1. Evaluate (9+3) mod 12=
2. 2 b. 8 c. 32 d. 12
3. For any integers a and b , and positive integer n, then $a≡a\left(mod n\right)=$
4. 0 b. n c. a d. 1
5. If x is real number and $\left|x\right|$< 3, then
6. $x\geq 3$ b. $-3<x<3$ c. $x\leq 3$ d. $-3\leq x\leq 3$
7. If A and B are symmetric matrices of same order, AB-BA is a
8. Skew-symmetric b. symmetric c. zero d. identity
9. If a is a square matrix such that $A^{2}=A,$ then $\left(I+A\right)^{3}-7A$ is equal to
10. A b. I-A c. I d. 3A
11. If A is a matrix of order $m×n$ and B is a matrix such that $AB^{'} and B'A$ are both defined, then order of matrix B is
12. $m×m$ b. $n×n$ c. $n×m$ d. $m×n$
13. Cramer’s Rule fails for
14. Determinant > 0 b. Determinant < 0 c. Determinant = 0 d. Determinant = non real
15. The smallest value of the polynomial $x^{3}-18x^{2}+96x$ in [0,9] is
16. 126 b. 0 c. 135 d. 160
17. The function $f\left(x\right)=\tan(x-x)$
18. Always increasing b. always decreasing c. never increase d. sometime increasing and sometime decreasing
19. Variance of a random variable X is given by
20. $E(X)$ b. $E(X^{2})$ c. $E\left(X^{2}\right)-\left(E\left(X\right)\right)^{2}$ d. $\left(E\left(X\right)\right)^{2}$
21. For large value of ‘n’ , Binomial Distribution
22. Loses its discreteness b. tends to Poisson’s distribution c. Stay as it is d. give oscillatory values
23. The shape of normal curve depends on its
24. Mean deviation b. standard deviation c. quartile deviation d. correlation
25. If ‘m’ is the mean of Poisson distribution , the standard deviation is given by
26. $√m$ b. $m^{2}$ c. $m$ d. $\frac{m}{2}$
27. The value of year for index number is
28. 100 b. 10 c. 1000 d. none of these
29. A index number is called simple index number when it is computed from
30. Single variable b. Bi-variable c. Multiple variable d. None of these
31. Fisher price index is the
32. A.M of Laspeyre’s and Paasche’s b. G.M of Laspeyre’s and Paasche’s c. difference of Laspeyre’s and Paasche’s d. None of these.
33. A and B invest in a business in the ratio 3:2. If 5% of the total profit goes to charity and A’s share is Rs. 855, the total profit is :
34. 500 b. 1000 c. 1500 d. 2000
35. The matrix $P= \left[\begin{matrix}0&0&4\\0&4&0\\4&0&0\end{matrix}\right]$ is a
36. Square matrix b. diagonal matrix c. unit matrix d. None of these
37. Normal distribution is symmetric about
38. Variance b. mean c. standard deviation d.covariance.
39. An index number constructed to measure changes in quantities over a period of time is
40. Quantity index b. time series c. quality index d. value index
41. In what ratio the grocer will mix two varieties of pulses costing Rs.15 and Rs.20 per kg respectively so as to get a mixer worth Rs.16.50 per kg
42. 3:7 b. 5:7 c. 7:3 d. 7:5
43. Three friends X, Y and Z agrees to invest for time periods in the ratio 2:3:4. If their profit sharing ratio is 6:7:8 then the ratio of their investments is
44. 4:5:6 b. 9:7:6 c. 8:7:6 d. 12:21:32
45. It is currently 7:00 a.m in 12 hr clock ,the time in next 493 hrs will be
46. 8:00 a.m b. 8:00 p.m c. 20:a.m d. 20:00 p.m
47. In which of the technology matrix, Hawkins- Simon conditions are satisfied
48. $\left[\begin{matrix}0.2&0.9\\0.8&0.1\end{matrix}\right]$ b. $\left[\begin{matrix}0.7&0.3\\0.2&1.2\end{matrix}\right]$ c. $\left[\begin{matrix}1.02&0.5\\0.6&0.8\end{matrix}\right]$ d. $\left[\begin{matrix}0.3&0.2\\0.1&0.5\end{matrix}\right]$