VMC Vidyamandir Classes SINCE 1986

IIT JEE | MEDICAL | FOUNDATION

Sample Paper	Class 8 (Pre-Foundation)

Duration: 2 Hrs **Maximum Marks: 200**

For Students Presently in Class 7 (Stream: Pre-Foundation)

PAPER SCHEME:

- The paper contains **40 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 **20 Multiple Choice Questions (21-40)** 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, **5 marks** will be awarded for correct answer and **–1 negative marking** for incorrect answer.

SECTION - I [MENTAL APTITUDE]

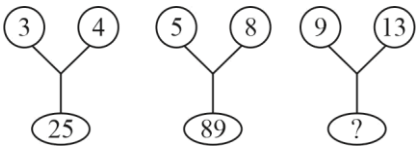
1. In a certain code, if BETTER is coded as 527729 and BUT as 537, How is BUTTER coded in that code?
(A) 357729 **(B)** 537729 **(C)** 357792 **(D)** 537792

2. If + means /, × means –, / means × and – means +, then 8 + 6 × 4 / 3 – 4 equals:
(A) –2 **(B)** –20/3 **(C)** 4 **(D)** –4

3. 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

4. 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

5.



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

SECTION - II [SCIENCE]

6. Which solution is used to test the starch?
(A) Chlorine Solution **(B)** Iodine solution
(C) Both of these **(D)** None of these

7. Rhizopus is a:
(A) Autotroph **(B)** Heterotroph **(C)** Saprophyte **(D)** None of these

8. 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

9. Which of the following best describes the characteristic of materials when it becomes warm?
(A) Contract **(B)** Vaporize **(C)** Float **(D)** Expand

10. 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:

$$4NH_3(g) + 5O_2(g) \rightarrow 4NO(g) + 6H_2O(g)$$

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 $CuSO_4$ 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. The sum of 3 odd numbers and 4 even numbers is:

(A) Even **(B)** Odd **(C)** Can't say **(D)** 0

23. **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

24. Simplify : $\left[15 \div 3 + 10\{60 - 8 \div 4 + 3\,(5 \text{ of } \overline{3 - 7})\}\right]$

(A) –20 **(B)** –15 **(C)** 12 **(D)** 16

25. The value of 3 and 2 third × 2 and 1 fourth ÷ 11 is:

(A) $\frac{2}{3}$ **(B)** $\frac{3}{4}$ **(C)** $\frac{1}{3}$ **(D)** $\frac{1}{4}$

26. 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

27. 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

28. Which of the following statements is true?

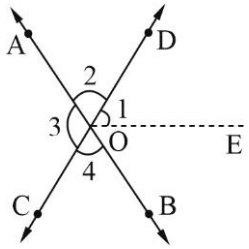
(A) Fractions with the same numerator are called unlike fractions

(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

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

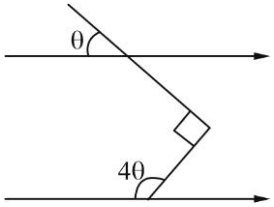


(A) 190 **(B)** 220
(C) 240 **(D)** 260

30. If an angle is five times to its complementary angle, then find the supplementary angle of that angle:

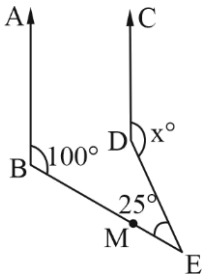
(A) 15° **(B)** 75° **(C)** 105° **(D)** 30°

31. Find the value of 2θ in the figure:



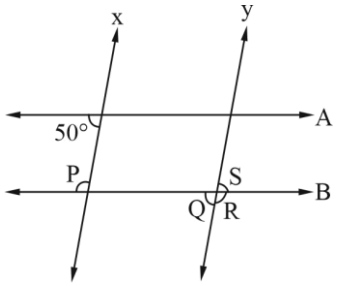
(A) 30 **(B)** 60 **(C)** 45 **(D)** 75

32. In the figure given below: $AB \parallel CD$, $\angle ABE = 100°$, $\angle DEM = 25°$. Find $\angle CDE$.



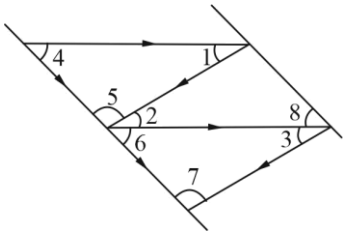
(A) 55 **(B)** 105 **(C)** 125 **(D)** 155

33. Line $x \parallel y$, $A \parallel B$, then find $P + Q + R - S$.



(A) 360° **(B)** 330° **(C)** 260° **(D)** 130°

34. 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

35. 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

36. 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)** $\frac{5p^2}{3} + 139\frac{p}{12} + 20$

37. 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

38. 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

39. 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)** $2a + 3b + 4c$

40. 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. $(7x + 3y)$

End of Sample Paper | Class 8 (Pre-Foundation)