the number of grams present initially and t = time in years. If 1000 grams were present initially, how many grams will remain after 900 years?
(A) 500 grams (B) 250 grams (C) 125 grams (D) 62.5 grams

4. Which is the first incorrect step in simplifying $\log_4 \frac{4}{64}$?

Step 1: $\log_4 \frac{4}{64} = \log_4 4 - \log_4 64$ Step 2 : $= 1 - 16$ Step 3 : $= -15$
(A) Step 1 (B) Step 2 (C) Step 3 (D) Each step is correct

MATHEMATICAL REASONING

5. Which expression represents $f(g(x))$ if $f(x) = x^2 - 1$ and $g(x) = x + 3$?
(A) $x^3 + 3x^2 - x - 3$ (B) $x^2 + 6x + 8$ (C) $x^2 + x + 2$ (D) $x^2 + 8$

6. From a deck of card two are drawn. The probability that both are of same suit is
(A) $\frac{1}{2}$ (B) $\frac{1}{13}$ (C) $\frac{4}{17}$ (D) $\frac{2}{17}$

7. On a recent test, Jyoti wrote the equation $\frac{x^2 - 16}{x - 4} = x + 4.$ Which of the following statements is correct about the equation she wrote?
(A) The equation is always true
(B) The equation is always true, except when $x = 4$
(C) The equation is never true
(D) The equation is sometimes true when $x = 4$

8. If x is a real number, which best describes the values of x for which the inequality $\sqrt{x} > 0$ is true?
(A) All $x > 0$ (B) All $x \geq 0$ (C) All values of x (D) No values of x

9. If the equation $y = 2^x$ is graphed, which of the following values of x would produce a point closest to the x-axis?
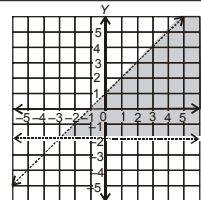(A) 1/4 (B) 3/4 (C) 5/3 (D) 8/3

10. The graph of $\left(\dfrac{x}{2}\right)^2 - \left(\dfrac{y}{3}\right)^2 = 1$ is a hyperbola. Which set of equations represents the asymptotes of the hyperbola's graph ?

(A) $y = \dfrac{3}{2}x,\ y = -\dfrac{3}{2}x$

(B) $y = \dfrac{3}{2}x,\ y = -\dfrac{2}{3}x$

(C) $y = \dfrac{1}{2}x,\ y = -\dfrac{1}{2}x$

(D) $y = \dfrac{1}{3}x,\ y = -\dfrac{1}{3}x$

11. What system of inequalities best represents the graph shown?

(A) $y > -2$ and $y > x + 1$

(B) $y > -2$ and $y < x + 1$

(C) $y < -2$ and $y > x + 1$

(D) $y < -2$ and $y < x + 1$

12. If $\displaystyle\int_{\pi/6}^{\pi/3} \dfrac{\sqrt{\sin x}}{\sqrt{\cos x} + \sqrt{\sin x}}\,dx = \dfrac{k}{4}$ then value of k equals

(A) $\pi/12$

(B) $\pi/3$

(C) $\pi/2$

(D) $\pi/7$

EVERYDAY MATHEMATICS

13. Mrs. Ballad decided to apply wallpaper on one wall of her living room. A diagram of the rectangular wall with its window is shown. A roll of wallpaper covers approximately 30 square feet. What is the minimum number of rolls she will have to buy in order to cover the entire wall excluding the window?
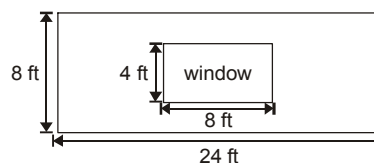
(A) 2 rolls

(B) 5 rolls

(C) 6 rolls

(D) 7 rolls

14. A box contains 7 large red marbles, 5 large yellow marbles, 3 small red marbles, and 5 small yellow marbles. If a marble is drawn at random, what is the probability that it is yellow, given that it is one of the large marbles?

(A) 5/12

(B) 7/20

(C) 5/8

(D) 1/5

15. A restaurant manager bought 20 packages of bagels. Some packages contained 6 bagels each, and the rest contained 12 bagels each. There were 168 bagels in all. How many packages of 12 bagels did the manager buy?

(A) 6

(B) 8

(C) 9

(D) 12

I E O International English Olympiad

WORD AND STRUCTURE KNOWLEDGE

A. Write one word that can be used in all three sentences.

1.

a. You can stay with us if you like, we've got a _____ room in our house.

b. It's very difficult to get _____ parts for this old washing machine.

c. I like my school but the hours are so long it doesn't allow me much _____ time.

(A) spare

(B) extra

(C) new

(D) also

B. Read the text below and think of the word which best fits each gap. Choose from A, B, C or D.

2. With the coming of the motor car at the end of the last century, a new era in personal transport was born. The early motorist certainly _____ his problems.

(A) Is

(B) want

(C) had

(D) has

3. Perhaps the biggest one being _____ his vehicle would start or not.

(A) whether

(B) what

(C) when

(D) that

4. More traffic and faster vehicles mean that, _____ safe and reliable a car may be, its driver has to have more driving skill than ever before.
(A) though   (B) however   (C) also   (D) always

5. Today's drivers cannot neglect their own direct and personal_____ for the accidents that happen on the road every year.
(A) responsibility   (B) risks   (C) dangers   (D) well being

6. A good driver has many things in his make-up. Some of _____, such as experience and skill, will come only in time.
(A) them   (B) that   (C) this   (D) it

7. But others-just as important-must _____ part of him from the start.
(A) Get   (B) form   (C) being   (D) of

8. These qualities are a _____ of responsibility for the safety of others.
(A) seeing   (B) sense   (C) felt   (D) being

9. And a determination to _____ on the job of driving, patience and courtesy.
(A) Aim   (B) focus   (C) think   (D) succeed

10. Together, these become what is generally known _____ the driver's attitude.
(A) All   (B) of   (C) as   (D) has

READING

C. For each sentence match one half of the sentence with the second half of the sentence from A-D.

11. Hardly had he put the phone down.....

12. At no time in my life.......

13. Under no circumstances.....

14. Little did I realise ....
(A) that the teachers were watching me.
(B) when he heard the sound of the fire engines.
(C) have I taken something that didn't belong to me.
(D) would I not protect a friend who was accused unfairly.

SPOKEN AND WRITTEN EXPRESSION

D. Read the extracts given and answer the question given. Choose the answer from A, B, C or D.

Summer jobs for students

Employers are more and more interested in taking on students during their holiday periods. Students can do the easier tasks and free up time for their permanent employees to concentrate on the more demanding ones. Although there is little financial reward for students, it is a great chance to explore their interests and add to their CVs. However, few students know what jobs may be available.

Schools sometimes advertise summer jobs on their notice-boards and in newspapers, and there are also well known international organisations which can help. Students can also search the web, find an interesting company and email the manager to ask what temporary jobs exist. This may sound time consuming but then students get to work in the company of their choice, so it is what I recommend.

15. The writer says the best way to find a summer job is
(A) to ask their schools for help
(B) to read the job advertisements in the press
(C) to join an organised student programme
(D) to contact possible employers directly

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 SHARMA, then you should write as follows :

| S | A | T | I | S | H | | K | U | M | A | R | | S | H | A | R | M | A | | | |

SCHOOL CODE

M H 0 5 4 7

3. SCHOOL CODE
Write your school code i.e. if your school code is MH0547 darken as follows :

Darken the circle

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 circles as follows :

CLASS 1 0

ROLL NO. 5 8 7

Darken the circle

6. GENDER
If you are a boy, then darken **Male** circle

GENDER

MALE ● **FEMALE** ○

CORRECT way to darken ☞ ● the circle

WRONG ☞ way to darken the circle

7. If your choice for Answer 1 is C, then you should darken the circle as follows :

1. Ⓐ Ⓑ ● Ⓓ

MARK YOUR ANSWERS WITH HB PENCIL/BALL POINT PEN (BLUE/BLACK)

National Cyber Olympiad

1. Ⓐ Ⓑ Ⓒ Ⓓ   2. Ⓐ Ⓑ Ⓒ Ⓓ   3. Ⓐ Ⓑ Ⓒ Ⓓ   4. Ⓐ Ⓑ Ⓒ Ⓓ   5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓐ Ⓑ Ⓒ Ⓓ   7. Ⓐ Ⓑ Ⓒ Ⓓ   8. Ⓐ Ⓑ Ⓒ Ⓓ   9. Ⓐ Ⓑ Ⓒ Ⓓ   10. Ⓐ Ⓑ Ⓒ Ⓓ
11. Ⓐ Ⓑ Ⓒ Ⓓ   12. Ⓐ Ⓑ Ⓒ Ⓓ   13. Ⓐ Ⓑ Ⓒ Ⓓ   14. Ⓐ Ⓑ Ⓒ Ⓓ   15. Ⓐ Ⓑ Ⓒ Ⓓ

National Science Olympiad

1. Ⓐ Ⓑ Ⓒ Ⓓ   2. Ⓐ Ⓑ Ⓒ Ⓓ   3. Ⓐ Ⓑ Ⓒ Ⓓ   4. Ⓐ Ⓑ Ⓒ Ⓓ   5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓐ Ⓑ Ⓒ Ⓓ   7. Ⓐ Ⓑ Ⓒ Ⓓ   8. Ⓐ Ⓑ Ⓒ Ⓓ   9. Ⓐ Ⓑ Ⓒ Ⓓ   10. Ⓐ Ⓑ Ⓒ Ⓓ
11. Ⓐ Ⓑ Ⓒ Ⓓ   12. Ⓐ Ⓑ Ⓒ Ⓓ   13. Ⓐ Ⓑ Ⓒ Ⓓ   14. Ⓐ Ⓑ Ⓒ Ⓓ   15. Ⓐ Ⓑ Ⓒ Ⓓ

International Mathematics Olympiad

1. Ⓐ Ⓑ Ⓒ Ⓓ   2. Ⓐ Ⓑ Ⓒ Ⓓ   3. Ⓐ Ⓑ Ⓒ Ⓓ   4. Ⓐ Ⓑ Ⓒ Ⓓ   5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓐ Ⓑ Ⓒ Ⓓ   7. Ⓐ Ⓑ Ⓒ Ⓓ   8. Ⓐ Ⓑ Ⓒ Ⓓ   9. Ⓐ Ⓑ Ⓒ Ⓓ   10. Ⓐ Ⓑ Ⓒ Ⓓ
11. Ⓐ Ⓑ Ⓒ Ⓓ   12. Ⓐ Ⓑ Ⓒ Ⓓ   13. Ⓐ Ⓑ Ⓒ Ⓓ   14. Ⓐ Ⓑ Ⓒ Ⓓ   15. Ⓐ Ⓑ Ⓒ Ⓓ

International English Olympiad

1. Ⓐ Ⓑ Ⓒ Ⓓ   2. Ⓐ Ⓑ Ⓒ Ⓓ   3. Ⓐ Ⓑ Ⓒ Ⓓ   4. Ⓐ Ⓑ Ⓒ Ⓓ   5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓐ Ⓑ Ⓒ Ⓓ   7. Ⓐ Ⓑ Ⓒ Ⓓ   8. Ⓐ Ⓑ Ⓒ Ⓓ   9. Ⓐ Ⓑ Ⓒ Ⓓ   10. Ⓐ Ⓑ Ⓒ Ⓓ
11. Ⓐ Ⓑ Ⓒ Ⓓ   12. Ⓐ Ⓑ Ⓒ Ⓓ   13. Ⓐ Ⓑ Ⓒ Ⓓ   14. Ⓐ Ⓑ Ⓒ Ⓓ   15. Ⓐ Ⓑ Ⓒ Ⓓ

ANSWERS

National Cyber Olympiad

1. (C)   2. (A)   3. (D)
4. (C)   5. (C)   6. (D)
7. (D)   8. (C)   9. (D)
10. (C)   11. (B)   12. (A)
13. (B)   14. (D)   15. (C)

National Science Olympiad

MATHEMATICS
1. (A)   2. (D)   3. (D)
4. (C)

BIOLOGY, PHYSICS & CHEMISTRY
1. (A)   2. (A)   3. (D)
4. (A)   5. (B)   6. (B)
7. (B)   8. (B)   9. (C)
10. (C)   11. (C)

International Mathematics Olympiad

1. (D)   2. (D)   3. (C)
4. (A)   5. (D)   6. (D)
7. (A)   8. (B)   9. (B)
10. (B)   11. (A)   12. (D)
13. (A)   14. (B)   15. (B)

International English Olympiad

1. (D)   2. (D)   3. (B)
4. (B)   5. (D)   6. (B)
7. (C)   8. (A)   9. (C)
10. (C)   11. (D)   12. (B)
13. (B)   14. (C)   15. (A)