

# INTERNATIONAL TALENT HUNT OLYMPIAD **2014**



**iTHO**

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FOR SUPREMACY IN SCIENCE & MATHEMATICS

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Class 8th

Syllabus & Sample Questions

Crop Production and Management, Microorganisms, Synthetic Fibres and Plastics, Metals and Non-metals, Coal and Petroleum, Combustion and Flame, Conservation of Plants, Cell - Structure and Functions, Reproduction in Animals, Reaching the Age of Adolescence, Force and Pressure, Friction, Sound, Chemical Effects of Electric current, Natural Phenomena, Light, Stars and the Solar System, Pollution, Rational Numbers, Linear Equations in One variable, Quadrilaterals, Practical Geometry, Data Handling, Squares and Square Roots, Cubes and Cube Roots, Algebraic Expressions, Visualising Solid Shapes, Mensuration, Exponents and Powers, Direct and Inverse Proportion, Factorisation, Introduction to Graphs, Analogy, Blood relation, Classification, Coding Decoding, Direction Test, Letter Series, Mixed series, Non verbal & Number series.

*The actual question paper contains 40 questions. The duration of the test paper is 60 minutes.*

1. We tends to fall backward when a car suddenly starts moving. Which phenomenon is responsible for this?

- (A)  Momentum  
(B)  Inertia  
(C)  Gravity  
(D)  Third law of motion  
(E)  None of these

2. Which one of the following has the highest calorific value?

- (A)  Peat  
(B)  Lignite  
(C)  Anthracite  
(D)  Bituminous  
(E)  None of these

3. Find the weight of an object whose volume is  $45\text{m}^3$  and density is  $2.4\text{ gm/m}^3$ .

- (A)  0.108 kg      (B)  1.1 kg  
(C)  2.4 kg      (D)  2.2 kg  
(E)  None of these

4. The earth's atmosphere is layered according to the availability of gases, temperature and altitude. Which one of the following layers is found between the thermosphere and stratosphere?

- (A)  Troposphere      (B)  Exosphere  
(C)  Mesosphere      (D)  All of these  
(E)  None of these

5. Arrange the following in correct order:

- (1) Manuring      (2) Sowing  
(3) Irrigation      (4) Harvesting  
(A)  2 → 1 → 3 → 4  
(B)  1 → 2 → 3 → 4  
(C)  2 → 3 → 4 → 1  
(D)  3 → 1 → 2 → 4  
(E)  None of these

6. Find the multiplicative inverse of  $\left(7 \times \frac{1}{12}\right)^{-1}$

- (A)   $7^{-1} \times 12^{-1}$       (B)   $7 \times 12^{-1}$   
(C)   $7^{-1} \times 12$       (D)  All of these  
(E)  None of these

7. Find the solution of the equation

$$\frac{6m + 7}{3m + 2} = \frac{4m + 5}{2m + 3}$$

- (A)   $-\frac{11}{9}$       (B)   $\frac{11}{9}$   
 (C)   $\frac{9}{11}$       (D)   $-\frac{9}{11}$   
 (E) None of these

8. Robert can finish the writing of a book in 8 days while James can finish the same work in 10 days. If they work together then how long they will take to finish the same work?

- (A)   $10\frac{1}{2}$  days      (B)   $6\frac{2}{3}$  days  
 (C)   $\frac{4}{9}$  days      (D)   $4\frac{4}{9}$  days  
 (E)  None of these

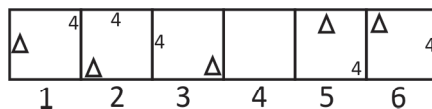
9. A monkey jumps 5 m every second on a 60 m vertical pole and then falls down 2 m over the next second. How many seconds will it take to climb on the pole?

- (A)  12 sec      (B)  39 sec  
 (C)  40 sec      (D)  30 sec  
 (E)  None of these

10. Find the smallest number by which 12800 must be multiplied so that it becomes a perfect cube.

- (A)  4      (B)  5  
 (C)  8      (D)  12  
 (E)  None of these

11. Replace the blank box with suitable option.



- (A)
- (B)
- (C)
- (D)
- (E)  None of these

12. Select the correct option to replace the question mark (?).

61 16 54 45 ? 81

- (A)  38      (B)  18  
 (C)  16      (D)  15  
 (E)  None of these

## Answers

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