

MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.

2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACES IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. This Test Booklet contains **50** items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
5. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided, by using **BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.

SEAL

- (D) None of the above
3. Let p be a prime number. If p divides m^2 , where m is a positive integer then :
- (A) p does not divide m
 (B) mp is always an even number
 (C) p divides m
 (D) None of the above
4. $8\sqrt{15} \div 2\sqrt{3} =$
- (A) $3\sqrt{5}$
 (B) $4\sqrt{5}$
 (C) $4\sqrt{3}$
 (D) $4\sqrt{15}$
5. The value of $4725-2879$ by rounding each number to the nearest hundred is
- (A) 1900
 (B) 1846
7. If the HCF of 210 and 55 is expressible in the form $210 \times 5 + 55y$ then $y =$
- (A) 19
 (B) 5
 (C) 55
 (D) -19
8. In a school there are two sections — Section G and Section H of class X. There are 90 students in Section G and 144 students in section H. Determine the minimum number of books required for their class library so that they can be distributed equally among the students of Section G or Section H.
- (A) 18
 (B) 720
 (C) 90
 (D) 144

the number ?

- (A) 200
- (B) 280
- (C) 1568
- (D) None of the above

11. How many two digit numbers are divisible by 3 ?

- (A) 30
- (B) 20
- (C) 40

(B) Yes if we have total number of terms as 51

- (C) No
- (D) None of the above

15. A quadratic equation $ax^2 + bx + c = 0$ has no real root if :

- (A) $b^2 - 4ac > 0$
- (B) $b^2 - 4ac = 0$
- (C) $b - 4ac < 0$
- (D) $b^2 - 4ac < 0$

16. A motor boat has speed 10 km/hr in still water. It takes 1 hour to go upstream to a place and return. The speed of the stream is ?

equations given below has unique solution :

$$4x + py + 8 = 0 ; 2x + 2y + 2 = 0$$

- (A) $p = 4$
- (B) $p \neq 8$
- (C) For all values of p except 4
- (D) None of the above

19. 4 chairs and 3 tables cost Rs. 2100 and 5 chairs and 2 tables cost Rs. 1,750, then the cost of a chair is :
- (A) Rs.150
 - (B) Rs. 500
 - (C) Rs. 15

(C) 0

(D) 12

23. Verify whether 2 and 0 are zeroes of the polynomial $x^2 - 2x$:

- (A) Yes
- (B) No
- (C) Yes if $x^2 = 3$
- (D) None of the above

24. The remainder when $x^4 + x^3 - 2x^2 + x + 1$ is divided by $(x - 1)$ is :

- (A) 1
- (B) 3

can A alone finish the work ?

- (A) 18 days
- (B) 20 days
- (C) 30 days
- (D) 12 days

28. At what rate percent per annum will a sum of Rs. 2,000 amount to Rs. 2,205 in 2 years, compounded annually ?

- (A) 6
- (B) 20
- (C) 2

- (B) Not equal
- (C) Equal
- (D) None of the above

32. The area of the sector of a circle with radius 4 cm and of angle 30° is (use $\pi = 3.14$) approximately :

- (A) 4.19 cm^2
- (B) 16 cm^2
- (C) 120 cm^2
- (D) None of the above

- (A) Asymptote
- (B) Cyclic
- (C) Cubic
- (D) None of the above

36. Surface area of a cuboid whose length, breadth and height are 15 cm, 10 cm and 20 cm respectively is :

- (A) 6000 cm^2
- (B) 1300 cm^2
- (C) 3000 cm^2
- (D) None of the above

37. Find the curved surface area of a right

(A) 84.8 cm^2

(B) 89 cm^3

(C) 89.8 cm^3

(D) None of the above

40. A cone of height 24 cm and radius of base 6 cm is made up of modeling clay. A child reshapes it in the form of a sphere. Then the radius of the sphere will be :

- (A) 2 cm
- (B) 4 cm
- (C) 12 cm

(D) None of the above

44. The number of times a particular observation occurs in a given data is called its :

(A) Range
(B) Frequency
(C) Group
(D) None of the above

45. The height (in cm) of 9 students of a class are as follows :

155, 160, 145, 149, 150, 147, 152, 144, 148.

46. A box contains 3 blue, 2 white and 4 red marbles. If a marble is drawn at random from the box, then what is the probability that it will be a red ?

(A) $\frac{1}{9}$
(B) $\frac{1}{3}$
(C) $\frac{2}{9}$
(D) None of the above

49. An unbiased die is thrown, what is the probability of getting an even number ?

(A) $\frac{1}{6}$
(B) $\frac{1}{2}$
(C) $\frac{1}{3}$