

## **SAMPLE PAPER 2 CLASS 04**

### **SECTION 01 LOGICAL REASONING**

1. Four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to that group?

- (A) QO2
- (B) PN2
- (C) TR2
- (D) HF2

Ans. A

Only option (A) has vowel.

2. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

AB, CD, EF, GH, ?

- (A) HJ
- (B) HK
- (C) IJ
- (D) JI

Ans. C

English Alphabet series Next two letters after H.

3. In the following question, select the missing number from the given series.

23, 11, 34, 45, 79, ?

(A) 121

(B) 124

(C) 163

(D) 169

Ans. B

$$23+11=34$$

$$11+34=45$$

$$34+45=79$$

$$45+79=124.$$

4. Which word will appear first when arranged in order of dictionary?

(A) Ankle

(B) Anger

(C) Antique

(D) Aster

Ans. C

Except Air all are fuel.

5. In the following question, select the odd word from the given alternatives.

(A) Petrol

(B) Coal

(C) Air

(D) Natural Gas

Ans. A    Anger, Ankle, Antique, Aster

6. Arrange the words given below in a meaningful sequence.

1. Post-box 2. Letter 3. Envelope 4. Delivery 5. Clearance

(A) 2, 3, 1, 4, 5

(B) 3, 2, 1, 4, 5

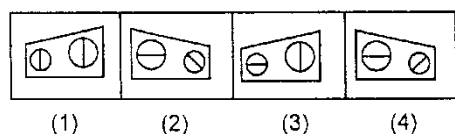
(C) 3, 2, 1, 5, 4

(D) 3, 2, 4, 5, 1

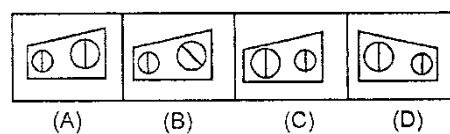
Ans. C

7. Directions two sets of figures pose the problem. The sets are called problem Figures and Answer Figures. Each problem figure changes in design from the preceding one. The answer figure set contains 4 figures marked A, B, C, D. You are required to choose the correct answer figure, which would best continue the series.

Problem Figures



Answer Figures



(A) A

(B) B

(C) C

(D) D

Ans. A

The bigger balls diameter is moving at  $90^\circ$  and smaller balls diameter is moving at  $45^\circ$ , simultaneously the face of the bigger figure is changing position.

8. Which answer figure will complete the pattern in the question figure?



(A)



(B)



(C)



(D)



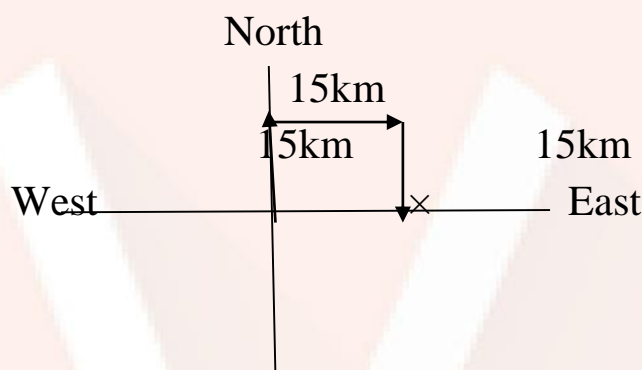
Ans. A



9. Suman walks 15 km towards north. She turns right and walks another 15 km. She turns right and walks another 15 km. In which direction is she from her starting point?

- (A) North
- (B) South
- (C) East
- (D) West

Ans. C



10. In a certain code language, "RUN" is written as "28" and "BUS" is written as "39". How is "GUN" written in that code language?

- (A) 37
- (B) 38
- (C) 39
- (D) 42

Ans. C Add the ranking of opposite letters of the word 'GUN'

$$\text{RUN} = 9 + 6 + 13 = 28$$

$$\text{BUS} = 25 + 6 + 8 = 39$$

$$\text{GUN} = 20 + 6 + 13 = 39$$

## SECTION 02 MATHEMATICAL REASONING

11. If  $1 + 3 + 5 + 7 + 9 + \dots + 99 = 2500$ , then  $3 + 5 + 7 + 9 + \dots + 101 =$

- (A) 2400
- (B) 2600
- (C) 2610
- (D) 2910

Ans. B

The second sum replaces 1 with 101, so the total is  $2500 + 100 = 2600$ .

12. Alfonse's high chair is 10 times as tall as his cat. His cat is 8 times as tall as his pet rat. His rat is 6 times as tall as his pet cricket. If his cricket is 4 mm tall, how tall is Alfonse's high chair?

- (A) 3840 mm
- (B) 240 mm
- (C) 720 mm
- (D) 1920 mm

Ans. D

Work backwards. Alfonse's rat is  $6 \times 4 = 24$  mm tall. His cat is  $8 \times 24 = 192$  mm tall. His high chair is  $10 \times 192 = 1920$  mm tall.

13. Ray runs every other day. If he ran for the first time last month on a Monday, then he ran for the tenth time last month on a

- (A) Wednesday
- (B) Thursday
- (C) Friday

(D) Monday

Ans. C

If Ray ran for the first time last month on a Monday, then he ran on Wed., Fri., Sun., Tues., Thurs., Sat., Mon., Wed., and Fri. The tenth day was a Friday.

14. How many of the whole numbers less than 100 are 10 greater than an odd whole number?

(A) 45

(B) 46

(C) 90

(D) 91

Ans. A

Add 10 to 1, 3, 5, 7, . . . , 87, and 89. None of these sums is more than 99. There are 45 such sums.

15. Which two fractions are equivalent?

(A)  $\frac{1}{3}$  and  $\frac{2}{4}$

(B)  $\frac{1}{2}$  and  $\frac{2}{4}$

(C)  $\frac{2}{4}$  and  $\frac{2}{6}$

(D)  $\frac{1}{2}$  and  $\frac{1}{4}$

Ans. B

$\frac{1}{2}$  and  $\frac{2}{4}$  are equivalent because if you multiply, the numerator and denominator of the fraction  $\frac{1}{2}$  by 2, you obtain  $\frac{2}{4}$ .

16. Deepak spent few minutes at drama rehearsal in the past 4 days.

Minutes spent rehearsing	
Day	Minutes
Tuesday	161
Wednesday	112
Thursday	164
Friday	146

On which day did Deepak rehearse the most?

- (A) Friday
- (B) Tuesday
- (C) Thursday
- (D) Wednesday

Ans. C

17. If the fractions  $N/6$  and  $2/3$  are equivalent, what is the value of  $N$ ?

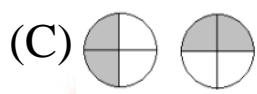
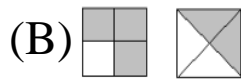
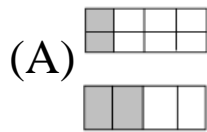
- (A) 2
- (B) 6
- (C) 5
- (D) 4

Ans. D

The denominator of  $2/3$  is 3 and the denominator of  $N/6$  is 6. We need to multiply 3 by 2 in order to obtain 6. Therefore we need to multiply the numerator 2 in  $2/3$  by 2 to obtain  $N$  and  $N = 2 \times 2 = 4$ .



18. Which of the following two figures have shaded parts that represent equivalent fractions?



(D) none of these

Ans .C)

Examining all figures, the only option (C) has equivalent shaded fractions. Each figure has a shaded part equal to  $\frac{1}{2}$ .

19. \_\_\_\_\_ thousands = 900 tens

(A) 9000

(B) 9

(C) 90

(D) None of these

Ans. B

20. Order from greatest to least the fractions  $\frac{1}{3}$ ,  $\frac{1}{6}$ ,  $\frac{1}{2}$ ,  $\frac{1}{7}$ .

(A)  $\frac{1}{2}, \frac{1}{3}, \frac{1}{6}, \frac{1}{7}$

(B)  $\frac{1}{3}, \frac{1}{2}, \frac{1}{7}, \frac{1}{6}$

(C)  $\frac{1}{6}, \frac{1}{3}, \frac{1}{2}, \frac{1}{7}$

(D)  $\frac{1}{7}, \frac{1}{6}, \frac{1}{2}, \frac{1}{3}$

Ans. A

Each of the above fractions is represented by 1 part of a whole and it is clear from the figure that  $\frac{1}{2}$  is the greatest, then  $\frac{1}{3}$ , then  $\frac{1}{6}$  and  $\frac{1}{7}$  is the smallest.



### SECTION03 EVERY DAY MATHEMATICS

21. Which number is smallest?

(A) 3,999

(B) 5,099

(C) 4,009

(D) 1,099

Ans. D

22. What value of the number N given below makes  $N/3 < 1/2$ ?

(A)  $N = 2$

(B)  $N = 4$

(C)  $N = 1$

(D)  $N = 3$

Ans. C

For  $N = 3$  the fraction  $N/3 = 3/3 = 1$  and is greater than  $1/2$ . For  $N = 2$ ,  $N/3 = 2/3$  is also greater than  $1/2$ . For  $N = 1$ ,  $N/3 = 1/3$  and is smaller than  $1/2$ . So for  $N = 1$ ,  $N/3 < 1/2$ .

23. The largest number formed by arranging the digits of 54, 291, 36 is

(A) 9136542

(B) 9654321

(C) 9654361

(D) None of these

Ans. B

24. Tanya scored 20 out of 25 on her math quiz. What percent did she score?

(A) 45

(B) 40

(C) 80

(D) 120

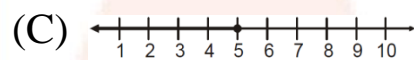
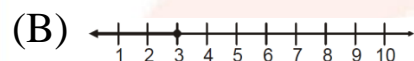
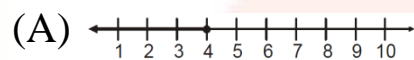
Ans. C

By dividing, we find the fraction  $\frac{20}{25}$  is equivalent to the decimal 0.80.

We convert this to a percent by multiplying by 100%.

Thus, Tanya scored  $0.80 \times 100\% = 80\%$  on her math quiz.

25. Which number line shows the number that are less than or equal to 4?



(D) None of these

Ans. A

26. The value of  $202 - 101 + 9$  is equal to

(A) 220

(B) 110

(C) 330

(D) 440

Ans. B

Evaluating,  $202 - 101 + 9 = 101 + 9 = 110$ :

27. Which of the following numbers is equal to 33 million?

(A) 3 30

(B) 330 000 000

(C) 33 000 00

(D) 33 000 000

Ans. D

Written numerically, the number 33 million is 33 000 000.

28. The largest fraction in the set  $\left\{\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{10}\right\}$  is

(A)  $\frac{1}{2}$

(B)  $\frac{1}{3}$

(C)  $\frac{1}{4}$

(D)  $\frac{1}{5}$

Ans. A

29. The digits 2, 4, 6 and 8 are each used once to create two 2-digit numbers. What is the largest possible difference between the two 2-digit numbers?

(A) 64

(B) 62

(C) 60

(D) 66

Ans. B

To make the difference as large as possible, we make one number as large as possible and the other number as small as possible.

The tens digit of a number contributes more to its value than its units digit.

Thus, we construct the largest possible number by choosing 8 (the largest digit) to be its tens digit, and by choosing 6 (the second largest digit) to be the ones digit. Similarly, we construct the smallest possible number by choosing 2 (the smallest digit) to be its tens digit, and 4 (the second smallest digit) to be its ones digit. The largest possible difference is  $86 - 24 = 62$ .

30. The smallest four digit number added with largest four digit number is

- (A) 10099
- (B) 10999
- (C) 19999
- (D) None of these

Ans. B

### **ACHIEVER SECTION**

31. Is  $9 \times 1$  even or odd?

- (A) Prime
- (B) even
- (C) Odd
- (D) None of these

Ans. C

32. The radius of a circle is half the length of the side of a square. The square's perimeter is equal to the diameter of the circle multiplied by

- (A) 6
- (B) 10
- (C) 8
- (D) 12

Ans. B

If a radius of a circle is half the length of a side of a square, a diameter is equal to the length of one side. The perimeter is 4 times the diameter.

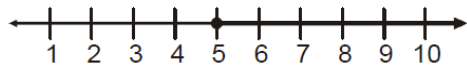
33. When each of the following is divided by 8, only \_\_\_\_\_ has a remainder that is a prime number.

- (A) 564
- (B) 642
- (C) 678
- (D) 318

Ans. C

The remainder upon division by 8 is shown next to each answer choice. Of the remainders shown, only 2 is a prime. (1 is not prime)

34. What does this number line show?



- (A) Greater than 7
- (B) Greater than 8
- (C) Greater than 4
- (D) Less than or equal to 3

Ans. C

35. My aunt can fold 16 paper cranes in 4 minutes. My uncle can fold 15 paper cranes in 5 minutes. How long would it take them to fold 42 cranes if they work together at those rates?

- (A) 6 minutes
- (B) 10 minutes
- (C) 12 minutes
- (D) 14 minutes

Ans. A

My aunt can fold 4 paper cranes in 1 minute. My uncle can fold 3 paper cranes in 1 minute. Together they fold 7 paper cranes in 1 minute. It takes them  $42 \div 7 = 6$  minutes to fold 42 paper cranes.