INSTRUCTIONS:

1. Please **DO NOT OPEN** the contest booklet until the Proctor has given permission to start.

2. **TIME**: 1 hour and 30 minutes

3. There are 30 questions in this paper. 3 points, 4 points and 5 points will be awarded for each correct question in Section A, Section B and Section C respectively. No points are deducted for Unanswered question. 1 point is deducted for Wrong answer.

4. Shade your answers neatly in the answer entry sheet.

5. **PROCTORING**: No one may help any student in any way during the contest.

6. **No calculators** are allowed.

7. All students must fill and shade in your **Name, Index number, Level and School** in the Answer sheet provided.

8. **MINIMUM TIME**: Students must stay in the exam hall for at least 1 hour and 15 minutes.

9. Students must show detailed working and transfer answers to the answer entry sheet.

10. No spare papers can be used in writing this contest. Enough space is provided for your working of each question.

11. You must return this contest paper to the proctor.
Rough Working
Section A  (Correct – 3 points | Unanswered – 0 points | Wrong – deduct 1 point)

Question 1
Which of the pieces (A, B, C, D, E) will fit in between the two pieces below, such that the two equations formed will be true?

(A) \[8 - 3 = 5\]  (B) \[5 - 1 = 3\]  (C) \[1 + 2 = 5\]  (D) \[4 - 2 = 4\]  (E) \[1 + 1 = 5\]

Question 2
John looks through the window as shown in the picture below. He only sees half the number of kangaroos in the park. How many kangaroos are there in the park in total?

(A) 12  (B) 14  (C) 16  (D) 18  (E) 20
Question 3
Two gridded transparent sheets are darkened in some squares, as shown in the picture below. They are both placed on top of the board shown in the middle. The the pictures behind the darkened squares cannot be seen. Only one of the pictures can still be seen, which picture is it?

(A)  (B)  (C)  (D)  (E)

Question 4
A original picture of footprints(left) was rotated in a particular way. The result is shown on the right of the original picture. Which pair of footprints are missing?

(A)  (B)  (C)  (D)  (E)

Question 5
What number is hidden behind the panda?

10 + 6 =  +8  - 6 =  + 8  - 10 =

(A) 16  (B) 18  (C) 20  (D) 24  (E) 28
Question 6
In the table below, the correct sums are shown. What number is in the box with the question mark?

\[
\begin{array}{ccc}
+ & 11 & 7 & 2 \\
6 & 17 & 13 & 8 \\
? & 11 & \\
\end{array}
\]

(A) 10 (B) 12 (C) 13 (D) 15 (E) 16

Question 7
Dolly accidentally broke the mirror into pieces. How many pieces have exactly four sides?

(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

Question 8
Which option shows the necklace below when it is untangled?

(A) (B) (C) (D) (E)
Section B (Correct – 4 points | Unanswered – 0 points | Wrong – deduct 1 point)

Question 9
The picture below shows the front of Ann’s house. The back of her house has three windows and no door. What does Ann see when she is standing from the back of her house?

(A)

(B)

(C)

(D)

(E)

Question 10
Which option is correct?

\[ \text{●} + \text{●} + \text{●} + \text{●} + \text{□} = \text{□} + \text{□} + \text{□} \]

(A) \[ \text{●} = \text{□} \]

(B) \[ \text{●} + \text{●} + \text{●} = \text{□} \]

(C) \[ \text{□} + \text{□} + \text{□} = \text{●} \]

(D) \[ \text{□} + \text{□} = \text{●} \]

(E) \[ \text{●} + \text{●} = \text{□} \]
Question 11
Balloons are sold in packets of 5, 10 and 25. Marius buys exactly 70 balloons. What is the smallest number of packets he could buy?

(A) 3 (B) 4 (C) 5 (D) 6 (E) 7

Question 12
Bob folded a piece of paper. He cut exactly one hole through the folded paper. Then he unfolded the piece of paper and saw the result as shown in the picture below. How did Bob fold his piece of paper?

(A) (B) (C) (D) (E)

Question 13
There is a tournament at a pool. At first, 13 children signed up, and then another 19 signed up. Six teams with an equal number of members are needed for the tournament. At least how many more children need to sign up so that the six teams can be form?

(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

Question 14
Numbers are placed in the cells of the 4 × 4 square shown in the picture below. Mary selects any 2 × 2 square in 4 × 4 square and adds up all the numbers in the four cells. What is the largest possible sum she can get?

(A) 11 (B) 12 (C) 13 (D) 14 (E) 15
Question 15
David wants to cook 5 dishes on a stove with only 2 burners. The time he needed to cook the 5 dishes are 40 mins, 15 mins, 35 mins, 10 mins and 45 mins. What is the shortest possible time in which he can cook all 5 dishes? (He can only remove a dish from the stove when it is fully cooked.)

(A) 60 min  (B) 70 min  (C) 75 min
(D) 80 min  (E) 85 min

Question 16
Which number should be written in the circle containing the question mark?

(A) 10  (B) 11  (C) 12  (D) 13  (E) 14

Section C  (Correct – 5 points | Unanswered – 0 points | Wrong – deduct 1 point)

Question 17
The picture shows a group of building blocks and a plan of these blocks. Some ink has dripped onto the plan. What is the sum of the numbers covered by the ink?

(A) 3  (B) 4  (C) 5  (D) 6  (E) 7
Question 18
How long is the train?

(A) 55 m  (B) 115 m  (C) 170 m  (D) 220 m  (E) 230 m

Question 19  George trains at his school field at five o’clock every afternoon. The journey from his house to the bus stop takes 5 minutes. The bus journey takes 15 minutes. It takes him 5 minutes to go from the bus stop to the field. The bus runs every 10 minutes from six in the morning. What is the latest time he has to leave his house in order to arrive at the field exactly on time?

Question 20
A small zoo has a giraffe, an elephant, a lion and a turtle. Susan wants to plan a tour where she sees 2 different animals. She does not want to start with the lion. How many different tours can she plan?

(A) 3  (B) 7  (C) 8  (D) 9  (E) 12
**Question 21**

Four brothers have eaten 11 cookies in total. Each of them has eaten at least one cookie and no two of them have eaten the same number of cookies. Three of them have eaten 9 cookies in total and one of them has eaten exactly 3 cookies. What is the largest number of cookies one of the brothers has eaten?

(A) 3  
(B) 4  
(C) 5  
(D) 6  
(E) 7

**Question 22**

Zosia has hidden some smileys in some of the squares in the table. In some of the other squares she writes the number of smileys in the neighbouring squares as shown in the picture. Two squares are said to be neighbouring if they share a common side or a common corner. How many smileys has she hidden?

![Table with smileys](image)

(A) 4  
(B) 5  
(C) 7  
(D) 8  
(E) 11

**Question 23**

Ten bags contain different numbers of candies from 1 to 10 in each of the bag. Five boys took two bags of candies each. Alex got 5 candies, Bob got 7 candies, Charles got 9 candies and Dennis got 15 candies. How many candies did Eric get?

(A) 9  
(B) 11  
(C) 13  
(D) 17  
(E) 19

**Question 24**

Kate has 4 flowers, one with 6 petals, one with 7 petals, one with 8 petals and one with 11 petals. Kate tears off one petal from three flowers. She does this several times, choosing any three flowers each time. She stops when she can no longer tear one petal from three flowers. What is the smallest number of petals which can remain?

(A) 1  
(B) 2  
(C) 3  
(D) 4  
(E) 5
Rough Working
Rough Working