

Code  
0

Time : 45 Min

MM : 60

## JUNIOR GROUP (VII & VIII) SAMPLE PAPER

### GENERAL INSTRUCTIONS:

- Fill in your complete detail in the space provided on first page of **Question Paper** & in **Answer Sheet**, before starting the paper.
- Each question has only one correct answer.
- There is (+3) marking for each right answer & (– 1) negative marking for each wrong answer. So attempt each question carefully.
- All questions are correct and no queries will be entertained during the examination.
- Blank paper, clipboards, log tables, slide rulers, calculators, cellular phones, pagers and any other electronic gadgets are not allowed.
- Use the space provided in the question paper for the rough work.

### INSTRUCTIONS FOR ANSWER SHEET (ORS):

- Fill in all the details given in the Answer Sheet properly.
- DO NOT TAMPER the Answer Sheet.
- Use only BLUE or BLACK ball point pen to fill the answer sheet.

NAME OF THE CANDIDATE : ..... ROLL NO. : .....

I have read all the instructions  
and shall abide by them

I have verified the identity, name and roll number  
of the candidate.

Signature of the Candidate

Signature of the Invigilator

**PCCP Lucknow Head Office :**

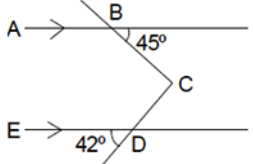
**Address :** 13/1 Ground floor, Moti chamber, YMCA Complex,  
Opposite Gauri Apartments, Near Dainik Jagran, Hazratganj , Lucknow

**Contact. No. :** 0522-4300041,

Website : [www.pccp.resonance.ac.in](http://www.pccp.resonance.ac.in) E-mail : [lko@resonance.ac.in](mailto:lko@resonance.ac.in)

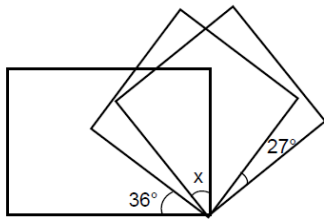
1. Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of last two is 1073. The sum of three number is  
 (A) 75 (B) 81 (C) 85 (D) 89

2. In the given figure  $AB \parallel ED$  ; then the value of  $\angle ABC + \angle BCD + \angle CDE$  is :



- (A)  $180^\circ$  (B)  $273^\circ$  (C)  $360^\circ$  (D)  $110^\circ$

3. The given figure shows three identical squares. Find x

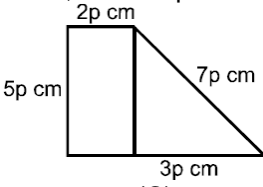


- (A)  $30^\circ$  (B)  $90^\circ$  (C)  $27^\circ$  (D) None of these
4. a is the greatest negative integer and b is the smallest rational number with the smallest absolute value then  $a^{2007} + \frac{b^{2009}}{2008}$   
 (A) - 1 (B) 0 (C)  $\frac{1}{2008}$  (D) 2007
5. In a rectangle, there is a point inside a rectangle and that point.s distance to the four sides of the rectangle is 1 , 2 , 3 and 4, then the minimum area of a rectangle is  
 (A) 21 (B) 20 (C) 24 (D) 25
6. Let n be an integer such that  $3 < n < 8$ . R is the remainder when 2008 is divided by  $n(n + 1)$ . Find the ratio of the largest possible value of R to the smallest possible value of R.  
 (A) 17 : 4 (B) 7 : 2 (C) 8 : 1 (D) 6 : 1

**Space for Rough Work**

7. If  $5^{10x} = 4900$  and  $2^{\sqrt{y}} = 25$ , then the value of  $\frac{[5^{(x-1)}]^{-5}}{4^{-\sqrt{y}}}$
- (A)  $\frac{14}{5}$  (B) 5 (C)  $\frac{28}{5}$  (D) 14
8. In the triangle ABC there are interior angles A, B, C. Let their exterior angles be  $\alpha, \beta, \gamma$ . If  $\beta = 2\alpha - \gamma = 40^\circ$  then the degree of three angles A, B, C is
- (A)  $60^\circ, 60^\circ, 60^\circ$  (B)  $30^\circ, 60^\circ, 90^\circ$   
(C)  $40^\circ, 60^\circ, 80^\circ$  (D)  $50^\circ, 60^\circ, 70^\circ$
9. In the quadrilateral ABCD,  $AB = 3, BC = 4, CD = 9, AD = a$ , then
- (A)  $a \geq 16$  (B)  $a < 2$  (C)  $2 < a < 16$  (D)  $a = 16$
10. There are two boxes of candy with a total 176 candies. If we take out 16 candies from the second box and put them into first box. Now the candies in the first box have 16 candies more than the m times of the candies in the second box (m is a integer that is greater than 1), then there were at least \_\_\_\_\_ candies in the first box.
- (A) 80 (B) 120 (C) 100 (D) None of these
11. In triangle ABC,  $\angle A$  is the smallest angle and  $\angle B$  is the largest angle. Given that  $2\angle B = 5\angle A$ . If the lowest possible value of  $\angle B$  is x and the largest possible value of  $\angle A$  is y, Find x + y.
- (A)  $140^\circ$  (B)  $115^\circ$  (C)  $105^\circ$  (D)  $175^\circ$
12. A man mixes two types of rice (x and y) and sells the mixture at the rate of Rs.18 per kg. Find his profit percentage.
1. The rate of X is Rs.20 per kg  
2. The rate of Y is Rs. 15 per kg
- (A) 1 alone sufficient (B) 2 alone sufficient  
(C) Both 1 and 2 are necessary to answer (D) Both 1 and 2 are not sufficient to answer
13. A fair 6 sided dice is rolled twice. What is the probability that the first number that comes up is greater than or equal to the second number ?
- (A)  $\frac{1}{6}$  (B)  $\frac{5}{12}$  (C)  $\frac{1}{12}$  (D)  $\frac{7}{12}$
14. If  $x = 32^2 \times 33^4 \times 35^6 \times 36^8$  and is a multiple of  $34^N$  where n is a non- negative integer, then what is the value of  $n^{34} - 34^n$  ?
- (A) - 34 (B) - 35 (C) - 1 (D) 0

**Space for Rough Work**

15. Taylor and Anya live 63 miles apart. Sometimes on a Saturday, they ride their bikes toward each other's houses and meet somewhere in between. Taylor is a very consistent rider - she finds that her speed is always very close to 12.5 miles per hour. Anya rides more slowly than Taylor, but she is working out and so she is becoming a faster rider as the weeks go by. A couple of months later, on a Saturday in September, the two friends set out again on their bikes at 8 am. Taylor, as always, rides at 12.5 miles per hour. This time they meet at 11 am. How fast was Anya riding this time ?  
 (A) 12.5 (B) 8.5 (C) 25.5 (D) None of these.
16. A woman bought two parcels of toffees, the same number in each parcel. She bought the first pack at 25 paise per each toffee and the second pack at 3 toffees for 65 paise. She mixed them together and sold at Rs. 3.50 a dozen. Her gain percent is  
 (A) 15% (B) 25% (C)  $16\frac{2}{3}\%$  (D) 12%
17. The class marks of a frequency distribution are given as follows: 15, 20, 25,.. The class corresponding to the class mark 20 is  
 (A) 12.5 - 17.5 (B) 17.5 - 22.5 (C) 18.5 - 200.5 (D) 19.5 - 20.5
18. If the perimeter of the figure given is 57 cm, find the perimeter of the triangle in the figure
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- (A) 30 cm (B) 45 cm (C) 39 cm (D) 3 cm
19. A train 150 m long is moving at a speed of 30 km/hr. It will cross a cyclist coming at a speed of 10 km/hr in the opposite direction in  
 (A) 11.5 seconds (B) 13.5 seconds (C) 14.25 seconds (D) 15.75 seconds.
20. If  $2x - \frac{1}{2x} = 3$  then the value  $16x^4 - \frac{1}{16x^4} - 1$  is  
 (A) 11 (B) 117 (C) 119 (D) 121

**Space for Rough Work**

**Answer Key**

<b>Ques.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Ans.</b>	C	C	C	C	C	A	C	B	C	D
<b>Ques.</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>Ans.</b>	D	B	C	D	C	B	B	B	B	C

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**Space for Rough Work**