(Concept based)

1. Write the reciprocal of $(8/9)^{-2}$
(A) $(8/9)^2$ (B) $(8/9)^{-2}$ (C) $(8/9)^2$ (D) $(8/9)^{-2}$

2. Divide $(17/14)$ by $(-17/8)$.
(A) -4/7   (B) 4/7   (C) 289/112   (D) -289/112

3. Convert 0.000671 in standard form.
(A) 67.1×10^5 (B) 6.71×10^{-5} (C) 67.1×10^4 (D) 6.71×10^{-4}

4. Find the value of x: $(3 \div 4)^{2x} \times (21 \div 28)^x = (36 \div 48)^6$
(A) 2   (B) 5   (C) 8   (D) 8

5. If one of the numbers Pythagorean triplet is 8 then the other two numbers will be
(A) 6 and 10   (B) 10 and 12   (C) 4 and 6   (D) None of these

(Application based)

6. What number will come in place of question mark: $(\sqrt{8} \times \sqrt{8})^{1/2} + (9)^{1/2} = (?)^3 + \sqrt{8} - 340$
(A) 18   (B) 7   (C) 19   (D) 9

7. Mehul plants 15376 apple trees in his garden and arranges them so that there are as many rows as there are apple trees in each row. The number of rows is _____.
(A) 124   (B) 126   (C) 144   (D) 13

8. $(3/4)^{th}$ of a number is 20 more than half of the same number. The required number is _____.
(A) 50   (B) 80   (C) 90   (D) 180

9. In a school, $\frac{5}{8}$ of the total students are girls. If the number of girls is 120 more than that of the boys, what is the strength of the school?
(A) 640   (B) 575   (C) 280   (D) 480

10. A gold chain, when packed in a decorative gift box, weighs 481/6 grams. If the chain weighs $(26 + 7/12)$ grams, what is the weight of the box?

(A) $50\frac{7}{12}$ g   (B) $53\frac{7}{12}$ g   (C) $50\frac{5}{7}$ g   (D) $53\frac{5}{7}$ g

11. If $2^{n-1} + 2^{n+1} = 320$, then n is equal to _____.
(A) 7   (B) 6   (C) 5   (D) 8

12. If $x^{x3/2} = (x^{3/2})^x$, then the value of x is _____.
(A) 8/27   (B) 3/2   (C) 16/25   (D) 9/4

13. There are 86,400 seconds in a day. How many days long is a second? Express your answer in scientific notation upto 3 decimal places.
(A) 1.157×10^{-6} (B) 1.234×10^{-5} (C) 1.157×10^{-5} (D) 1.432×10^{-4}

14. One fruit salad requires ½ cup of sugar. Another recipe for the same fruit salad requires 2 tablespoons of sugar. If 1 tablespoon is equivalent to 1/16 cup, how much more sugar does the first recipe require?
(A) 4/5 cup   (B) 6/5 cup   (C) 3/8 cup   (D) 5/8 cup

15. The length and the breadth of a rectangular hall are (21+3/4) m and (11+1/4) m, respectively. How many square tiles are required to pave the floor of the hall if square tiles of side 3/4 m are used?
(A) 425 Tiles   (B) 535 Tiles   (C) 435 Tiles   (D) 525 Tiles

(Value based)

16. Rehman invested Rs. 10,000 for a business. After one year he noticed that his profit was 1/8 of his capital investment. He invested this profit also into his capital and decided to give away the next profit in charity. After the end of this year, he found that his profit was – 1/8 of his present capital. Find his profit at the end of this year.
(A) Rs. – 1406.25   (B) Rs. 1406.25   (C) Rs. 161.75   (D) Rs. –161.75

(Logical Reasoning)

17. One evening, two friends Riya and Priya were talking to each other, with their backs towards each other, sitting in a park. If Riya's shadow was exactly to the left of her, then which direction was Priya facing?
(A) North-East   (B) North   (C) East   (D) South

18. If DELHI is coded as 73541 and CALCUTTA as 82589662, how can CALICUT be coded?
(A) 5279431   (B) 5978213   (C) 8251896   (D) 85436916

19. How many meaningful English words can be formed with letters "ADIC" using each letter only once in each word?
(A) none   (B) one   (C) two   (D) More than three

20. Complete the series: B, D, F, I, L, P, ?
(A) T   (B) S   (C) R   (D) U