

SAMPLE PAPER 2014-15

CLASS



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

SYLLABUS

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

Section — II (Computers and IT): Fundamentals of Computer, Evolution of Computers, Hardware, Software, Input & Output Devices, Memory & Storage Devices, Using Windows, MS-Word, MS-PowerPoint, MS-Excel, Programming in QBasic, Internet & Viruses, Latest Developments in the field of IT.

Section – III (Achievers Section): Syllabus as per in Section II. Questions are based on Windows 7 and MS-Office 2010.

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

SYLLABUS

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

Section – II (Science): Heat, Motion and Time, Electric Current and its Effect, Winds, Storms and Cyclones, Light, Acids, Bases and Salts, Physical and Chemical Changes, Weather, Climate and Adaptations of Animals, Fibres to Fabrics, Nutrition in Plants and Animals, Respiration in Organisms, Transportation in Plants and Animals, Reproduction in Plants, Natural Resources and Their Conservation.

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

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.

SYLLABUS

Section — I (Logical Reasoning): Verbal and Non-Verbal Reasoning

Section — II (Mathematical Reasoning) : Integers, Fractions and Decimals, Exponents and Powers, Algebraic Expressions, Simple Linear Equations, Lines and Angles, Concept of Percentage, Profit and Loss, Simple Interest, Probability, Properties of Triangle, Symmetry, Congruence of Triangles, Rational Numbers, Perimeter and Area, Data Handling, Arithmetical Ability, Visualising Solid Shapes.

Section – III (Everyday Mathematics) : The Syllabus of this section will be based on the syllabus of Mathematical Reasoning.

Section — **IV** (Achievers Section) : Syllabus as per Section II.

The actual test paper consists of 50 questions. Time allowed : 60 minutes. There are 4 sections.

SYLLABUS

Section – I (Word and Structure Knowledge): Perfect tenses, Prepositions, Modals, Adjectives, and Adverbs, Conjunctions, Direct indirect speech, Word order, Phrasal verbs, etc. Spellings, Collocations, Phrasal verbs, Idioms, and Words related to Travel, Locations, Activities, Homonyms and Homophones, etc.

Section – II (Reading) : Search for and retrieve information from various text types like News stories, Brochures and advertisements. Understand information given in news reports, Brochures, Itinerary, etc., Acquire broad understanding of and look for specific information in short narratives, Advertisements, Biographies, etc.

Section — **III** (**Spoken and Written Expression**): Ability to understand situation-based variations in functions like requesting and refusing, Apologies and stating of preferences and expression of intent, etc.

Section – **IV** (Achievers Section) : Syllabus as per Sections I, II and III.



NATIONAL SCIENCE OLYMPIAD

INTERNATIONAL MATHEMATICS OLYMPIAD







N C National Cyber Olympiad

1.	Which of the following o	ptions will complete th	ne given series?	
	9	·	≠ ↓ ?	
	(A)	(B)	(C) \[\psi \]	(D)
2.	If TOGETHER is writter (A) NCPQJG	n as RQEGRJCT, how (B) NCQPJG	will PAROLE be written (C) RCPQJK	? (D) RCTQNG
3.		• .		portspersons and circle represents spersons but not coaches?
4.	Five boys A, B, C, D and of the following pairs rep (A) C, B	•		D and B is between D and E. Which (D) A, C
5.	What is the number of t (A) 12 (B) 20 (C) 22	triangles in this figure	?	
	(D) 24			
6.	A man goes towards ea			s right and goes five kilometres. He to the point from where he started, (D) South
6.	A man goes towards ear again takes a turn towar where is he now? (A) East	ds right and goes five	kilometres. With respec	t to the point from where he started, (D) South
6. 7.	A man goes towards ear again takes a turn towar where is he now? (A) East	ds right and goes five (B) North COMPUTERS AND IN for a famous high er Pro	kilometres. With respec	t to the point from where he started, (D) South LOGY le. It is called
7.	A man goes towards ear again takes a turn towar where is he now? (A) East MBP is a short form f (A) Macintosh Book (C) Mountain Book F	ds right and goes five (B) North COMPUTERS AND IN for a famous high er Pro Pro e Directory domain Edition te Edition	(C) West FORMATION TECHNO and notebook from App (B) Mac Book Pro (D) MacBook Pro in which of the following	t to the point from where he started, (D) South LOGY le. It is called grammable ng Windows 7 versions? essional Edition
7. 8.	A man goes towards ear again takes a turn towar where is he now? (A) East MBP is a short form f (A) Macintosh Book (C) Mountain Book F You can join an Active (i) Windows Home (iii) Windows Ultima (A) Only (i) and (ii) (C) Only (ii), (iii) and In MS PowerPoint, 'Re	ds right and goes five (B) North COMPUTERS AND IN for a famous high er Pro Pro e Directory domain Edition te Edition d (iv) hearse timings' is pr	(C) West FORMATION TECHNO and notebook from App (B) Mac Book Pro (D) MacBook Pro (in which of the followin (ii) Windows Prof (iv) Windows Ente (B) Only (iv) (D) All of these esent on the	to the point from where he started, (D) South LOGY le. It is called grammable ng Windows 7 versions? essional Edition rprise Edition tab.
7. 8.	A man goes towards ear again takes a turn towar where is he now? (A) East MBP is a short form f (A) Macintosh Book (C) Mountain Book F You can join an Active (i) Windows Home (iii) Windows Ultima (A) Only (i) and (ii) (C) Only (ii), (iii) and In MS PowerPoint, 'Re	ds right and goes five (B) North COMPUTERS AND IN for a famous high er Pro Pro e Directory domain Edition te Edition d (iv) hearse timings' is pr (B) Transitions	(C) West FORMATION TECHNO and notebook from App (B) Mac Book Pro (D) MacBook Pro (in which of the followin (ii) Windows Prof (iv) Windows Ente (B) Only (iv) (D) All of these esent on the (C) Slide Show	t to the point from where he started, (D) South LOGY le. It is called grammable ng Windows 7 versions? essional Edition erprise Edition

11. Match the following terms with what they stand for

Term

Stands for

(i) .com

(a) Education

(ii) .edu

(b) India

(iii) .in

(c) Australia

(iv) .au

- (d) Commerce
- (A) (i)-(a), (ii)-(b), (iii)-(c), (iv)-(d)
- (B) (i)-(b), (ii)-(c), (iii)-(d), (iv)-(a)
- (C) (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
- (D) (i)-(d), (ii)-(a), (iii)-(b), (iv)-(c)
- **12.** A browser is an interactive program that permits a user to view web pages on the computer. The browser performs which of the following services?
 - (A) Connecting to the source computer whose address is specified
 - (B) Requesting new page from the server
 - (C) Receiving new page
 - (D) All of these
- **13.** Modern Computers compared to earlier computers are
 - (A) Faster and larger

(B) Less reliable

(C) Larger and stronger

- (D) Faster and smaller
- 14. In MS Word, which shortcut key is used to increase the font size of text?
 - (A) Ctrl + F

(B) Ctrl + Alt + F

(C) Ctrl + Shift + >

- (D) Ctrl + Shift + X
- 15. In QBasic, what will the given command do?

LET
$$C = A + B$$

- (A) The string variable C receives the value of A + B.
- (B) The numerical variable C is assigned the value of A + B.
- (C) The string variable C is assigned the expression A + B.
- (D) An error message is displayed.

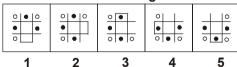
N S Q

National Science Olympiad

LOGICAL REASONING

- 1. If '+' means 'x', '-' means '÷', 'x' means '-' and '÷' means '+', then what will be the value of $16 \div 64 8 \times 4 + 2 = ?$
 - (A) 18
- (B) 14
- (C) 24
- (D) 16
- 2. Select a figure from the options which will continue the same series as given in the Problem Figures.

Problem Figures



...



(B)



(C)



(D)



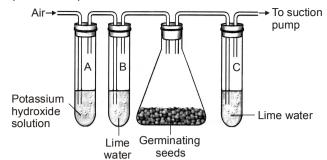
3. How many 5's are there in the following sequence such that the sum of the two immediately following digits is greater than the sum of the two immediately preceding digits?

37658324554879153487598764

- (A) One
- (B) Two
- (C) Three
- (D) Four

4.	Anuradha remembers that her friend had visited her after 13 th but before 18 th of the month, while Anuradh sister remembers that Anuradha's friend had visited after 16 th but before 20 th . If it was Saturday on 16 th the month, then on which day of the week, Anuradha's friend visit her?										
	(A) Saturday (B) Monday	(C) Sunday	(D) None of these								
5.	A piece of paper containing six joined squares labelled as shown in the diagram is folded along the edges of the squares to form a cube. The label of the face opposite the face labelled X is										
		Y UVW X Z									
	(A) Z (B) U	(C) V	(D) Y								
6.	A body moves with uniform velocity. Whic time for this motion?	SCIENCE h of the graphs shown	here is a graph of distance against								
	(A) Lime (B) Lime Lime	(C) Distance Lime	(D) Signature (D) Time								
7.	X is present in the stomach. However, pre the intake of milk of magnesia to undo th (A) HCl (B) H ₂ SO ₄		•								
8.	The given parts of the plant help out in	(6) 1.0011									
0.	(A) Photosynthesis										
	(B) Respiration		(00)								
	(C) Transpiration										
	(D) All of the above.		LEY'								
9.	The increase in area of the solid on heati	ing is called									
	(A) Superficial expansion	(B) Linear expans									
	(C) Cubical expansion	(D) Quadra expai	nsion								
10.	The temperature at which no more energy	y can be removed fror	n matter is called								
	(A) Absolute zero	(B) Boiling point									
	(C) 32° F	(D) 32°C									
11.	A lightning conductor is a (A) Piece of metallic wire with spikes thr (B) Substance that can be charged by cl (C) Carbon rod (D) Plastic rod.	•	n flow								
12.	Which one of the following is true for all of	chemical reactions?									
	(A) There is a change in volume	(B) Heat is evolve									
	(C) Chemical bonds are broken or formed	d (D) There is a ch	ange in mass								
13.	The movement of oxygenated blood from to the body is called	the left auricle to left ve	entricle and then to aorta to all parts								
	(A) Extracellular circulation	(B) Pulmonary ci									
	(C) Systemic circulation	(D) Intracellular o	irculation								

14. Study the given set up of an experiment. You will observe that



- (A) Lime water in test tube B turns milky
- (B) Lime water in test tube C turns milky
- (C) Potassium hydroxide solution in test tube A turns red
- (D) Temperature in the flask will go down.
- **15.** Which metal is present in the human body in greater percentage?
 - (A) Calcium
- (B) Sodium
- (C) Potassium
- (D) Iron

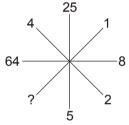


International Mathematics Olympiad

LOGICAL REASONING

- 1. Which will come next in the series?
 - (A) ef
- (B) gh
- az, by, cx, ____?__ (C) ij
- (D) dw

- 2. Which number will replace the ? in Fig. (X)?
 - (A) 1
 - (B) 2
 - (C) 3
 - (D) 4



- Fig. (X)
- 3. Which most closely resembles the mirror image of the given word, if the mirror is placed vertically to the left

STROKE

- EKORTS (A)
- (B) EKORTS
- (C) ROKETS
- STROKE (D)
- 4. Count the number of triangles in the following figure.
 - (A) 8

(B) 10

(C) 12

(D) 14



MATHEMATICAL REASONING

- 5. Which of the following is best described in the given figure?
 - (A) Acute angles(C) Parallel lines

- (B) Obtuse angles
- (D) Perpendicular lines

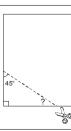


- **6.** Nina made a triangle by cutting the corner of a sheet of paper. One angle is 45°. What is the measure of the third angle of Nina's triangle?
 - (A) 30°

(B) 45°

(C) 55°

(D) 60°



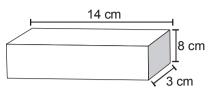
- 7. The value of $4\frac{3}{4} 2\frac{1}{2} =$
- (C) $2\frac{1}{4}$
- (D) $2\frac{3}{4}$

- 8. This rectangular prism has a length of 14 cm. a height of 8 cm, and a width of 3 cm. What is the volume?
 - (A) 25 cu cm

(B) 42 cu cm

(C) 112 cu cm

(D) 336 cu cm



- **9.** Which expression represents the product of *n* and 25?
 - (A) 25n
- (B) 25 n
- (C) 25 + n
- (D) $25 \div n$

- 10. What is the prime factorization of 45?
 - (A) $2^3 \times 5$
- (B) $3^2 \times 5$
- (C) $5^2 \times 3$
- (D) $5^2 \times 9$

- **11.** The value of $11.3 \times 2.7 =$
 - (A) 29.31
- (B) 29.51
- (C) 30.31
- (D) 30.51
- 12. Mohit gains 60 paise on ₹ 60. His gain percent is
 - (A) 1%
- (B) 0.1%
- (D) 1.1%

EVERYDAY MATHEMATICS

- 13. Kartik can throw a ball $50\frac{3}{5}$ metres high. Ayan can throw the same ball $48\frac{1}{3}$ metres high. How much farther can Kartik throw the ball than Ayan?
 - (A) $2\frac{2}{15}$ m
- (B) $2\frac{4}{15}$ m
- (C) $2\frac{3}{5}$ m
- (D) $2\frac{4}{5}$ m
- 14. In a parking lot, 1 out of every 8 cars is blue. What percent of the cars in this lot are blue?
 - (A) 1.25%
- (B) 7%
- (C) 9%
- (D) 12.5%
- 15. A duck flew at 18 km per hour for 3 hours, then at 15 km per hour for 2 hours. How far did the duck fly in all? $\left(\text{Speed} = \frac{\text{Distance}}{\text{Time}} \right)$
 - (A) 69 km
- (B) 75 km
- (C) 81 km
- (D) 84 km



International English Olympiad

WORD AND STRUCTURE KNOWLEDGE

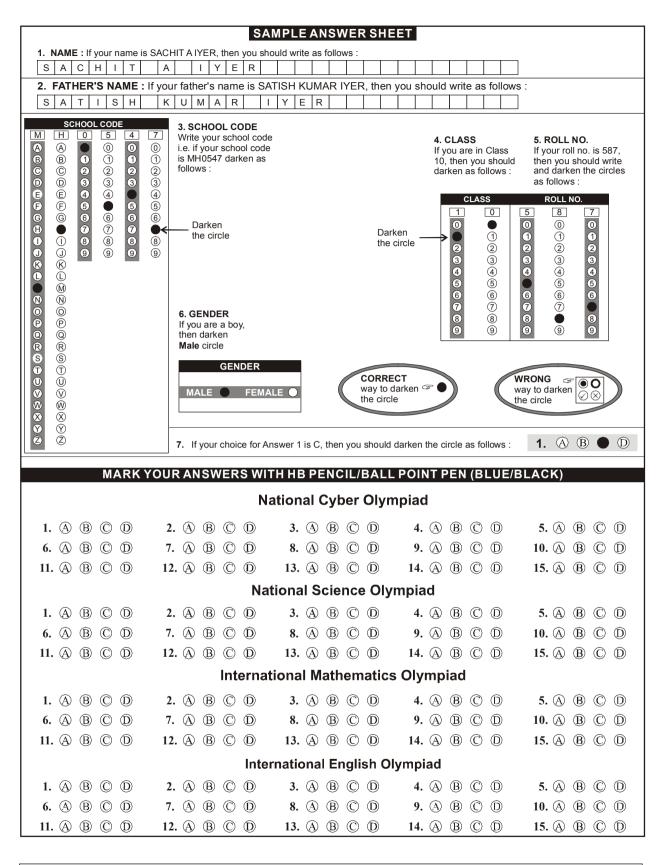
Direction (Q. No. 1 and 2): Choose one suitable word for each blank.

- Someone who interprets is
 - (A) An interpretist
- (B) An interpreter
- (C) An interprecian
- (D) An interpretor
- 2. Many diamond mines are in South Africa.
 - (A) Situation
- (B) Situate
- (C) Situated
- (D) Situating

- Choose the odd one out.
 - (A) Disappear
- (B) Dissolve
- (C) Dissatisfy
- (D) Disallow

- Find the correct phrase.
 - (A) Slow and study
- (B) Slow and steady (C) Slow and fast
- (D) Slow and heady
- All children did well in the marathon but Rahul was
 - (A) The faster
- (B) Fast
- (C) Fastest
- (D) The fastest

6.		rt and mark it in your a told me, Sir," / <u>Watsor</u> (B)			(D)	
7.	Complete the conver Ravi: Did you invite h Rahul: Well! Being in (A) However			l. inviting oneself i Compared to		
8.	In which sentence is (A) This watermelor (C) It's very slippery	y to.	(B)	Hold it with to Well, hand it to		
"Th One who sav clos got scu		I): Read the passage worse off than you." The bits of Jim Corbett we hey saw a single anime is stampeding about any rown themselves rather lake, a troop of frogs into the water. "Truly", omeone worse off than own themselves because	e and re so that append in the frighter said controls appendix to the frighter said controls app	terrorized by the opposite them, off quite a panic all to live in a continuened in their turn one of the rabbits	other animals, t they used to ru the rabbits scut ual state of fear by the approac s, "things are no	hey did not know n. One day, they tled off to a lake . But just as they ch of the rabbits, of so bad as they
	(A) They were scare (C) They were chasir			They did not like They had nowher		ar.
10.	Rabbits ran away from (A) They wanted to d (C) They were scare		(B)	They were shy. They were arrog	ant.	
11.	Which of the following of wild horses? (A) Frightened	g words would you use (B) Unfriendly		scribe the feeling Worried	of the rabbits or (D) Hostile	seeing the troop
		SPOKEN AND W	/RITT	EN EXPRESSIO	N	
	ection (Q. No. 12 an Dimpy : Shahid is alv Radha :					cher?
	(A) Don't. Talk to Sh(C) Write him a lette			I think you shou Don't let him ye		
13.	Manasa : I hear that		w sch	ool.		
	Minu: Oh, you heard (A) I should have told (C) I'm happy I did n	d you earlier.		 I'm sure you are Why are you as		
	(A) That's why he de		d creater	ted to have a hap re, given in abun	ppy life.	
	(C) Earth could have (D) Therefore, he cre	them in abundance.				
15.	(A) They regarded al(B) These plants give(C) They lend beauty	nodern man often work I flora and fauna as sa e us food and oxygen. to our surroundings. rifice themselves to se	s to 'd	conquer' Nature,		worshipped her.



ANSWERS

National Cyber Olympiad					National Science Olympiad						International Mathematics					International English							
1.	(A)	2.	(A)	3.	(B)	1.	(D)	2.	(D)	3.	(C)			Olyn	npiad					Oly	mpiac	i	
4.	(B)	5.	(C)	6.	·- (4.	(C)	5.	(D)	6.	(A)	1.	(D)	2.	(A)	3.	(D)	1.	(B)	2.	(C)	3.	(B)
7.	(D)	8.	(C)	9.	(C)	7.	(A)	8.	(D)	9.	(A)	4.	(C)	5.	(D)	6.	(B)	4.	(B)	5.	(D)	6.	(C)
10	. (C)	11.	(D)	12.	(D)	10.	(A)	11.	(A)	12.	(C)	7.	(C)	8.	(D)	9.	(A)	7.	(B)	8.	(D)	9.	(B)
13	. (D)	14.	(C)	15.	(B)	13.	(C)		(B)		(A)	10.	(B)	11.	(D)	12.	(A)	10.	(C)	11.	(A)	12.	(A)
1	(-)		(-)		(-)		(3)		(-)		(- 1)	13.	(B)	14.	(D)	15.	(D)	13.	(A)	14.	(A)	15.	(A)