Mark(A) if the question can be answered using one statements alone,but cannot be answered using the other statement alone.

Mark(B) if the question can be answered using either statements alone .

Mark(C) if the questions can be answered using 1 and 2 together but not using 1 or 2 alone.

Mark(D) if the question cannot be answered even 1 or 2 together.

1)All cats are tigers. All rats are dogs.no tiger is a dog. Is X a rat?

1. X is a tiger.

2.X is a cat.

Ans.the statement is classified as follows.

Subject predicate

1) universal affirmative cats tiger

11)particular affirmative cats dogs

111) universal affirmative rats dogs

1v) universal affirmative tiger dogs

From statement 1

X is a tiger=> X is not a dog ( from (1v)) =>X is not rat(from (111))

Hence, 1 alone is sufficient.

From statement 2

X is a cat=>X is tiger(from (1))=>X is not dog(from(1v))

X is not rat(from(111)).

Hence 2 alone is also sufficient. Choice(B)

2) N is a natural number. Find the remainder when N2 is divided by 12.

1. N is odd

2. N is not divisible by 3.

Using statement 1,if N=1,rem(N2/12)=1;

If N=3,rem(N2/12)=9

1 is not sufficient.

Using statement 2.if N=1,rem(N2/12)=1

If N=2,rem(N2/12)=4

2 is also is not sufficient.

Hence choice D.

3) How many people are standing in a row?

1. In the row there are 14 people standing between Ajay and Arun.

2. In the row Ajay is the 22nd person from the left and Arun is 20th from the right.

Ans) From the statement 1 we cannot tell the position of Ajay and Arun and the number of people in the row. so 1 is not sufficient.

From 2 we cannot tell how many people are in between Ajay and Arun.

But using both the statements.

Number of people in the row =22+15+20= 57

Number of people in the row is 5+15+7=27

So the number of people in the row cannot be determined using both the statements

Choice D.

4) What of the factor of N?

1. There are 5 prime factors of N.

2. There are 120 factors of 2N.

Ans) From the statement 1 alone we cannot find the number of fator of N.

From statement 2 alone,we are given that the 2N has 120 factors. Since we do not know the power of 2 in N,2 alone is not sufficient.

From 1 and 2 together,we have that N has 5 prime factors an 2N has 120 factors.120=2\*2\*2\*3\*5. So,the index of 2 of 2N could be(2-1),(3-1)or(5-1). If the index 2 in 2N was (2-1) therefore, 1, index of N would be 0 I.e, N would be 4. Since we know that the number of prime factors of N is 5, the index of 2 in N must be (3-2)=1 or (5-2)=3. So even now we cannot find the factors of N. hence the option D.

5) Are the roots of the quadratic equation ax2+bx+c=0 are rational?

1. The product of the roots is 5/2.

2. The sum of the roots is 6.

Ans) let the quadratic equaton be x2+bx+c=0

For the roots to be rational must be rational along with b and c.

From statement 1 alone, we have b=-5/2 and this is not sufficient because we do not know the value of c.

From statement 2 alone, we have c =6 and this is not sufficient as b is not known.

From statement 1 and 2 together,we can find whether the roots are rational or not.

Hence choice C.

6) If A>2, is AB<B?

1.B<0

2. A>20.

Ans) is AB<B🡺 is AB-B<0 🡺 is B(A-1)<0 and A>2 so,to decide whether AB<B we just need the sign of B. here statement 2 is not sufficient to decide. Statement 2 helps us to decide that AB<B as B is negative.

Choice A.

7) Find the 3 terms of the series , whose sum is 27.

1.The product of three terms is 504.

2. The sum of the 1st and the 3rd terms is twice the second term.

Ans) given a+b+c=27-----(1)

From statement 1, we have a,b,c= 504---(2)

From statement 2, we have a+c=2b-----(3)

Using these equations, we can determined three unknowns.

8) How is A related to B?

1.C is the maternal grand father of A and is the paternal grand father of Y.

2. B’s father’s mother’s son’s son Is A.

Ans) from 1, we get A’s mother’s father is B and B’s father’s father is C. A’s mother and B’s father are sibilings. Hence A is the cousin of B. so 1 alone is sufficient.

From 2 alone, A could be either the brother of B or cousin of B.

So 2 is not enough.

Choice A.

9) In which month did Raj celebrated his birthday?

1. The month in which Raj celebrated his birthday has at least 30 days.

2. The total number of days the month in which Raj celebrated his birthday ,the preceding month and the succeeding month have together is 90 days.

Ans) D

10) A dishonest shop keeper sells milk at cost price but he mixes it with the water. Find the percentage of water in the mixture.

1. By adding water shopkeeper gains 25%.

2. Milk in the new mixture is 80%.

Ans ) By 1 we can tell that shopkeeper mixed the water at 25%.

From 2 we can tell that shopkeeper mixed the water at 20%.

Choice B.

11) There are 30 boys and 12 girls in a clas. Find the average weight of the class.

1.The average weight of the boys to that of girls is 4:3.

2. The ratio of boys to girls is 4:5

Ans) D

Since the weight of the boys and girls are not given this question cannot be answered.

12) Which item among A and B has largest reduction in price?

1.Price of A was reduced by 15%.

2. Price of B was reduced by 10%.

Ans) D.

Since the price is not given we cannot answer this question.

13) Are M and N integers?

1. M+N is even integer.

2. M-N is even integer.

Ans) C

Given M+N=2x. Let 2x=4.where x is an integer For 2x= 4, M can be 1 and N can be 3. Or M =2.9 and N=1.1. hence we cannot infer from statement 1.

From 2, let M-N=2y, where y is an integer,if 2y=2 M=3 and N=1, or M may be 2.1 N can be 0.1, hence M and N may or may not be integer.

But using both the statement M+N=2a-------(1)

M-N=2b--------(2).

Adding both 2M=2a+2b

M=a+b

Putting M in any equation,N=a-b

As a and b are integers M and N are also integers..hence option C.

13) A certain number of people can complete a work in 18 days. How many more men are required to complete the work 3 days early?

1.270 man- days are required to complete the work.

2.If the number of people are half the original number,they complete half the work in 18 days.

Ans)A

Statement 1 gives 270 man-days required to complete the work,hence the number of men required to complete the work in 15 days is 18. 1 alone is sufficient, statement 2 doesnot talk anything about the quantity of work hence statement 2 is not sufficient. option A

14) What is the age of the coach?

1.The average age of 4 players is 20.

2.The average age of 4 players and the coach is 24 years.

Ans) C

From the statement 1 we get to know the age of 4 players is 80..statement 2 we can know the age of coach+4 players is 120,substituting 1 in 2, we get the age of coach. Hence option C.

15) Find the value of four digit number.

1.The sum of the first three digit number is equall to the last digit which is also thrice of first digit.

2.The second digit is twice the first digit and third digit is 2 less than the first digit.

Ans) C

Let the 4 digit number be abcd

From statement 1—a+b+c=d=3a

From statement 2,b=2a and c=a-2

Using both statements a+b+c=a+2a+(a-2)

=4a-2=3a as a+b+c=3a

A=2,b=4 and c=0

D=a+b+c=6

Hence the number is 2406. Choice C.

16) Is the cost of an apple more than the cost of an orange?

1.Three times the cost of an orange is Rs15 more than the twice the cost of an apple.

2.Five times the cost of an orange is Rs12 more than than six times the cost of an apple.

Ans) A

Let the cost of an apple and orange be a and b respectively.

From statement 1,3b=2a+15

From this statement we cant say whether b>a.

From statement 2,5b=6a+12🡺 b>a

Statement 2 is sufficient..option A.

17.Is X divisible by 26?

1.X is an odd multiple of 13.

2. when X is divided by 39,it leaves 20 as the remainder.

Ans) A

From statement 1,

X-13(sn+1)=26n+13.

So X is not dividible by 26.

From statement 2 X=39n+26.

If n is even,then X is the multiple of 26,otherwise not,hence,cannot be decided from statement 2 choice A.

18) If m and n are two positive numbers, is m>n?

1. The sum of m2 and n3 is less than the sum of m3 and n2.

2 The product of the square of m and the cube of n is greater than the product of the cube of m and the square of n.

Ans) A

From statement 1,

M2+n3<m3+n2

N2(n-1)<m2(m-1)

statement 1 alone is not sufficient as (n-1) and (m-1) may be positive or zero.

From statement 2,m2n3>m3n2

=>n>m

So statement 2 is sufficient hence option A

19) Id x>y, is x2y3>0?

1.x+y=2.

2.y2=9.

Ans) C

Neither of the statements is fully sufficient, as we have two unknowns and one equation.

Using both statements x+y=2 and y2=9=y=-3 and x=5(bcoz x>y) as we know the value of x and y,we can know the value of x2y3>0 or not

Hence option C.

20) what is the LCM od 2n,22n and 23n?

1.when n is a prime number less than 3.

2.n=2

Ans) B

From statement 1 alone we can say that n=2,

* LCM of 22,24,26=64

Hence statement 1 alone is sufficient.

From statement 2,we can say that LCM of 22,24,26 is 64.

Hence statement 2 alone is sufficient.

Option B