Statement Test {Home Work}

1. In the XYZ Stock Exchange there are 45% female employees and thus the number of male employees is exceeded by 72.Hence the total no. of employees in the XYZ Stock Exchange.
A) 720 B) 550 C) 670 D) 400 E) 580

2. A hotel incurs two types of expenses ,one which is fixed and other depends on the guests .When there are 10 guests ,total expenses of hotel are Rs. 6000.Also when there are 25 guests average per guests are Rs.360. What is the total expense of hotel when there are 40 guests ?
A) Rs.12,000 B) Rs.10,000 C) Rs.18,000 D) Rs.15,000 E) Rs.17,000

3. Pipe A can fill an empty tank in 30 hrs while B can fill it in 45 hrs .Pipe A and B are opened and closed alternatively i.e. first pipe A is opened ,then B ,again A and then B and so on for 1 hr. each time without any time lapse .In how may hours the tank will be filled when it was empty ,initially ?
A) 48 B) 60 C) 35 D) 36 E) 54

4. The cost of packaging of the mangoes is 40% the cost of fresh mangoes. The cost of mangoes increased by 30% but the cost of packaging decreases by 50%, then the percentage change of the cost of packed mangoes, if the cost of packed mangoes is equal to the sum of the cost of fresh mangoes and the cost of packaging .
A) 7.14% B) 6.8% C) 6.55% D) 7.9% E) 8%

5. Mallika and Supriya leave towns Kolkata and Ambala at 6 am and travel towards Ambala and Kolkata resp. Speed of Mallika is 60km/hr and speed of Supriya is 120km/hr .Heena leaves Kolkata for Ambala sometime later and travels at a speed of 90km/hr .If the distance between Kolkata and Ambala is 1080km and all three meet at the same point on the way, at same time, then at what time did Heena leave Kolkata ?
A) 10am B) 7am C) 8am D) 6am E) 12am

6. A letter is takenout at random from "ASSISTANT" and another is taken out from "STATISTICS". The probability that they are the same letters :
A) 32/87 B) 19/90 C) 17/69 D) 28/76 E) 21/98

7. A man takes 1(7/9) times as long to row a distance upstream as to row the same distance downstream. What is the speed of the boat in still water if it takes 3 hours to travel 38.4 downstream (in km/hr)?
A) 11 B) 22 C) 15 D) 10 E) 17

8.The average monthly salary of employees , consisting of officers and workers of an organization is Rs. 3000. The average salary of an officer is Rs. 10,000 while that of a worker Rs. 2000/ month . If there are total 400 employees in the organization . Calculate the number of workers and officers separately.
A) 470,50 B) 200,70 C) 350,50 D) 240,65 E) 300,60

9. Ishita invested in 3 schemes P,Q and R the amounts in the ratio 2 : 3 : 4 resp. If the schemes offered interest at 20 p.c.p.a , 16 p.c.p.a and 15 p.c.p.a resp. Calculate respective ratio of amount after one year.
A) 12:75:63 B) 54:71:110 C) 78:45:94 D) 60:87:115 E) 44:54:73

10. The number of copies circulated for a first – rank newspaper is 25,42,745 in the world. If the number of copies circulated for the second rank newspaper is less by 6,15,430 of the first – rank newspaper, how many copies of second rank newspaper are circulated in the world?
A) 20,10,100 B) 19,27,315 C) 18,50,000 D) 10,12,785 E) 11,24,578

11. A bag contains 4 green and 6 red balls. Another bag B contains 3 green and 4 red balls. If one ball is drawn from each bag. Find the probability that both are green.
A) 7/48 B) 4/33 C) 7/45 D) 6/35 E) 2/35

12. In a rectangular tank there are two garbage tanks , X and Y with lengths 12m and 15m resp. in a square field . If the total area of the square field excluding the rectangular tanks is 360 sq. m and the breadth of both the rectangular tanks is (1/3) of the side of the square field , what is the perimeter of the square field (in m)?
A) 63 B) 87 C) 75 D) 84 E) 96

13. The ratio between the rates of travelling of P and Q is 3 : 4 and then P takes 10 min. more than the time taken by Q to reach a destination . If P had walked at double the speed , at what time he would have covered the distance ?
A) 20 B) 35 C) 10 D) 24 E) 15

14. In how many different ways can the letters of the word "CANDIDATE" be arranged in such a way that the vowels always come together ?
A) 4578 B) 5100 C) 4320 D) 3245 E) 1245

15. There was a book exhibition in an auditorium. On the first day 14 persons visited the exhibition , on the second day 12 persons and on the third day only 10 persons visited the exhibition . The ratio of admission fees collected from each of them on these days was 2 : 3 :5 resp. If the total amount collected on these three days was Rs. 4560 , what amount was collected on the first day ?
A) Rs.1400 B) Rs.1120 C) Rs.4500 D) Rs.2457 E) Rs.2450

16. There are 8 blue balls , 4 green balls and 5 white balls in a bag. 5 balls are chosen at random . What is the probability of their being 2 blue balls , 1 green ball and 2 white balls?
A) 199/1457 B) 200/1547 C) 280/1547 D) 280/1457 E) 110/1457

17. The population of a village increases by 10% during the first year but during the next year, it decreases by 15%. If the population at the end of the second year was 56100. Find the population at the beginning of the first year.
A) 55,000 B) 70,000 C) 60,000 D) 75000 E) 90,000

18. A tank can be filled by two pipes in 20 minutes and 30 minutes resp. The two pipes are opened when the tank was empty. The first pipe was closed after some time. The tank was filled in 18 minutes. Find after how much time from the start, was the first pipe closed ?
A) 10mins. B) 8mins. C) 15mins. D) 20mins. E) 13mins.

19. 7 years ago ,the average age of a husband and wife was 25 years at the time of their marriage . Now the average age of the family including husband ,wife and a child born during the interval is 22 years. What is the present age of the child?
A) 6 years B) 4 years C) 8 years D) 2 years E) 3 years

20. The radius of a circle wheel is 70cm .A cyclist takes 22hours to reach a destination at the speed of 20kmph.How many revolutions will the wheel make during this journey ?
A) 1lakh B) 5lakh C) 50,000 D) 30,000 E) 2lakh

21. The sum of side of a square and length of a rectangle is 30m and the sum of the side of the square and breadth of the rectangle is 24m. If the length of the rectangle is twice its breadth ,what is the respective ratio between the area of the square and the area of the rectangle ?
A) 11:7 B) 9:8 C) 9:2 D) 8:5 E) 10:9

22. A certain sum is invested for 2 years in scheme X at 20% p.a. compound interest compounded annually . Same sum is also invested for the same period in scheme Y at x% p.a. at as simple interest . The interest earned from scheme X is twice of that earned from scheme Y. What is the value of x ?
A) 10 B) 13 C) 9 D) 8 E) 11

1.Option A
Solution:
Male …….Female
55x……45x
=> 10x = 72
=> x = 7.2
Therefore , 7.2 * 100 = 720
2.Option A
Solution:
Let k be the fixed expenditure.
k + 10x = 6000
k + 25x = 9000
=> 15x = 3000
=> x = 200 and k = 4000
Therefore ,
k + 40x = 12,000
3. Option D
Solution:
Efficiency of pipe A = 3.33%
Efficiency of pipe B = 2.22%
Combined efficiency = 5.55%
Therefore ,
2 hours ……pipe A and B fill ……5.55%
36 hours ……..requires to fill the tank …..100%
4. Option A
Solution:
cost of fresh mangoes +cost of packaging = Total cost
1 + 0.4 = 1.4
1.3 + 0.2 = 1.5
% increase in cost = (0.1/1.4) *100 = 7.14%
5.Option C
Solution:
Time taken to meet Mallika and Supriya = 1080/(60 + 120) = 6hrs.
so, in 6 hrs Mallika covers a distance of 360km and this 360km dist. Heena covers in 360/90 = 4hrs.
Hence ,Heena leaves Kolkata 2 hrs later than Mallika i.e at 8am .
6. Option B
Solution:
Here , N and C are not common and same letters can be A ,I ,S,T .
Therefore ,
Probability of choosing A = (2C1/9C1) * (1C1/10C1) = 1/45
Probability of choosing I = (1/9C1) * (2C1 / 10C1) = 1/45
Probability of choosing S = (3C1/9C1) * (3C1/10C1) = 1/10
Probability of choosing T = (2C1/9C1) * (3C1/10C1) = 1/15
Hence ,required probability =(1/45)+(1/45)+(1/10)+(1/15) = 19/90
7. Option D
Solution:
Let speed of boat in still water = x kmph
speed of current = y kmph
4/(x+y) = 3
=> x+y = 38.4/3 = 12.8kmph
Again,
38.4/(x-y) = (16/9)*3 = 16/3
=> x – y = 7.2 kmph
Therefore ,
speed of boat in still water = (12.8+7.2)/2 = 10 kmph
8.Option C
Solution:
Let the no. of officers be x
and no. of workers be (400 – x)
=> 3000*400 = 10000x + 2000(400 – x)
=>x = 50
Therefore ,
No. of workers = 350
No. of officers = 50
9. Option D
Solution:
Required ratio = 2x*(120/100) : 3x*(116/100) : 4x*(115/100)
60 : 87 : 115
10.Option B
Solution:
Required answer **=** 25,42,745 – 6,15,430
11. Option D
Solution:
Total balls in bag A = 4 + 6 = 10
Total balls in bag B = 7
Probability of green balls in bag A = 4/10
Probability of green balls in bag B = 3/7
Therefore ,
Total probability = (4/10)*(3/7) = 6/35
12. Option E
Solution:
Let length of square be x m.
Breadth of each tank = (x/3) m
Area of square field – Area of both tanks = 360
x^2 – {[(12*x)/3] +[(15*x)/3]} = 360
=> x =24
Therefore ,
Perimeter of the square field = 4*24 = 96m
13.Option A
Solution:
Time taken by P = (x+10) min.
Time taken by Q = x min.
Therefore ,
=> 3 / 4 = x/ (x+10)
=> x = 30 min.
Time taken by P = 40min.
If P doubles his speed ,then time taken by P = 20min.
14. Option C
Solution:
Vowels = A ,I ,A , E

Consonants = C,N,D,D,T
Here ,D and A comes twice.
No. of arrangements = (6! * 4!)/ (2! *2!) = 4320
15. Option B
Solution:
Ratio of amount collected = (14*2) : (12*3) : (10*5) = 28 : 36 : 50 = 14 : 18 : 25
sum of ratios = 14 + 18 + 25 = 57
Therefore ,
Amount collected on day one = (14/57) * 4560 = Rs.1120
16. Option C
Solution:
Total possible outcomes = 17C5 = 6188
Total favourable outcomes = 8C2 * 4C1 * 5C2 = 1120
Required probability = 1120/6188 = 280/1547
17. Option C
Solution:
Required population = 56100 *[100/(100 + 10)]*[100/(100 – 15)]
= 60,000
18. Option B
Solution:
Total capacity = 60 units
first pipe = 3 units/mins.
second pipe = 2 units/mins.
Total time required by both the pipe to fill the empty tank = 60/5 = 12mins.
By second pipe it is filled in 18 mins. = 36 litre
Remaining = 60 – 36 = 24 litre
By first pipe = 24/3 = 8mins.
19. Option D
Solution:
Total age 7 years ago = 25 * 2 = 50 years
Total age ,now = 50 +7*2 = 64 years
Total age after child is born = (64 + x)years
Average = (64+x)/3 = 22
= > x = 2 years
20.Option A
Solution:
Circumference of the wheel = 2*pi*r = 2*(22/7)*70 = 440 m
Therefore ,number of revolutions = (2000000 * 22)/440 = 1,00,000
21. Option C
Solution:
Let the width of rectangle be x
then length = 2x
Let the side of square = y
Now ,
2x + y = 30 ———(1)
x + y = 24————-(2)
subtracting (2) from (1) equations ,we get
=> x = 6 m
=> y = 18 m
Therefore ,
area of the square : area of the rectangle = (18*18) : (6*12) = 9 : 2

22. Option E
Solution:
Let principal be P.
C.I. = P[(1+ (R/100)^2) -1] = P[(1 + (20/100)^2) – 1]
=P[(6/5)^2 – 1] = P[(36/25) – 1]
= 11P/25
S.I. = (P*T*R)/100 = (P * 2 * x)/100 = 2Px/100
Now,
11P/25 = 2*(2Px/100)
=> x = 11