1. For a p x q bivariate frequency table, the maximum number of marginal distributions is
   a) p
   b) p + q
   c) 1
   d) 2
2. What is spurious correlation?
   a) It is a bad relation between two variables.
   b) It is very low correlation between two variables.
   c) It is the correlation between two variables having no causal relation.
   d) It is a negative correlation.
3. If all the plotted points in a scatter diagram lie on a single line, then the correlation is
   a) Perfect positive
   b) Perfect negative
   c) Both (a) and (b)
   d) Either (a) or (b)
4. The method applied for deriving the regression equations is known as
   a) Least squares
   b) Concurrent deviation
   c) Product moment
   d) Normal equation
5. If r = 0.8 then the coefficient of non-determination is
   a) 0.4
   b) -0.6
   c) 0.36
   d) 0.64
6. If u + 5x = 6 and 3y + 7v = 20 and the correlation coefficient between x and y is 0.58 then what would be the correlation coefficient between u and v?
   a) 0.58
   b) -0.58
   c) -0.84
   d) 0.84
7. The coefficient of concurrent deviation for p pairs of observations was found to be $1/_2$. If the number of concurrent deviations was found to be 5, then the value of p is.
   a) 10
   b) 9
   c) 8
   d) None of these
8. If u = 3x + 5 and v = 2y - 6 and regression coefficient of y on x is 2.4, what is the regression coefficient of v on u?
   a) 1.6
   b) -3.6
   c) 2.4
   d) -2.4
9. If 4y - 5x = 15 is the regression line of x on y and the coefficient of correlation between x and y is 0.75, what is the value of the regression coefficient of y on x?
   a) 0.45
   b) 0.9375
   c) 0.703125
   d) None of these
10. r, b_{xy}, b_{yx} all have _____ sign
    a) Different
    b) Same
    c) Both
    d) None

11. Two regression lines coincide when
    a) r = 0
    b) r = 2
    c) r = ± 1
    d) none
12. If the rank correlation coefficient between marks in management and mathematics for a group of student in -0.4 and the sum of squares of the differences in ranks in 28, what is the number of students in the group?
    a) 10
    b) 9
    c) 5
    d) 7
13. Two broad divisions of probability are
    a) Subjective probability and objective probability
    b) Deductive probability and non-deductive probability
    c) Statistically probability and Mathematical probability
    d) None of these
14. If P(A) = 2/9, then the odds against the event A is
    a) 2 : 7
    b) 5 : 4
    c) 7 : 2
    d) 5 : 14
15. Expected value of a random variable
    a) is always positive
    b) may be positive or negative
    c) may be positive or negative or zero
    d) can never be zero.
16. If two letters are taken at random from the word DUSHYANT, what is the Probability that none of the letters would be vowels?
    a) 13/28
    b) 14/28
    c) 15/28
    d) 16/28
17. What is the chance of getting one defective item if 3 items are drawn randomly from a lot containing 6 items of which 2 are defective item?
    a) 0.30
    b) 0.60
    c) 0.80
    d) 0.50
18. If two unbiased dice are rolled together, what is the probability of getting difference of points?
    a) 7 / 9
    b) 29 / 36
    c) 5 / 6
    d) 1 / 6
19. A bag contains 1200 balls which are numbered from 1 to 1200. If a ball is selected at random, what is the probability that the number of the ball will be a multiple of 23 or 31 ?
    a) 69/1200
    b) 89/1200
    c) 79/1200
    d) 59/1200
20. If P (A) = b, P (B) = a and P (P (A^c ∩ B) = c then the expression of P (A ∩ B^c) in terms of a, b and c is
    a) 1 - a - b – c
    b) a + b – c

c) b –a+ c
d) 1 - a - b + c

21. There are three persons aged 60, 65 and 70 years old. The survivals probabilities for these three persons for another 5 years are 0.7, 0.4 and 0.2 respectively. What is the probability that exactly one of them would survive another five years?
    a) 0.425
    b) 0.456
    c) 0.392
    d) 0.388
22. For a group of students, 30 %, 40% and 50% failed in Physics, Chemistry and at least one of the two subjects respectively. If an examinee is selected at random, what is the probability that he passed in Physics if it is known that he failed in Chemistry?
    a) 1 / 2
    b) 1 / 3
    c) 1 / 4
    d) 1 / 6
23. A bag contains 3 white and 2 red balls. If a person draws 2 balls and receives Rs.15 and Rs.45 for a white and red balls respectively, then his expected amount is
    a) Rs. 53
    b) Rs. 55
    c) Rs. 54
    d) Rs. 52
24. The probability distribution of a random variable is as follows:

x:	1	2	3	4
P:	k	3k	3k	3k

    The variance of x is
    a) 0.69
    b) 4.41
    c) 0.96
    d) 1.44
25. The following table gives distribution of wages of 100 workers –

Wages (in Rs.)	120-140	140 – 160	160-180	180 -200	200- 220	220-240	240- 260
No. of workers	9	20	20	10	8	15	18

    The probability that his wages are between Rs.140 to Rs.220 is
    a) 85/100
    b) 58/100
    c) 29/100
    d) None