# SLMC 8 – Model Question Paper (2019)

1. If Arjuna's birthday was on a Sunday last year and Murali's birthday was 300 days after Arjuna's, then Murali's birthday was on a

   (A) Saturday   (B) Sunday   (C) Monday   (D) Tuesday   (E) Wednesday

2. The remainder when 5^{2004} is divided by 100 is

   (A) 75   (B) 50   (C) 25   (D) 5   (E) 10

3. What is the largest sum obtainable if the different letters are assigned different digits in the addition problem of *BEST+OF+LUCK*?

   (A) 18423   (B) 13140   (C) 18420   (D) 13142   (E) 19423

4. When the result of $10^{2005} + 2005$ is written in decimal representation the sum of the digits is

   (A) 1   (B) 7   (C) 8   (D) 3   (E) 9

5. What is the shaded area of the figure drawn on the 1 cm × 1 cm square grid which is shown below?
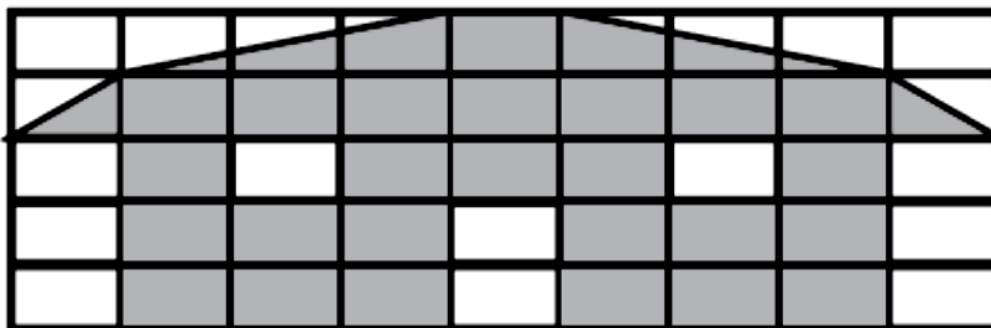
   (A) 25cm²   (B) 26cm²   (C) 27cm²   (D) 28cm²   (E) 29cm²

6. If $A \neq 0$ and

   $$\begin{array}{r} ABCD \\ \times\ \underline{\quad E\quad} \\ 2006 \end{array}$$

   then the value of B is

   (A) 0   (B) 2   (C) 3   (D) 6   (E) 8

7. $\dfrac{2006}{2005}$ is not equal to

    A) $\dfrac{2008006}{2007005}$ B) $\dfrac{20062006}{20052005}$ C) $\dfrac{200602006}{200502005}$ D) $\dfrac{20064012}{20054010}$ E) $\dfrac{206}{205}$

8. There was a plate of *Kevuns* on a table. Abdul, who first saw the plate, ate two thirds of the *Kevuns*. Meena, who came after Abdul ate half of the remaining *Kevuns* and gave the two remaining *Kevuns* to Kamal. How many *Kevuns* were there on the plate when Abdul saw it?

   (A) 6   (B) 8   (C) 10   (D) 12   (E) 16

9. The number of regions a plane could be divided into by three distinct straight lines on the plane is? (For the example, if two straight lines intersect, then the plane is divided into four regions)

    i) 7   ii) 6   iii) 4

    (A) I only   (B) I and II only   (C) I and III only   (D) II and III only   (E) All

10. *ABCD* is a rectangle and *P,Q,R,S* are the midpoints of *AB,BC,CD,AD* respectively. Then area of *PQRS*: area of *ABCD* is

    (A) 1:2   (B) 1:4   (C) 1:6   (D) 1:3   (E) 1:8
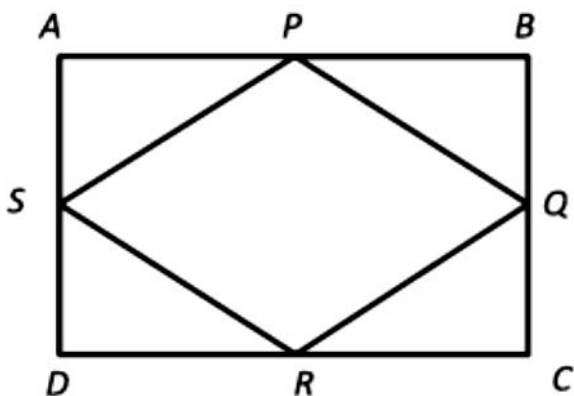
11. Shanthini visits Kamala on the Sinhala-Tamil New Year with 5 *Laddus*. Kamala has 7 *Kavuns*. In how many different ways can Kamala choose 10 pieces of sweets, *Laddus* or *Kevuns*, for the New Year ceremonial first meal?

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

12. What is the smallest integer obtained by crossing out 10 digits from 1234123412341234?

    (A) 111121   (B) 111122   (C) 111123   (D) 111124   (E) 111142

13. The sum of Sarath's age and Meena's age is 25. The sum of Kamal's age and Abdul's age is 40. Kamal is at least 2 years younger than Sarath. Then at least how many years is Abdul older than Meena?

   (A) 15   (B) 16   (C) 17   (D) 25   (E) 40

14. At Kanjana's school, four fifths of those who play chess play hockey and two thirds of those who play hockey play chess. The ratio of the number who play hockey: the number who play chess is

   (A) 5: 12   (B)10: 3   (C) 5: 6   (D) 6:5   (E) 3.5

15. In the table given below, each of the symbols @, #, & and $ denotes a number. The sum of the numbers denoted by each symbol in a column is given below the column and the sum of the numbers denoted by each symbol in a row is given to the right of the row except in the second row. What is the missing number?

   (A) 17   (B) 18   (C) 19   (D) 20   (E) 21

@	@	#	#	14
&	$	@	&	
#	#	@	#	15
&	#	$	@	16
21	13	12	18	

16. Kanjana has given Nirmali 12 useful presents. Nirmali has 10 saucepans and they are the only things she has that are made of tin. None of Nirmali's saucepans is of the slightest use. How many tin objects are there among Kanjana's presents?

   (A) 0   (B) 2   (C) 10   (D) 12   (E) Cannot be concluded from the given data

17. The following is a coded number coded using dancing men where each dancing man represents a unique digit (0, 1, 2, 3, 4, 5, 6, 7, 8 or 9) and different dancing men represent different digits:

   Which of the following code could be the correctly decoded number?

   (A) 201877841637   (B) 201877841222   (C) 201877841333
   (D) 201877841444   (A) 201877841555

18. In how many different ways can a nonempty plate be made from 2 identical Kavuns and 3 identical Laddus?

    (A) 8　　(B) 9　　(C) 10　　(D) 11　　(E) 12

19. What is the largest number that can be made by using each digit 2, 0, 1 and 8 of 2018 exactly once and the operations addition and multiplication any number of times?

    (A) 10　　(B) 16　　(C) 18　　(D) 24　　(E) 25

20. In the following diagram ABCD and PQRS are squares. Then $\dfrac{\text{Area ABCD}}{\text{Area PQRS}}$ is ?

    (A)17　　(B)18　　(C)19　　(D)20　　(E)21
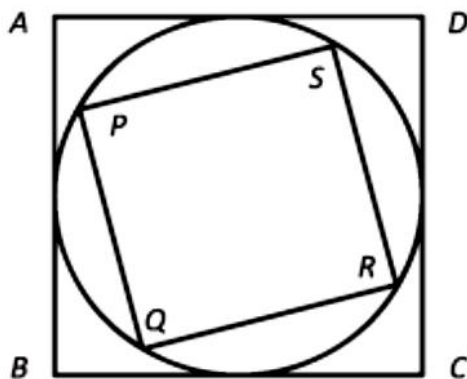
21. If a⊗b= the Highest Common Factor of a and b, then the value of 10⊗(24⊗27) is

    (A) 1　　(B) 3　　(C) 2　　(D) 2　　(E) 27

22. A four digit number x can have as digits only1's and 2's.
    If x>2005 and x is even, the number of possible values of x is

    (A) 10　　(B) 8　　(C) 3　　(D) 4　　(E) 5

23. Sanath batting from the start of an over bats through two consecutive overs (he faces all twelve balls) and scores 51 runs in ones, twos, fours, and sixes. The least number of sixes he hit can be

    (A) 1　　(B) 2　　(C) 3　　(D) 4　　(E) 5

24. The average of the following one hundred numbers: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11, 12, 13, 14... 97, 98, 99, 90 is

    (A) 49.5　　(B) 50.5　　(C) 50.05　　(D) 49.25　　(E) 50

25. In the magic square shown below a, b, c, d, e and f are numbers such that the sum of 3 numbers in each row, column and diagonal is 21. The value of c is

a	2	b
c	7	d
e	f	6

(A) 8   (B) 4   (C) 12   (D) 10   (E) 11

26. Two rectangles overlap each other in such a manner that the overlapping portion is $\frac{1}{10}$ th of the first rectangle and $\frac{1}{4}$ th of the second rectangle. What percentage of the total non-overlapping area is the overlapping area?

(A) 8 $\frac{1}{3}$%   (B) 35%   (C) 7 $\frac{9}{13}$%   (D) 12%   (E) 9 $\frac{2}{3}$%

27. Ramani was asked to square the number x, subtract 32 and then divide the result by 7. She instead took the square root of x, added 32 and multiplied the result by 7. Her answer was 245. If Ramani had worked the problem correctly, what would her answer have been?

(A) 3   (B) 5   (C) 7   (D) 9   (E) 11

28. The sum of eight consecutive integers is 2004. What is the largest of these integers?

(A) 400   (B) 254   (C) 129   (D) 500   (E) 2004

29. If a book is numbered starting with 1 and using 2004 digits, the number of pages in the book is

(A) 838   (B) 704   (C) 705   (D) 1002   (E) 501

30. What is the total number of squares of any size in the diagram (drawn to scale) shown?

(A) 27
(B) 34
(C) 39
(D) 40
(E) 42