EDUHEAL FOUNDATION

EDUHEAL FOUNDATION CONDUCTS 8 OLYMPIADS ANNUALLY REACHING OUT TO 3,500 + SCHOOLS
● 5 LAKH + STUDENTS ● 50,000 TEACHERS AND HAVING 500 RESOURCE PERSONS
IN ENGLISH / MATHS / SCIENCE / BIOTECH / COMPUTER / G.K. / ARTS / CRICKET / FINANCE & 300 REGIONAL COORDINATORS.

WEBSITE : WWW.EDUHEALFOUNDATION.ORG ● E-MAIL : INFO@EDUHEALFOUNDATION.ORG

ICO	NISO	NIMO	NBTO	IEO	IGO	BIFO	NIPO
INTERNATIONAL CYBER OLYMPIAD	NATIONAL INTERACTIVE SCIENCE OLYMPIAD	NATIONAL INTERACTIVE MATHS OLYMPIAD	NATIONAL BIOTECHNOLOGY OLYMPIAD	INTERNATIONAL ENGLISH OLYMPIAD	INTERNATIONAL G.K. OLYMPIAD	BSE INTERNATIONAL FINANCE OLYMPIAD	NATIONAL IIT-PMT OLYMPIAD

Level - 1 : All Level-1 successful* participants will get certificate, apititude report and online subscription, and school toppers will be eligible for school hero medals.

Level - 2 : School toppers* will be selected for level-2-National level - online computer based interactive test held at exam centres all over India. Besides selection for level-3, winner will get merit certificate, medals, educational CDs, laptop, scholarship and other prizes. There is no level 2 in Art, G.K. and Biotech.

Level - 3 : Toppers will qualify# for level 3-International level-where you will compete with students globally. Get selected for EHFs International Olympiad training camp. Only Indian organization giving students exposure to global competitions. Represent India & win laurels. Guidance by top scientists. Prizes ranges from cash (millions of $), gadgets, foreign trips, publicity, fame, scholarships, Internships, conference participation and more. Level 3 is in Maths, Science & Cyber only.

* # See prospectus/website for details

EHF NATIONAL INTERACTIVE MATHS OLYMPIAD

N I M O

8 Class **A1 Paper Code**

L E V E L - 1

1. You are allowed additional 10 minutes to fill the required details in the **RESPONSE SHEET (OMR). STUDENTS OF CLASS 1 & 2 HAVE TO UNDERLINE** THE CORRECT ANSWER IN THE QUESTION PAPER ITSELF. THEY ARE NOT REQUIRED TO USE THE RESPONSE SHEET (OMR). THEY HAVE TO FILL THEIR NAME, ROLL NUMBER, CLASS, SCHOOL NAME IN THE SPACE PROVIDED IN THE QUESTION PAPER.
2. The question paper is made as per syllabus guidelines & pattern given in the information Booklet. The Question Paper for Classes 1 to 6 contains 25 Questions each to be answered in 40 minutes. The Question paper for classes 7 to 12 contains 50 Questions each to be answered in 60 minutes. All questions are compulsory. Further instructions are given in the instruction letter to the teacher.
3. Use the response sheet to mark your responses by darkening the required circle. The response sheet has to be returned to the foundation, duly filled in. THE STUDENT CAN RETAIN THE QUESTION PAPER EXCEPT FOR CLASSES 1 AND 2.

MENTAL ABILITY

1. Select the missing number
3, 6, 24, 30, 63, 72, ?, 132
(1) 80 (2) 120
(3) 72 (4) None of these

2. If in any code language CLERK is coded as AHYJA. How is JOB coded in that language?
(1) HKW (2) HKV
(3) HKU (4) None of these

3. If AJAY is written as 1117, then by the same code NAMA would be written as:
(1) 5114 (2) 5411
(3) 5141 (4) None of these

4. (48 - 12) ÷ 4 + 6 ÷ 2 × 3 = ?
(1) 12 (2) 14
(3) 18 (4) None of these

5. If × means ÷, - means ×, ÷ means + and + means, then (3 - 15 ÷ 19) × 8 + 6 = ?
(1) 8 (2) 4
(3) 2 (4) None of these

6. Kishan walks 10 km towards North. From there, he walks 6 km towards South. Then he walks 3 km towards East. How far and in which direction is he with reference to his starting point ?
(1) 5 km, North (2) 5 km, North-East
(3) 7 km, East (4) None of these

7. I am facing south. I turn 900 in the anti-clockwise direction and walk 30 m and then turing north, I walk 40 m and then turning west, I go 60 m. Then turning left, I walk 80 m. How far am I from the starting point?
(1) 30 m (2) 40 m
(3) 50 m (4) None of these

8. If P $ Q means P is the father of Q, P # Q means P is mother of Q, & P * Q means P is the sister of Q. Then how is Q related to N if N # L $ P * Q

(1) Grandson (2) Grand-daughter
(3) Nephew (4) Data inadequate

9. Hour is related to Second in the same way as Tertiary is related to:

(1) Ordinary (2) Secondary
(3) Primary (4) None of these

10. Choose one number which is similar to the number 192, 282, 372:

(1) 462 (2) 461
(3) 236 (4) None of these

MATHEMATICS

11. An elevator descends into a mine shaft at the rate of 5 metres per minutes, what will be its position after 1 hour?

(1) 200m (2) 300m
(3) 600m (4) None of these

12. On dividing a negative integer by other negative integer the quotient will be

(1) negative (2) positive
(3) can't say (4) None of these

13. The sum of 1–2+3–4+5–6+7–8.....19–20 is_____.

(1) 20 (2) –20
(3) –10 (4) None of these

14. Which set of numbers is ordered from greatest to least?

(1) $4.5 > \frac{-12}{40} > \frac{-5}{10}$

(2) $4.5 > \frac{-5}{10} > \frac{-12}{40}$

(3) $\frac{-12}{40} > \frac{-5}{10} > 4.5$

(4) None of these

15. Which set of numbers is ordered from least to greatest?

(1) $3 < -0.5 < -0.8$ (2) $-0.5 < -0.8 < 3$
(3) $-0.8 < -0.5 < 3$ (4) None of these

16. Which set of numbers is ordered from greatest to least?

(1) $\frac{8}{10} > -0.6 > -3\frac{20}{25}$

(2) $\frac{8}{10} > -3\frac{20}{25} > -0.6$

(3) $-0.6 > -3\frac{20}{25} > \frac{8}{10}$

(4) None of these

17. Multiply $\frac{343}{729}$ and $\frac{9}{7}$, express the result in exponential form

(1) $\left(\frac{9}{7}\right)^3$ (2) $\left(\frac{9}{7}\right)^2$

(3) $\left(\frac{7}{9}\right)^2$ (4) None of these

18. Third power of (1/3) x fourth power of 3 is equal to

(1) 1/8 (2) 3
(3) $(1/3)^6$ (4) None of these

19. In power notation $\frac{243}{32}$ can be expressed as

(1) $\left(\frac{3}{4}\right)^2$ (2) $\left(\frac{3}{4}\right)^4$

(3) $\left(\frac{3}{2}\right)^5$ (4) None of these

20. Which of the following is a solution of the quadratic equation?

$2x^2 + x - 6 = 0$

(1) $x = 2$ (2) $x = -2$
(3) $x = -3/2$ (4) None of these

21. The value of K for which x = -2 is a root of the quadratic equation $kx^2 + x - 6 = 0$

(1) –1 (2) –2
(3) 2 (4) None of these

22. The expression for sum of numbers a and b subtracted from their product is

(1) a + b – ab (2) ab – a +b

(3) ab – (a + b) (4) None of these

23. The sum of mn + 5 – 2 and mn + 3 is

(1) 2mn + 3 (2) 6

(3) 2mn + 6 (4) None of these

24. Which is the statement for the expression 3 mn + 5 ?

(1) 5 more than 1/3 of product of m& n

(2) 5 times the product of 3 and mn

(3) 5 more than 3 times the product of the numbers m and n

(4) None of these

25. The constant term in the expression $1+x^2+x$ is

(1) 1 (2) 2

(3) x (4) x^2

26. The coefficient of y^3 in the expression → $y - y^3 + y^2$ is

(1) 1 (2) y

(3) –1 (4) None of these

27. In Janpath Market, the cost of a packet of coffee is `240. One shop keeper advertises coffee at 1/5 off and another shopkeeper offers 1/10 off. What is the difference in the price at which it is sold?

(1) 2nd, `27 (2) 1st, `27

(3) 2nd, `24 (4) None of these

28. The teacher asked the students to read as much as possible of a particular book during the weekend. Balakrishnan read 1/2 of the book. Angela read 5/6 and Subhalakshmi read 2/3. Arrange them in order from the one who read the most to the least.

(1) Ananya, Subhalakshmi, Balakrishnan

(2) Ananya, Balakrishnana, Subhalakshmi

(3) Subhalakshmi, Balakrishnan, Ananya

(4) None of these

29. In a theatre, for a show, 1/2th audience were women. 1/3 of these women were school girls. If the total audience were 600 in number, how many were school girls?

(1) 100 (2) 200

(3) 300 (4) None of these

30. Chetna had 400 stamps in her collection 1/10 of them were Indian stamps of the remaining 1/3 of them were from Europe and 100 stamps were from Africa, the rest were from United States of America. How many American stamps were there?

(1) 120 (2) 140

(3) 150 (4) None of these

31. Out of 15,000 voters in a constituency, 60% voted. Find the percentage of voters who did not vote and how many actually did not vote?

(1) 40%, 5000 (2) 40%, 6000

(3) 30%, 5500 (4) None of these

32. In a city, 30% are females, 40% are males and remaining are children. What is the percentage of children?

(1) 25% (2) 30%

(3) 35% (4) None of these

33. What is the value of

10–1–6+21?

(1) 2 (2) 6

(3) 24 (4) None of these

34. The steepest part of any walding trail in craters of the Moon rises 9 yards vertically for every 50 yards travelled horizontally. If one particular part of the trail covers a horizontal disc of 25 yards how much of a vertical rise is covered?

(1) 4.5 yards (2) 9 yards

(3) 18 yards (4) None of these

35. $\overleftrightarrow{QS}$ and $\overleftrightarrow{TV}$ are parallel lines.

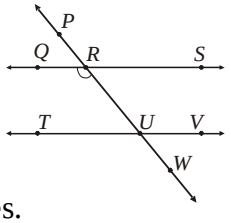
Which angles are corresponding angles?

(1) ∠QRU and ∠SRP

(2) ∠QRU and ∠TUR

(3) ∠QRU and ∠TUW

(4) None of these



36. $\overleftrightarrow{QS}$ and $\overleftrightarrow{TV}$ are parallel lines.

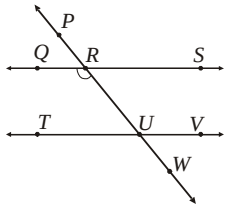
Which angles are supplementary angles?

(1) ∠TUW and ∠TUR

(2) ∠TUW and ∠VUR

(3) ∠TUW and ∠QRU

(4) None of these



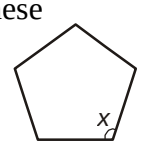
37. Beena and Ravi walked away from the same place Beena walked 200 feet east then 45 feet west. Ravi walked 12 feet west. Which expression represents the distance in feet between Beena and Ravi?

(1) 200–45 + 12 (2) 20 + 45 + 12
(3) –200–45 + 12 (4) None of these

38. A quadrilateral which has 2 pairs of equal adjacent sides but unequal opposite sides is called

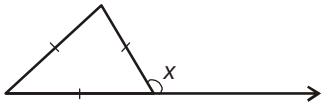
(1) Parallelogram (2) Rhombus
(3) Kite (4) None of these

39. The value of x in the following figure is



(1) 100° (2) 90°
(3) 108° (4) None of these

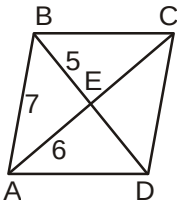
40. The value of x in the following figure is



(1) 100°
(2) 90°
(3) 120°
(4) None of these

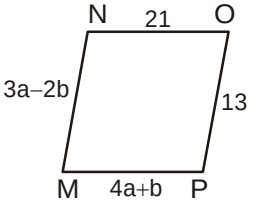
INTERACTIVE SECTION

41. If ABCD is a parallelogram, what is the length of segment BD?



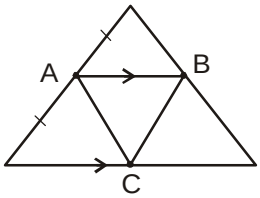
(1) 10 units
(2) 11 units
(3) 12 units
(4) None of these

42. What values of a and b make quadrilateral MNOP a parallelogram?



(1) a = 1, b = 5
(2) a = 5, b = 1
(3) a = $\frac{11}{7}$, b = $\frac{34}{7}$
(4) None of these

43. Which of the following points pictured must be a midpoint?



(1) A and C
(2) B and C
(3) A and B
(4) None of these

The marks (out of 100) obtained by a group of students in a science test are 85, 76, 90, 85, 39, 48, 56, 56, 95, 81 and 75.

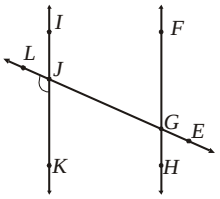
44. Highest marks

(1) 85 (2) 95
(3) 90 (4) None of these

45. Lowest marks

(1) 35 (2) 34
(3) 39 (4) None of these

46. $\overleftrightarrow{FH}$ and $\overleftrightarrow{IK}$ are parallel lines
Which angles are corresponding angles?

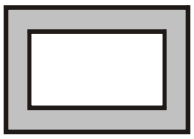


(1) ∠KJL and ∠HGE
(2) ∠KJL and ∠IJL
(3) ∠KJL and ∠HGJ
(4) None of these

47. In figure, the area of rectangular sheet is 50cm^2 and the area of circle inside the sheet is 15cm^2 cut from the sheet then the area of remaining sheet will be:

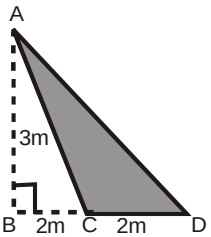
(1) 35 cm^2 (2) 65 cm^2
(3) 65 cm (4) None of these

48. In figure, the area of larger rectangle is 1750 m^2 and the area of smaller rectangle is 1350 m^2, then the area of the shaded region is



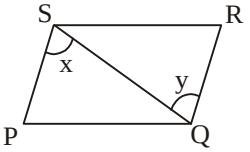
(1) 3100 m^2 (2) 400 m^2
(3) 750 m^2 (4) None of these

49. What is the shaded area?



(1) 3 cm^2
(2) 6 cm^2
(3) 9 cm^2
(4) None of these

50. $PQRS$ is a parallelogram as shown. Then the angles x and y are related as



(1) $x = y$
(2) $x < y$
(3) $x > y$
(4) None of these

END OF THE EXAM