JECA 2009 Question paper

1.In order to do a piece of work, Ram takes a – times as long as Shyam and Jadu together; Shayam takes b – times as long as Ram and Jadu together; Jadu takes x times as long as Ram and Shayam together. Then X is in terms of a and b is

A) (a+b+2)/(ab-1)

B) 2ab/(a+b)

C) a+b

D) None of these

2. In a competition, Sita, Lita & Mohan won pens. After the competition, Sita gives Lila as many pens Lila has and Mala, as many pens Mala has. Similarly, Lila then gives Sita and Mala as many pens as each then has. Mala, similarly, then gives sita and Lila as many pens each then has. If each finally has 16 pens, how many pens Mala won?

A) 8

B) 26

C) 14

D) None of these

3. On dividing a number by 10, the remainder obtained is 9; when dividing by 9, the remainder obtained is 8; on dividing by 8, the remainder is 7 and so onto when divided by 2, the remainder is 1. The number is

A)419

C)2519

C)3539

D) None of these

4. Let x, y, z be distinct digits. Consider a two digits number xy and a three digit number zzy, which are defined under the usual decimal number system. If $(xy)^2 = zzy$ and zzy > 300, then the value of y is

A) 1

B) 0

C) 5

D)6

5. If the income of x is 20% less than that of y, then the income of y is greater than that of x by

A) 20%

B) 25%

C) 30%

D)35%

6. If p is between 0 & 1, which of the following statement(s) is/are true ?

A) Only (II)

B)Only (I) & (III)

C)III only

D)All of them

7.The average weight of three men A,B,C is 84 kgs. Another man D joins the group and the average weight becomes 80 kg. If another man E whose weight is 3 kg. more than that of D, replaces A, then the average age of B,C,D,E becomes 79 kg. The weight of A is

A) 73 kg. B) 72 kg

C)75 kg. D) None of these

8.Three consecutive two-digit even number are such that if the first is divided by 6, the second by 4 and the third by 7, the sum of the quotients is 38. The third number is

A) 84 B) 70

C) 56 D) None of these

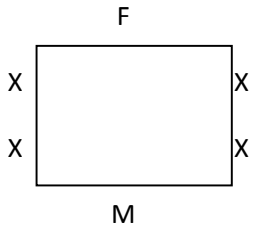
9. One of the following sets is different from the others. Which one is it?

I	II	III	IV
T	O	H	X
R	M	F	U
P	K	D	R
N	I	B	O

A)I B) II

C) III D) Iv

10. Family 1 comprising of mother, father and son are to be seated at atable with family 2 comprising of mother, father and daughter. The layout of the table is shown below. F represents one of the father and M represents one of the mothers. X represents any family member but with the condition that a male family member must sit opposite a female of the other family. How many different seating plan are possible?



A)6 B) 12

C) 16 D) 24

11. If S is the sum of 8,6,4,2 and x, what must be the value of x for x to equal 1/5 S?

A) 2 B) 3

C) 4 D) 5

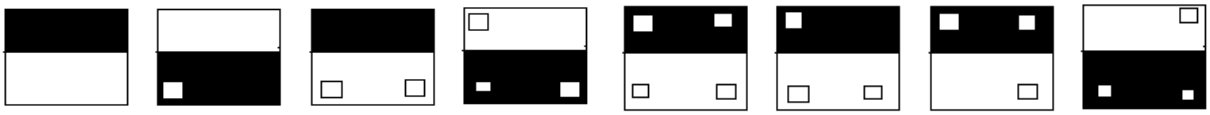
12.Directions: This question is based on the following information:

Five houses lettered A, B, C, D & E are built in a row next to each other. The houses are lined up in the order A, B, C, D & E. Each of the five houses has a colored chimney. The roof and chimney of each house must be painted as follow:

i. The roof be painted green, red or yellow
ii. The chimney must be painted white, black or red.
iii. No house may have the same color chimney as the color of roof.
iv. No house may use any of the same color that the every next house uses.
v. House E has a green roof.
vi. House has a red root and black chimney

A) At least two houses have black money
B) At least two houses have red roofs.
C) At least two houses have white chimneys.
D) At least two houses have green roofs.

13. Which figure completes the series?



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

14. The ascending order of the fractions 1/15, 34/75, 1/25, 3/45 is listed as

A) 7/15 ,34/75, 3/45, 1/25

B) 34/75,7/15, 3/45, 1/25

C) 1/25, 3/45, 34/75, 7/15

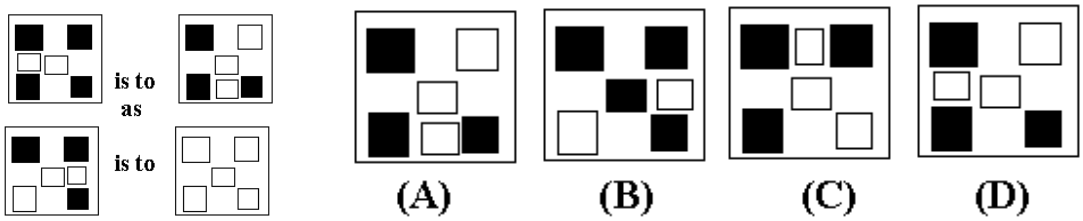
D) None of these

16. If the average of 6, 11, 19 and d is to lie between 19 and d, then which of the following is true?

A) d<40 B) d = 40

C) d>40 D) Can't be determined

17. Which figures completes the statement?



17. In an objective type test of 50 questions, the final score is calculated by subtracting twice the number of wrong answer from the total number of correct answers. If a student attempted all questions and receive a final score of 35, how many wrong answers did he given?

A) 8 B) 6

C) 5 D) 4

18. Given that the sum of the odd integers from 1 to 99 inclusives is 2500, what is the sum of even integers from 20 to 100 inclusives?

A) 2500 B) 2550

C) 2600 D) none of these

19.Divide 45 into four parts such that when 2 is added to the first part , 2 is subtracted from the second part, 2 is multiplied by the third part and the fourth part is divided by two, all result in the same number.

A) 6 , 14, 5, 18 B) 8, 14, 3, 20

C) 12, 8, 9, 16 D) 8, 12,5 ,20

20. There are two numbers such that one of them diminished by the reciprocal of the other is equal to the second diminished by the reciprocal of the first. Then

A) The number are equal B) their products is 1

C)the numbers are equal or their products is 1 D) None of these

21. If P is a% more than Q and Q is b% less than P, then

A) 1/a – 1/b = 100 B) 1/b – 1/a = 1/ 100

C) 1/a – 1/b = 1/100 D) None of these

22. Two numbers are such that their difference, their sum and their products are to one another as 1 : 3 : 8. Then the smallest of two numbers is

A) 4 B)6

C)8 D) None of these

23. Three positive integer are given. Taken any two of the integer and find their average and add this average to third integer. The number thus obtained are 37 , 34, 35. Then one of the original integer is

A) 15 B) 16

C) 19 D) None of these

24. If n^3 is odd, which of the following statement are true?

(I) n is odd (II)n^2 is odd (III) n^2 is even

A) I only B) II only

C) I & II only D) III only

25. If "MCA" is coded as "NXZ", then "CHANCE" will be coded as

A) XSZMXV B)YSZMYV

C)XZSMXV D) None of these

26. Acertain number of bullet were shared by 3 people equally. Each of them fired 4 bullets and the sum of the remaining bullets was equal to the initial share each had got. What was the initial number of bullets?

A)18 B)20

C) 22 D)44

27. A train running at 54 kmph takes 20seconds to pass a platform. Next it takes 12 seconds to pass a man walking at 6 kmph in the same direction in which the train is going. Find the length of the train and the length of the platform.

A) length of the train= 140 m and the length of the platform = 160 m.

B) length of the train= 160 m and the length of the platform = 140 m.

C) length of the train= 100 m and the length of the platform = 160 m.

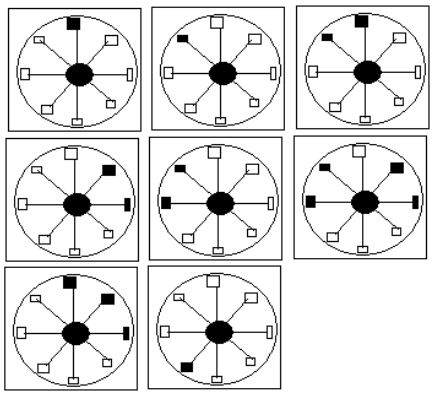
D) Can't be determined from the given data.

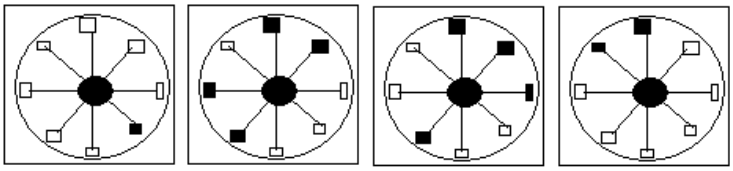
28. A piece of strng 6 feet long is cit into three smaller pieces. How long is the longest of the three pieces ? Given that:

(I) two piecec are having the same length;

(II) One piece is 3 feet 2 inches long.

29. Which figure completes the series?





A) B) C) D)

30. In the assembly election, the candidate of party A received one and a half times as many votes as the candidate of party B. The B candidate received one third more votes than the independent candidates. 900 votes were cast for the independent candidates. How many votes were cast for A candidate ?

A)900 B) 1600

C) 1000 D) 1800

31.The sum of two times one natural number and three times another natural number is less than 24. If the first natural number is less than or equal to eight, the highest value of the second natural number is:

A) 5 B) 6

C) 7 D) 9

32. – 20, -- 16, --12, -- 8

In the sequence above, each term after the first is 4 greater than the preceding term. Which of the following could not be a term in the sequence?

A) 0 B) 200

C) 762 D) 668

33. If $0 < x < 1$ which is greater?

A) $1/x^2$ B) $1/x$

C) x D)x^2

34. There are four prime numbers written in ascending order . The product of the first three is 385 an d that of the last three is 1001. Find the first number.

A) 5 B) 7

C) 11 D) 17

35. In the following correctly worked addition sum, A, B, C and D represent different digits, and all the digits in the sum are different. What is the sum of A, B, C and D?

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  5 A
  B C
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  D 4 3
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A) 23 B) 22 C) 18 D) 16

36. Sima and Ratan both drive to their new home 400 miles away. Sima drives the family car at an average speed of 60 mph. Ratan drives the removal truck at an average speed of 50 mph. During the journey, Sima stops for a total 1 hour and 20 minutes, Ratan stops for half as long. What is the difference in minutes between their arrival times?

A) 60 B) 55

C) 40 D) 90

37. The circumference of the front wheel of a cart is 30 ft long and that of the back wheel is 36 ft. long. What is the distance travelled by the cart, when the front wheel has done five more revolutions than the rear wheel?

A) 20 ft B) 25 ft

C) 750 ft D) 900 ft

38. A confectioner has 500 pieces each of mint-flavored, orange- flavored and strawberry- flavored sweets. He wishes to make packets containing 10 mint, 5 orange and 5 strawberry sweets. What is the maximum number of packets of this type he can make?

A) 45 B) 80

C) 55 D) 50

39. The next two term in the following series

5, ,8,16, 19, 28,…are

A) 30 & 40 B) 30 & 41

C) 31 & 41 D) 31 & 40

40. If pqr = 1, rst = 0 and spr = 0, which of the following must be zero?

A) p B) q C)r D)s