



Sample Paper

Class 8 (Pre-Foundation)

Duration: 2.5 Hrs

Maximum Marks: 300

For Students Presently in Class 7<sup>th</sup> (Stream: Pre-Foundation)

**PAPER SCHEME:**

- The paper contains **50 Objective Type Questions** divided into three sections: **Section - I, Section - II and Section - III.**
- **Section I** contains **5 Multiple Choice Questions (1-5)** based on **Mental Aptitude**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE** is correct.
- **Section II** contains **15 Multiple Choice Questions (6-20)** based on **Science**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE** is correct.
- **Section III** contains **30 Multiple Choice Questions (21-50)** based on **Mathematics**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE** is correct.

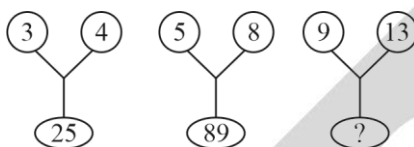
**MARKING SCHEME:**

- **Section I, II & III** : For each question, **6 marks** will be awarded for correct answer and **-1 negative marking** for incorrect answer.

**SUGGESTIONS:**

- Before starting the paper, spend 2-3 minutes to check whether all the pages are in order and report any issue to the invigilator immediately.
  - Try to attempt the Sections in their respective order.
- Do not get stuck on a particular question for more than 3-4 minutes. Move on to a new question as there are 50 questions to solve.

**SECTION - I [MENTAL APTITUDE]**

- In a certain code, if BETTER is coded as 527729, and BUT as 537, How is BUTTER coded in that code?  
(A) 357729 (B) 537729 (C) 357792 (D) 537792
- If + means  $\div$ ,  $\times$  means  $-$ ,  $\div$  means  $\times$  and  $-$  means  $+$ , then  $8 + 6 \times 4 / 3 - 4$  equals:  
(A)  $-2$  (B)  $-20/3$  (C) 4 (D)  $-4$
- Vishal, Priyatham, Raghu, Karthik and Veeru are five friends. Vishal is twice as old as priyatham. Raghu is half age of Priyatham. Vishal is half the age of Veeru and Raghu is twice the age of Karthik. Who is the youngest?  
(A) Veeru (B) Karthik (C) Vishal (D) Raghu
- Pointing towards a woman in a photograph, Vijay said, "She is the daughter of the father of the sister of my brother". How is the lady in photograph related to Vijay?  
(A) Daughter (B) Wife (C) Mother (D) None of these
- 

What term will come in place of question mark (?)  
(A) 144 (B) 169 (C) 210 (D) 250



**SECTION - II [SCIENCE]**

- Which solution is used to test the starch?  
(A) Chlorine Solution (B) Iodine solution  
(C) Both of these (D) None of these
- Rhizopus is a:  
(A) Autotroph (B) Heterotroph (C) Saprophyte (D) None of these
- What mode of nutrition is followed when an organism makes its food from carbon dioxide and water present in the surrounding?  
(A) Heterotrophic nutrition (B) Saprotrophic nutrition  
(C) Autotrophic nutrition (D) Holozoic nutrition
- Which of the following best describes the characteristic of materials when it becomes warm?  
(A) Contract (B) Vaporize (C) Float (D) Expand
- If you place your hand underneath but not touching a kettle of hot water. You mainly feel the presence of heat from:  
(A) Conduction (B) Convection (C) Radiation (D) Evaporation

11. Which of the following is an example of heat transfer by **convection** in nature?
- (A) Heat from the Sun reaching the Earth  
(B) Heating of water in a pot  
(C) Warm air rising and cool air sinking in the atmosphere  
(D) A metal rod getting hot from one end to another
12. What is required for electric current to flow in a circuit?
- (A) A switch only (B) A battery only  
(C) A closed path with a battery & wires (D) A bulb only
13. A Uniform Motion takes place in:
- (A) Curved Path (B) Straight Path (C) Circular Path (D) Both A and B
14. Two bodies moving with same speed but in different directions will have:
- (A) Same velocities (B) Different speed  
(C) Same displacement (D) Different velocities
15. A Chemical reaction is given below:  
 $4\text{NH}_3(\text{g}) + 5\text{O}_2(\text{g}) \rightarrow 4\text{NO}(\text{g}) + 6\text{H}_2\text{O}(\text{g})$
1. Displacement reaction                      2. Combination reaction  
3. Redox reaction                                4. Neutralisation reaction
- (A) 1 and 2                      (B) 2 and 4                      (C) 1 and 3                      (D) 3 and 4
16. 3 beakers A, B and C are taken each containing 20 mL of water. A small amount of NaOH, anhydrous  $\text{CuSO}_4$  and NaCl were added to the beakers A, B and C respectively. On Observing, there was an increase in the temperature of the solutions contained in A and B, whereas in C, the temperature of the solution falls. Which one of the following statement(s) is (are) correct?
1. Exothermic process has occurred in beakers A and B  
2. Endothermic process has occurred in beakers A and B  
3. Exothermic process has occurred in beaker C  
4. Endothermic process has occurred in beaker C
- (A) Only 1                      (B) 1 and 4                      (C) Only 2                      (D) 2 and 3
17. The ratio of hydrogen and Oxygen in water, by mass is:
- (A) 1 : 8                      (B) 2 : 1                      (C) 1 : 2                      (D) 1 : 1
18. Which of the following materials is a good conductor of electricity?
- (A) Rubber                      (B) Plastic                      (C) Copper                      (D) Wood
19. Which of the following materials allows light to pass through completely?
- (A) Wood                      (B) Frosted glass                      (C) Clear glass                      (D) Cardboard
20. Which organ in human body does not secrete digestive juices:
- (A) Large Intestine                      (B) Stomach  
(C) Small Intestine                      (D) Oesophagus

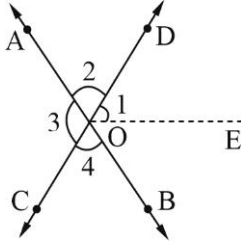
**SECTION - III [MATHEMATICS]**

21. The set of negative numbers and whole numbers is called?
- (A) Natural numbers                      (B) Integers  
(C) Composite numbers                      (D) Prime numbers

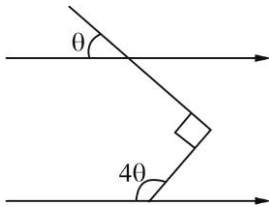
22. Which of the following statements is FALSE?  
 (A) 2 and  $-2$  are additive inverse  
 (B) The product of two odd numbers is always an even number  
 (C) The product of two even numbers is always an even number  
 (D) None of the above
23. The sum of 3 odd numbers and 4 even numbers is:  
 (A) Even (B) Odd (C) Can't say (D) 0
24. On the number line, how many steps will you move when move from  $-3$  to  $+3$ .  
 (A) 3 (B) 6 (C) 7 (D) 4
25. **Statement p** : when 2 positive integers and a negative integer are added we always get a positive integer.  
**Statement q** : when two negative integers and 1 positive integer are added, we always get a negative integer, then.  
 (A) Both p and q are true (B) p is true and q is false  
 (C) p is false, and q is true (D) Both p and q are false
26. Simplify :  $\left[ 15 \div 3 + 10 \{ 60 - 8 \div 4 + 3 (5 \text{ of } 3 - 7) \} \right]$   
 (A)  $-20$  (B)  $-15$  (C) 12 (D) 16
27.  $-(-9) - (-6) = ?$   
 (A)  $-15$  (B)  $-3$  (C) 3 (D) None of these
28.  $0 \div (-4) = ?$   
 (A)  $-4$  (B) 0 (C) Not defined (D) 4
29. The value of  $3$  and  $2$  third  $\times 2$  and  $1$  fourth  $\div 11$  is:  
 (A)  $\frac{2}{3}$  (B)  $\frac{3}{4}$  (C)  $\frac{1}{3}$  (D)  $\frac{1}{4}$
30. Given that  $a/b = c/d$ , then which of the statements is true?  
 (A)  $a/c = b/d$  (B)  $ad = bc$  (C)  $ac = bd$  (D) All except C
31. How many more parts should be shaded in the figure B to make it represent the same fraction as the unshaded part of the figure A?  
  
 Figure A  
  
 Figure B  
 (A) 4 (B) 5 (C) 10 (D) 8
32. India won 6 games, lost 4 and drawn 2. What fraction of the games did India not lose?  
 (A)  $\frac{1}{2}$  (B)  $\frac{1}{3}$  (C)  $\frac{2}{3}$  (D)  $\frac{1}{6}$
33. Ravi reads  $\frac{4}{5}$  of a book. He finds that there are still 100 pages left to be read. What is the total number of pages he had read in the book?  
 (A) 100 (B) 500 (C) 300 (D) 400

34. Which of the following statements is true?  
 (A) Fractions with the same numerator are called unlike fractions  
 (B) Fractions with the same denominator are called like fractions  
 (C) Difference of two like fractions = difference of numerators/common denominator  
 (D) Both B and C

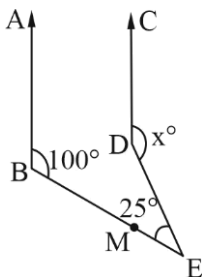
35. In the figure below  $OE$  is the bisector of  $\angle BOD$ . If  $\angle 1 = 70^\circ$ , then find the sum of Angles 2, 3 & 4.



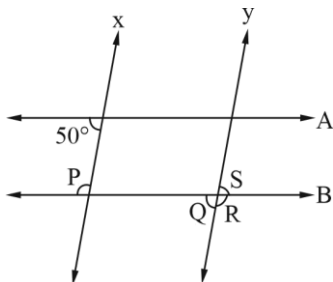
- (A) 190                      (B) 220                      (C) 240                      (D) 260
36. If an angle is five times to its complementary angle, then find the supplementary angle of that angle:  
 (A)  $15^\circ$                       (B)  $75^\circ$                       (C)  $105^\circ$                       (D)  $30^\circ$
37. Find the value of  $2\theta$  in the figure:



- (A) 30                      (B) 60                      (C) 45                      (D) 75
38. In the figure given below:  $AB \parallel CD$ ,  $\angle ABE = 100^\circ$ ,  $\angle DEM = 25^\circ$ . Find  $\angle CDE$ .

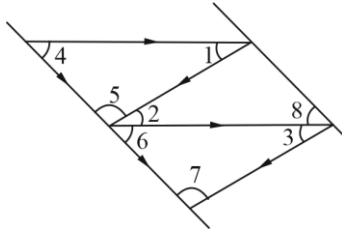


- (A) 55                      (B) 105                      (C) 125                      (D) 155
39. Line  $x \parallel y$ ,  $A \parallel B$ , then find  $P + Q + R - S$ .



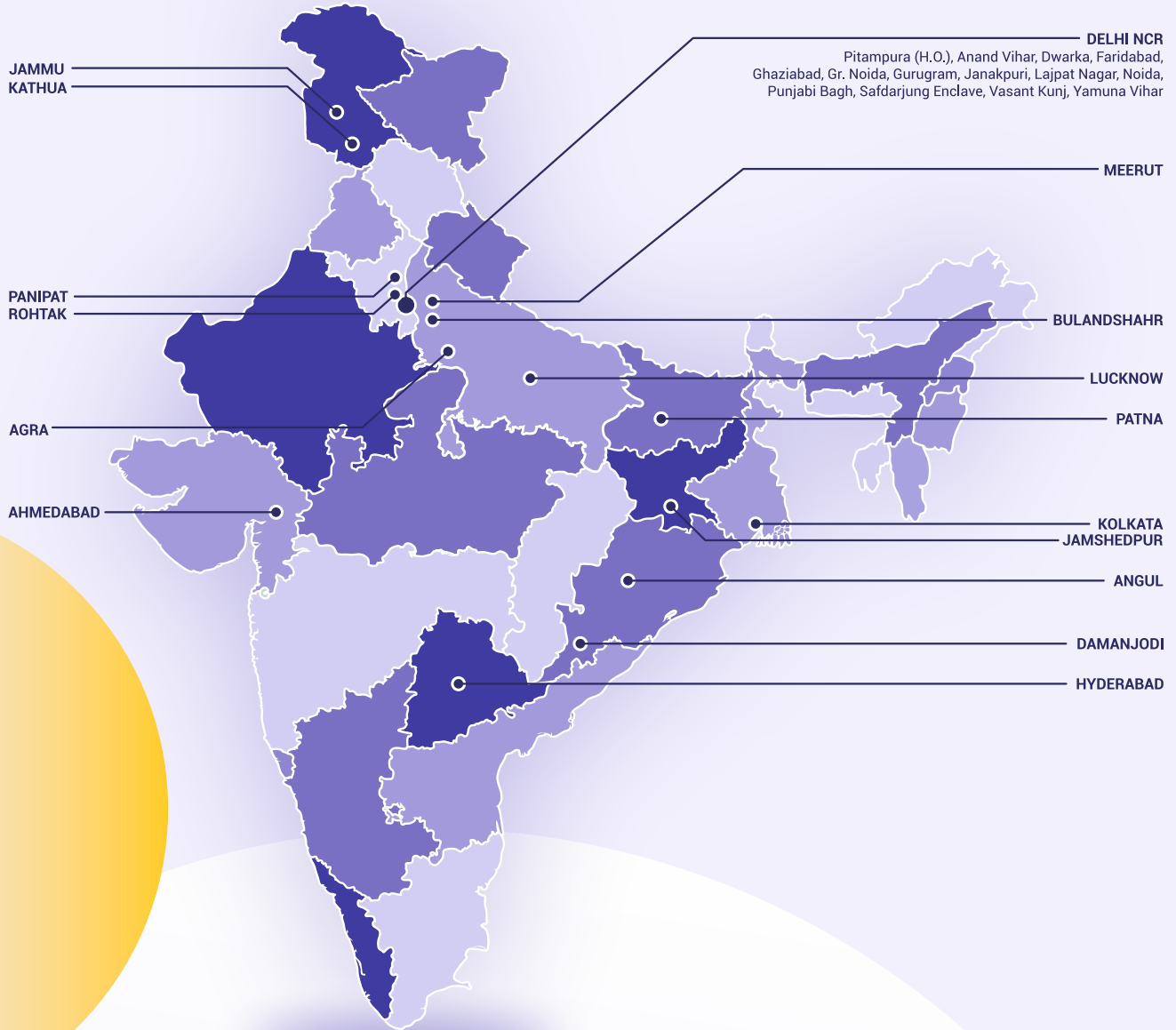
- (A)  $360^\circ$                       (B)  $330^\circ$                       (C)  $260^\circ$                       (D)  $130^\circ$

40. Which of the following options is/are INCORRECT?



- (A)  $\angle 1 = \angle 3 = 90$  (B)  $\angle 1 + \angle 4 + \angle 5 = 180$   
 (C)  $\angle 1 + \angle 6 = 180$  (D) Both A and C
41.  $ABC$  is an isosceles triangle with  $AB = BC$  and  $BD$  is altitude, then:  
 (A)  $\angle B = \angle C$  (B)  $\angle A = \angle C$  (C)  $\angle B = \angle A$  (D) None of these
42. In a triangle, the sum of any two sides must be:  
 (A) Less than the third side (B) Equal to the third side  
 (C) Greater than the third side (D) Perpendicular to the third side
43. The product of  $\frac{4p}{3} - 5$  and  $\frac{5p}{4} - 4$ .  
 (A)  $\frac{5p^2}{3} - 139\frac{p}{12} + 20$  (B)  $\frac{5p^2}{3} - 139\frac{p}{12} - 20$   
 (C)  $\frac{5p^2}{3} + 139\frac{p}{12} - 20$  (D)  $\frac{5p^2}{3} + 139\frac{p}{12} + 20$
44. The expression  $5p^2q - 20pq$  when subtracted from  $4p^2q - 16pq$  becomes:  
 (A)  $p^2q - 4pq$  (B)  $-p^2q - 4pq$  (C)  $-p^2q + 4pq$  (D)  $p^2q + 4pq$
45. If  $x + \frac{1}{x} = 14$  and  $x^2 - \frac{1}{x^2} = 84$ , then the value of  $x - \frac{1}{x}$  is:  
 (A) 12 (B) 13 (C) 17 (D) None of these
46. Which of the expression represents 2 less than  $x$  is equal to  $y$  less than 3?  
 (A)  $x - 2 = 3 - y$  (B)  $2 - x = 3 - y$  (C)  $x + 2 = y + 3$  (D)  $x + 3 = y + 2$
47. If  $x^2 - 2x + 1 = 0$ , then find  $x^2 + \frac{1}{x^2} = ?$  (Where  $x$  is a natural number)  
 (A) 2 (B) 0 (C) -2 (D) 1
48. Subtract  $(2a - 3b + 4c)$  from the sum of  $(a + 3b - 4c)$ ,  $(4a - b + 9c)$  and  $(-2b + 3c - a)$ .  
 (A)  $3a + 2b - 4c$  (B)  $2a - 2b + 4c$  (C)  $5a + 4b - 2c$  (D)  $2a + 3b + 4c$
49. The age of  $R$  is 2 yrs more than  $\frac{1}{2}$  the age of  $B$ . Then it can be represented by:  
 (A)  $R = B + 4$  (B)  $R = 2B + 4$  (C)  $2R = B + 4$  (D)  $R = \frac{1}{2} B - 2$
50. Ravi spends Rs.  $x$  daily and saves Rs.  $2y$  per week. What is his income in 3 weeks?  
 (A) Rs.  $(21x + 6y)$  (B) Rs.  $(3x + 9y)$  (C) Rs.  $(21x + 3y)$  (D) Rs.  $(7x + 3y)$

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