MATHS

BOOKS - DEEPTI MATHS (TELUGU ENGLISH)

THEORETICAL DISTRIBUTIONS

Solved Examples

1. The probability distribution of a random variable X is given

below, then k=

$X = x$	1	2	3	4
$P(X = x)$	k	$4k$	$4k$	k

A. 0.1

B. 0.2

C. 0.3

D. 0.4

Answer: A

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2. A random variable X has its range $\{0, 1, 2, 3, \ldots \ldots \}$. If $P(X = r) = \dfrac{c(r + 1)}{3^r}$ for r=0,1,2,.......... Then c =

A. 2

B. 1/2

C. 4/9

D. 1/4

Answer: C

3. 'S' is the sample space obtained when a pair of symmetric dice are tossed , X is the random variable defined by X(a,b) = max {a,b} so that the range of X is the set {1,2,3,4,5,6}. Then the mean of X is

A. 5.5

B. 5.57

C. 4.47

D. 4.97

Answer: C

4. Let n be a fixed positive integer and X take values

1,2,3,..........n. If $P(X = k) = \dfrac{1}{n}$ for

A. $\dfrac{\sqrt{n^2 - 1}}{2\sqrt{3}}$

B. $\dfrac{n^2 + 1}{2\sqrt{3}}$

C. $\dfrac{\sqrt{n^2 - 1}}{12}$

D. $\dfrac{n^2 + 1}{12}$

Answer: A

5. A random variable X takes the values 0,1,2, it's mean is 0.6.

If P(X=0)=0.5 then P(X=1)=

A. 0.3

B. 0.4

C. 0.7

D. 0.8

Answer: B

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6. If a binomial distribution has mean 15 and variance is 10,

then n=

A. 20

B. 15

C. 35

D. 45

Answer: D

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7. Fourty identical coins each with probability p of showing

heads are tossed. The probability of heads showing on 20

coins is sme as that of heads showing on 21 coins. Then p=

A. $10/41$

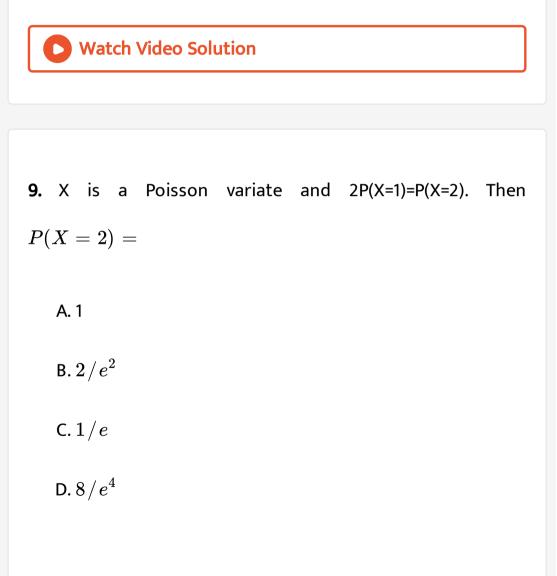B. $20/41$

C. $21/41$

D. $11/41$

Answer: C

8. A man takes a step forward with probability 0.3 and backward with probability 0.7. The probability that at the end of nine steps, he is just one step away from the starting point is

A. $126(0.21)^4$

B. $368(0.24)^5$

C. $462(0.24)^6$

D. $368(0.24)^6$

Answer: A

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9. X is a Poisson variate and 2P(X=1)=P(X=2). Then

$P(X = 2) =$

A. 1

B. $2/e^2$

C. $1/e$

D. $8/e^4$

Answer: D

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10. Cycle tyres are supplied in lots of 10 and there is a chance of 1 in 50 tyres to be defective . Using Possion distribution the approximate number of lots containing no defective tyres in a consignment of 100 lots is e^-0.2 =0.82

A. 98

B. 80

C. 89

D. 82

Answer: D

1. A random varible X has its range :1,2,3}. If

$$P(X = 1) = c, P(X = 2) = 3c, P(X = 3) = 5c, \text{ then c=}$$

A. $1/9$

B. $2/9$

C. $3/9$

D. $1/6$

Answer: A

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2. A random variable X ahs the following distribution

x	1	2	3	4
$P(X = x)$	c	$2c$	$3c$	$4c$

The value of c is

A. 0.1

B. 0.2

C. 10

D. 20

Answer: A

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3. A random variable X has the following distribution

x:	1	2	3	4
$P(X=x)$:	k^2	$3k^2$	$5k^2$	$7k^2$

The value of k is

    A. $\pm 1/4$

    B. $1/10$

    C. $1/6$

    D. 6

Answer: A

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4. The probability distribution of a random variable X is

given below , then k=

$X = x$	1	2	3	4
$P(X = x)$	$2k$	$4k$	$3k$	k

A. 0.1

B. 0.2

C. 0.3

D. 0.4

Answer: A

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5. The distribution of a random variable X is given below:

$X = x$	-2	-1	0	1	2	3
$P(X = x)$	$\frac{1}{10}$	k	$\frac{1}{5}$	$2k$	$\frac{3}{10}$	k

The value of k is

A. $\dfrac{1}{10}$

B. $\dfrac{2}{10}$

C. $\dfrac{3}{10}$

D. $\dfrac{7}{10}$

Answer: A

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6. The probability distribution of a random variable is given

below:

$X = x$	0	1	2	3	4	5	6	7
$P(X = x)$	0	k	$2k$	$2k$	$3k$	k^2	$2k^2$	$7k^2 + k$

Then $P(0 < X < 5) =$

A. $\dfrac{1}{10}$

B. $\dfrac{3}{10}$

C. $\dfrac{8}{10}$

D. $\dfrac{7}{10}$

Answer: C

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7. random variable X has the range {1,2,3,..........}. If

$P(X = r) = c^{r/r}$ for r=1,2,3,.......... then c=

A. e^2

B. 2^e

C. $\log_e 2$

D. $1/2$

Answer: C

8. A random variable X has its range {0,1,2,3,.........}. If $P(X = r) = \dfrac{c(r+1)}{2^r}$ for r=0,1,2,........... Then c=

A. 2

B. $1/2$

C. 4

D. $1/4$

Answer: D

9. If the range of a random variable X is {0,1,2,3,4,..........} with $P(X = k) = \dfrac{(k + 1)}{3^k}$ for $k \geq 0$, then u=

A. $2/3$

B. $4/9$

C. $8/27$

D. $16/81$

Answer: B

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10. The range of a random variable X={1,2,3,............) and the probabilities are given by

$P(X = k) = \dfrac{3^{ck}}{k!}$ (k=1,2,3,............) and c is a constant . Then c=

A. $\dfrac{1}{2}\log(\log 2)$

B. $\log_3(\log 2)$

C. $\dfrac{\log_e(\log 2)}{\log_3 e}$

D. $\log_2(\log 3)$

Answer: B

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11. A.p.d.f of a discrete random variable is zero except at the points x = 0, 1, 2. At these points it has the value $P(0) = 3c^3$, $P(1) = 4c - 10c^2$, $P(2) = 5c - 1$ for some $c > 0$. Find the value of c.

A. 2

B. $1/3$

C. $2/3$

D. $1/9$

Answer: B

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12. The range of a random variable X is {0, 1, 2}. Given that

$$P(X = 0) = 3c^3, P(X = 1) = 4c - 10c^2, P(X = 2) = 5c - 1$$

where c is constant.

Find (i) the value of c (ii) $P(X < 1)$

(iii) $P(1 < X \leq 2)$ (iv) $P(0 < X \leq 3)$

A. $1/3$

B. 8/9

C. 7/8

D. 1/9

Answer: B

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13. A random variable X has the following distribution

$$X = x_1: \qquad 1 \quad 2 \quad 3 \quad 4$$
$$P(X = x_1): \quad k \quad 2k \quad 3k \quad 4k$$

The value of k and $P(X < 3)$ are equal to

A. $k = 1/10, \ P(X < 3) = 3/5$

B. $k = 1/10, \ P(X < 3) = 3/10$

C. $k = 3/10, \ P(X < 3) = 1/10$

D. $k = 1/24, P(X < 3) = 5/12$

Answer: B

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14. A person who tosses an unbiased coin gains two points for turning up a head and loses one point for a tail. If three coins are tossed and the total score X is observed, then the range of X is

A. {0,3,6}

B. {-3,0,3)

C. {-3,0,3,6}

D. {-3,3,6}

Answer: C

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15. A random variable X has the following distribution

$x:$ 1   2   3   4
$P(X = x):$ 0.1   0.2   0.3   0.4

Then its mean is

A. 1

B. 3

C. 2

D. 6

Answer: B

16. A random variable X has its range {1,2,3}. If

$$P(X = 1) = 1/6, P(X = 2) = 1/3. P(X = 3) = 1/2$$

then mean =

A. $7/3$

B. $5/3$

C. $4/3$

D. $1/3$

Answer: A

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17. The probability distribution of a random variable X is given below. Then its mean is

$X = x_1$	1	2	3
$P(X = x_1)$	$1/4$	$1/8$	$5/8$

A. $19/8$

B. $5/4$

C. 1

D. $4/5$

Answer: A

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18. A random variable X has the following distribution

x_1:	0	1	2	3
$P(X = x_1)$:	$2k^2$	$3k^2$	$5k^2$	$6k^2$

Then value of k and its mean are

A. $\pm 1/4,\ 31/16$

B. $-1/7,\ 30/26$

C. $1/2,\ 25/15$

D. $1/8,\ 35/16$

Answer: A

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19. The probability distribution of a random variable X is given by

$X = x$	0	1	2	3	4
$P(X = x)$	0.4	0.3	0.1	0.1	0.1

The variance of X is

A. 1.76

B. 2.45

C. 3.2

D. 4.8

Answer: A

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20. The probability distribution of a random variable X is

given below:

$X = x$	0	1	2	3
$P(X = x)$	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$

Then the variance of X is

A. 1

B. 2

C. 3

D. 4

Answer: A

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21. If m and σ^2 are the mean and variance of the random variable X, whose distribution is given by:

$X = x:$	0	1	2	3
$P(X = x):$	$\frac{1}{3}$	$\frac{1}{2}$	0	$\frac{1}{6}$

A. $m = \sigma = 2$

B. $m = 1, \sigma^2 = 2$

C. $m = \sigma^2 = 1$

D. $m = 2, \sigma^2 = 1$

Answer: C

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22. X is a random variable with distribution given below

x:	0	1	2	3
$P(X = x)$:	k	$3k$	$3k$	k

The value of k and its variance are

A. $1/8, 22/27$

B. $1/8, 23/27$

C. 1/8, 24/27

D. 1/8, 27/36

Answer: D

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23. A random variable X has the probability distribution given below. Its variance is

X	1	2	3	4	5
$P(X = x)$	k	$2k$	$3k$	$2k$	k

A. $\dfrac{4}{3}$

B. $\dfrac{5}{3}$

C. $\dfrac{10}{3}$

D. $\dfrac{16}{3}$

Answer: A

24. A random variable X follows the following distribution

$$(X = x_i: , 0, 1, 2, 3), (P(X = x_i): , 2/6, 3/6, 0/6, 1/6,)$$

The mean and the variance are

A. 1,1

B. 1,2

C. 2,1

D. 2,2

Answer: A

25. A random variable X has the following distribution

$X = x_1$:	-2	-1	0	1	2	3
$P(X = x_1)$:	0.1	k	0.2	$2k$	0.3	k

The value of k and its mean and variance are

A. 0.1,1.0,0.85

B. 0.5, 0.2, 2.1

C. 0.21, 0.85, 2.16

D. 0.1, 0.8, 2.16

Answer: D

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26. A random variable X has the following distribution

$$x \quad\quad\quad : -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3$$
$$P(X = x): \quad 0.05 \quad 0.1 \quad 0.3 \quad 0 \quad 0.3 \quad 0.15 \quad 0.1$$

The mean and variance are

A. $\mu = 0.25, \sigma^2 = 2.8875$

B. $\mu = 25, \sigma^2 = 2.8$

C. $\mu = 0.17, \sigma^2 = 3.125$

D. $\mu = 0.13, \sigma^2 = 0.654$

Answer: A

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27. The random variable takes the values 1,2,3,.......m. If

$P(X = n) = \dfrac{1}{m}$ to each n, then the variance of X is

A. $\dfrac{(m+1)(2m+1)}{6}$

B. $\dfrac{m^2-1}{12}$

C. $\dfrac{m+1}{2}$

D. $\dfrac{m^2+1}{12}$

Answer: B

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28. A randomm variable X takes the value -1,0,1. It's mean is

0.6. If (X=0)=0.2 then P(X=1)=

A. 0.3

B. 0.5

C. 0.7

D. 0.8

Answer: C

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29. Let X denote the profit of a business man. The probability

of getting profit $Rs.\ 3000$ is 0.6. The probability of getting

loss $Rs4000$ is 0.3. The probability of getting neither profit

nor loss is 0.1 . The mean and variance of X are

A. $\mu = 100,\ \sigma^2 = 18200000$

B. $\mu = 400,\ \sigma^2 = 12300$

C. $\mu = 400,\ \sigma^2 = 4560000$

D. $\mu = 600,\ \sigma^2 = 9840000$

Answer: D

30. For a dealer in a consignment of umbrellas , the probabilty of getting a profit of $Rs.\ 1500$ is 0.6, the probability of getting a loss of $Rs.\ 1000$ is 0.3 and the probability of getting no profit or no loss is 0.1. The mean profit of the dealer is

A. 500

B. 900

C. 300

D. 600

Answer: D

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31. A box contains 6 tickets. Two of the tickets carry a price of $Rs. 5/-$ each , the other 4 the price of $Rs.1$. If one ticket is drawn, the mean value of the price is

A. $14/3$

B. $7/6$

C. 1

D. $7/3$

Answer: D

32. A random variable X has the probability distribution:

X: 1   2   3   4   5   6   7   8
$p(X)$:   0.15   0.23   0.12   0.10   0.20   0.08   0.07   0.05

For the events E={X is a prime number} and $F = \{X < 4\}$,

the probability $P(E \cup F)$ is

   A. 0.87

   B. 0.5

   C. 0.35

   D. 0.77

Answer: D

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33. The probability of getting exactly 2 heads when tossing 7 coins is

    A. $21/128$

    B. $15/16$

    C. $30/16$

    D. $1/2$

Answer: A

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34. A coin is tossed 3 times. The probability of getting head once and tail two times is

A. $1/3$

B. $1/4$

C. $3/8$

D. $1/2$

Answer: C

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35. If X is the number of heads getting when five coins are tossed, then mean and variance are

A. $5/2, 5/4$

B. $4, \sqrt{2}$

C. $7/2, \sqrt{35/12}$

D. $3/4, 4/5$

Answer: A

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36. If X is the number of heads getting when 8 coins are tossed , then mean and standard deviation are

    A. $5/2, 5/4$

    B. $4, \sqrt{2}$

    C. $7/2, \sqrt{35/12}$

    D. $3/4, 4/5$

Answer: B

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37. If X is the number on the die , when a die is rolled, then

mean and standard deviation are

    A. $5/2, 5/4$

    B. $4, \sqrt{2}$

    C. $7/2, \sqrt{35/12}$

    D. $3/4, 4/5$

Answer: C

38. If X is the sum of the number when two dice are rolled , then mean variance are

A. $5/2, 5/4$

B. $4, \sqrt{2}$

C. $4, 2.18$

D. $7, 5.83$

Answer: D

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39. In a binomial distribution $n = 12, p = 1/3$. Then mean and variance are

A. $4, 8/3$

B. $2, 6/3$

C. $1, 5/2$

D. $4, 2/3$

Answer: A

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40. Two coins whose faces are market 1 and 2 are tossed.

What is mean value of the total value of numbers?

A. 1

B. 2

C. 3

D. 4

Answer: C

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41. Four bad apples are mixed accidentally with 20 good apples. Probability distribution of the number of bad apples in a draw of 2 apples with replacement is formed. The mean is

A. $1/3$

B. $22/69$

C. $40/138$

D. $1/23$

Answer: A

42. In a binomial distribution $n = 20, q = 0.75$. Then mean =

A. 5

B. 15

C. 10

D. 7.5

Answer: A

43. For binomial distribution $n = 10$, $q = 0.4$, then mean is

A. 1

B. 5

C. 6

D. 10

Answer: C

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44. If a binomial distribution have parameters $9, 1/3$ then

P(X=4)=

A. $448/2187$

B. $224/1186$

C. $112/1046$

D. $94/886$

Answer: A

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45. In a binomial distribution, mean is 5 and the variance is 4 . The number of trials is

A. 9

B. 20

C. 25

D. 125

Answer: C

46. If the mean and variance of a binomial distribution are

$15/4$ and $15/16$ then the number of trials is

A. 5

B. 2

C. 4

D. 6

Answer: A

47. If a binomial distribution has mean 2.4 and variance is 1.44, then n=

A. 10

B. 6

C. 16

D. 20

Answer: B

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48. If a binomial distribution has mean 20 and variance is 15, then p=

A. 1//18

B. $1/8$

C. $1/2$

D. $1/4$

Answer: D

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49. In a binomial distribution n=400, $p = 1/5$, It's standard deviation is

A. $10\sqrt{2}$

B. $1/800$

C. 4

D. 8

50. If for a binomial distribution the mean is 6 and the standdard deviation is $\sqrt{2}$, then P(X=r)=

A. $.^9 C_r (2/3)^r (1/3)^{9-r}$

B. $.^9 C_r (1/3)^r (2/3)^{9-r}$

C. $.^{12} C_r (2/3)^r (1/3)^{12-r}$

D. $.^{12} C_r (1/3)^r (2/3)^{9-r}$

Answer: A

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51. For a binomial distribution $\bar{x} = 4$, $\sigma = \sqrt{3}$ Then P(X=r)=

A. $^{16}C_r(1/4)^r(3/4)^{16-r}$

B. $^{12}C_r(1/4)^r(3/4)^{12-r}$

C. $^{16}C_r(3/4)^r(1/4)^{16-r}$

D. $^{12}C_r(3/4)^r(1/4)^{12-r}$

Answer: A

52. The mean and variance of a random variable X having a

binomial distribution are 4 and 2 respectively, then P(X=1) is

A. $1/16$

B. $1/8$

C. $1/4$

D. $1/32$

Answer: D

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53. The mean and the variance of a binomial distribution are 4 and 2 respectively. Then the probability of 2 successes is

A. $\dfrac{37}{256}$

B. $\dfrac{28}{256}$

C. $\dfrac{128}{256}$

D. $\dfrac{219}{256}$

Answer: B

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54. The mean and standard deviation of a binomial variate X

are 4 and $\sqrt{3}$ respectively. Then $P(X = \ge 1) =$

A. $1 - (1/4)^{16}$

B. $1 - (3/4)^{16}$

C. $1 - (2/3)^{16}$

D. $1 - (1/3)^{16}$

Answer: B

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55. If the mean and variance of a binomial variable X are 2 and 1 respectively, then $P(X \geq 1) =$

A. $\dfrac{2}{3}$

B. $\dfrac{15}{16}$

C. $\dfrac{7}{8}$

D. $\dfrac{4}{5}$

Answer: B

56. Let X be a binomially distributed variate with mean 10 and variance 5. Then $P(X > 10) =$

A. $\dfrac{1}{2^{20}} \displaystyle\sum_{11}^{20} .^{20}C_k$

B. $\dfrac{1}{2^{10}} \displaystyle\sum_{1}^{11} .^{20}Ck$

C. $\dfrac{1}{2^{20}} \displaystyle\sum_{1}^{20} .^{10}Ck$

D. $\displaystyle\sum_{11}^{20} .^{20}Ck\dfrac{1}{2^k}\left(\dfrac{2}{3}\right)^{30-k}$

Answer: A

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57. If the mean and variance of a binomial variate X are 8 and 4 respectively then $P(X < 3) =$

A. $\dfrac{137}{2^{16}}$

B. $\dfrac{697}{2^{16}}$

C. $\dfrac{265}{2^{16}}$

D. $\dfrac{265}{2^{15}}$

Answer: A

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58. If the differnce between the mean and variance of a buinomial distribution for 5 trials is $5/9$, then the distribution is

A. $(2/5 + 3/5)^5$

B. $(2/3 + 1/3)^5$

C. $(1/3 + 2/3)^5$

D. $(3/4 + 1/4)^5$

Answer: B

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59. If the mean and variance of a binomial distribution are 4 and $4/3$. Then the distribution is

A. $\left(\dfrac{1}{5} - \dfrac{1}{3}\right)^6$

B. $\left(\dfrac{1}{3} + \dfrac{2}{3}\right)^2$

C. $\left(\dfrac{1}{2} + \dfrac{2}{3}\right)^4$

D. $\left(\dfrac{1}{3} + \dfrac{2}{3}\right)^6$

Answer: D

60. In a binomial distribution the mean is 12 and the standard deviation is $\sqrt{3}$. Then the distribution is

A. $\left(\dfrac{1}{4} + \dfrac{3}{4}\right)^{16}$

B. $\left(\dfrac{1}{4} + \dfrac{1}{4}\right)^{16}$

C. $\left(\dfrac{1}{2} - \dfrac{1}{4}\right)^{6}$

D. $\left(\dfrac{3}{4} - \dfrac{1}{4}\right)^{6}$

Answer: A

61. In a binomial distribution, n=5, the sum of the mean and variance is 1.8 . Then the distribution is

A. $\left(\dfrac{4}{5} + \dfrac{1}{5}\right)^3$

B. $\left(\dfrac{3}{5} + \dfrac{2}{5}\right)^5$

C. $\left(\dfrac{1}{5} + \dfrac{1}{5}\right)^5$

D. $\left(\dfrac{4}{5} + \dfrac{1}{5}\right)^5$

Answer: D

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62. If the difference between mean and variance of a binomial distribution is 2 and the mean of X is 6, then the number of trials is

A. 4

B. 9

C. 12

D. 18

Answer: D

63. If the mean of a binomial distribution with 9 trials is 6, then its variance is

A. 2

B. 3

C. 4

D. $\sqrt{2}$

Answer: A

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64. If the standerd deviation of the binomial distribution $(q + p)^{16}$ is 2, then mean is

A. 6

B. 8

C. 4

D. 6

Answer: B

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65. If the mean of the binomial distribution is 25, then the standerd deviation lies in the interval

A. $[0, 5)$

B. $(0, 5)$

C. $[0, 25)$

D. $(0, 25]$

Answer: A

66. If the mean of the binomial distribution is 100. Then standard deviation lies in the interval

A. $[0, 7)$

B. $[1, 7)$

C. $[0, 10)$

D. $[1, 11)$

Answer: C

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67. X is a binomial variate with parameters $n = 6$ and p. If $4P(X = 4) = P(X = 2)$, then p is s

A. $\dfrac{1}{2}$

B. $\dfrac{1}{3}$

C. $\dfrac{1}{4}$

D. $\dfrac{1}{6}$

Answer: B

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68. In a binomial distribution, the parameter $n = 6$. If $9P(X = 4) = P(X = 2)$, then p=

A. $1/4$

B. $2/3$

C. $1/3$

D. $9/8$

Answer: A

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69. For a binomial variate X with $n = 6,$ if $P(X = 2) = 9P(X = 4),$ then its variance is

A. $8/9$

B. $1/4$

C. $9/8$

D. $1/8$

Answer: C

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70. For a binomial variate X if $n = 5,$ and P(X=1)=8P(X=3),

thenp=

    A. $4/5$

    B. $1/5$

    C. $9/8$

    D. 4

Answer: B

71. X is a binomial variate with parameters $n = 6$ and p. If $4P(X = 4) = P(X = 2)$, then p is s

A. $1/2$

B. $1/4$

C. $1/6$

D. $1/3$

Answer: D

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72. In the experiment of tossing a coin n times, if the variable

X   denotes   the   number   of   heads   and

$P(X=4), P(X=5), P(X=6)$ are in arithmetic progression then find n.

A. 11

B. 12

C. 13

D. 14

Answer: D

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73. The least number of times a fair coin must be tossed so that the probability of getting atleast one head is atleast 0.8 is

A. 7

B. 6

C. 5

D. 3

Answer: D

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74. When a coin is tossed n times, if the probability for getting 6 heads is equal to the probability of getting 8 heads, then the value of n is

A. 10

B. 12

C. 14

D. 20

Answer: C

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75. Twenty identical coins each with probability p of showing heads are tossed . The probability of heads showing on 10 coins is same as that of heads showing on 11 coins. Then p=

A. $10/11$

B. $10/21$

C. $11/21$

D. $11/20$

Answer: C

76. One hundred identical coins each with probability p showing up heads are tossed once. If $0 < p < 1$ and the probability of heads showing on 50 coins is rqual to that of heads showing on 51 coins, then the value of p is

A. $1/2$

B. $49/101$

C. $50/101$

D. $51/101$

Answer: D

77. Consider 5 independent Bernouli's trials each with probability of success p. If the probability of at the one failure is greater than or equal to $31/32$, then p lies in the interval:

A. $\left[0, \dfrac{1}{2} \right]$

B. $\left(\dfrac{11}{2}, 1 \right]$

C. $\left(\dfrac{1}{2}, \dfrac{3}{4} \right]$

D. $\left[\dfrac{3}{4}, \dfrac{11}{12} \right]$

Answer: A

78. A fair coin is tossed 99 times . Let X be the number of times heads occur. Then P(X=r) is maximum when r is

A. 49

B. 51

C. 99

D. 100

Answer: A

79. X follows a binomial distribution with parameters n and p where $0 < p < 1$.

If $\dfrac{P(X = r)}{P(X = n - r)}$ is independent of n and r then p=

A. $1/2$

B. $1/3$

C. $1/4$

D. $1/5$

Answer: A

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80. The probability that a candidate seeure a seat in Engineering through EAMCET is $1/10$. Seven candidates are selected at random from a centre. The probability that exactly two will get seats is

A. $15(.1)^2(.9)^5$

B. $20(.1)^2(.9)^5$

C. $21(1.)^2(.9)^5$

D. $23(.1)^2(.9)^2$

Answer: C

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81. A pair of fair dice is thrown independently three . The peobability of getting a score of exactly 9 twice is

A. $1/729$

B. $8/9$

C. $8/729$

D. $8/243$

Answer: D

82. In an experiment the success is twice that of failure . If the experiment is repeated 6 times , the probability that atleast 4 times favourable is

A. $64/729$

B. $192/729$

C. $240/729$

D. $496/729$

Answer: D

83. The probability that a bomb dropped from a plane strikes the target is $1/5$. The probability that out of six bombs dropped at least 2 bombs stricke the target is

A. 0.345

B. 0.246

C. 0.543

D. 0.426

Answer: A

84. The probability of a man hitting a target is $1/4$. If he fires 7 times , the probability of hitting the target at least twice is

A. $1 - \dfrac{5}{2}\left(\dfrac{3}{4}\right)^6$

B. $1 - \dfrac{15}{2}\left(\dfrac{3}{4}\right)^6$

C. $1 - \dfrac{5 \times 3^5}{6}$

D. $1 - \left(\dfrac{3}{9}\right)^6$

Answer: A

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85. The probability that a man can hit a target is $3/4$. He makes 5 trials. The probability that he will hit the target

every time he hits is

A. $243/1024$

B. $81/1024$

C. $243/256$

D. none

Answer: A

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86. The probability of happening of an event in an experiment is 0.4. The probability of happening of the event atleast once if the experiment is repeated 3 times is

A. 0.784

B. 0.234

C. 1.245

D. 0.896

Answer: A

87. The probability of happening of an event in trial is 0.5. The probability of happening of the event atleast once if the experiment is repeated four times is

A. 1.589

B. 0.567

C. 0.9375

D. 1.9275

Answer: C

88. The probability that a student is not swimmer is $1/4.$ Then the probability that out of five students atleast four are swimmers is

A. $18/31$

B. $1/88$

C. $81/128$

D. $18/181$

Answer: C

89. In a family with 4 children, the probability that there are at least two girls is

A. $\dfrac{1}{2}$

B. $\dfrac{9}{16}$

C. $\dfrac{3}{4}$

D. $\dfrac{11}{16}$

Answer: D

90. A die is rolled 3 times. If getting a one is considered as a success, then the probability of 2 successes is

A. $5/72$

B. $2/27$

C. $5/27$

D. $7/72$

Answer: A

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91. A die is rolled 3 times. If getting a one is considered as a success, then the probability of atleast two successes is

A. $5/72$

B. $2/27$

C. $5/27$

D. $7/72$

Answer: B

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92. If on an average 1 vessel in every 10 is wrecked, the chance that out of 5 vessels expected 4 at least will arrive sefely is

A. $4/5$

B. $1/2$

C. 1/5

D. none

Answer: D

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93. One in 9 ships is likely to be wrecked , when they are set on sail. When 6 ships set on sail, the probability for exactly, 3 will arrive safely is

A. $1 + \dfrac{1}{(9)^6}$

B. $1 - \dfrac{1}{(9)^6}$

C. $.^6C_3 \dfrac{(8)^3}{(9)^6}$

D. $.^6C_3 \left(\dfrac{8^6}{9^3} \right)$

Answer: C

94. If on an average, out of 10 ships, one is drowned, then what is the probability that out of 5 ships atleast 4 reach safely ?

A. $14(0.9)^5$

B. $1.4(0.9)^5$

C. $0.14(0.9)^4$

D. $1.4(0.9)^4$

Answer: D

95. If the mean and variance of a binomial variable X are 2 and 1 respectively, then $P(X \geq 1) =$

A. $1/6$

B. $5/16$

C. $11/16$

D. $15/16$

Answer: D

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96. Suppose A and B are two equally strong table tennis players . The probability that A beats B in exactly 3 games

out of 4 is

A. $1/2$

B. $1/4$

C. $1/8$

D. $3/4$

Answer: B

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97. If on an average, out of 10 ships, one is drowned, then what is the probability that out of 5 ships atleast 4 reach safely ?

A. $1.4(.9)^4$

B. $1.4(.9)^5$

C. $1.4(.9)^3$

D. $14(.9)^4$

Answer: A

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98. In a hurdle race a player has to cross 10 hurdles . The probability that he will clear each hurdle is $5/6$. The probabilty that he will knock down fewer that 2 hurdles is

A. $\dfrac{2}{5} \times \dfrac{6^9}{15^{10}}$

B. $\dfrac{3 \times 6^9}{5^{10}}$

C. $\dfrac{3 \times 5^{10}}{6^{10}}$

D. none

Answer: C

99. The probability of a bomb hitting a bridge is $1/2$ and two direct hits are needed to destroy it . The least number of bombs required so that the probability of the bridge being destroyed is greater then 0.9 is

A. 5

B. 6

C. 8

D. 7

Answer: D

100. In a box containing 15 identical bulbs, 5 are defective . If 5 bulbs are drawn at random from the box with replacement , then the probability that none is defective is

A. $16/183$

B. $32/243$

C. $12/245$

D. $32/87$

Answer: B

101. Five present of objects prepared by a machine are defective . The probability that in a sample of 20 objects, 4 will be defective is

A. $.20C_4 \dfrac{29^{16}}{40^{20}}$

B. $.^{20}C_4 \dfrac{19^{16}}{20^{20}}$

C. $.^{10}C_4 \dfrac{19^{16}}{20^{20}}$

D. $.^{20}C_2 \dfrac{30^{16}}{20^{20}}$

Answer: B

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102. A multiple choice examination has 5 questions . Each question has three alternative answers of which exactly one is correct . The probability that a student will get 4 or more correct answers just by guessing is :

A. $\dfrac{11}{3^5}$

B. $\dfrac{10}{3^5}$

C. $\dfrac{17}{3^5}$

D. $\dfrac{13}{3^5}$

Answer: A

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103. A man takes a step forward with probability 0.4 and backward with probability 0.6. The probability that at the end of eleven steps, he is just one step away from the starting point is

A. $462(0.24)^5$

B. $368(0.24)^5$

C. $462(0.24)^6$

D. $368(0.24)^6$

Answer: A

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104. In an average , rain falls on 12 days in every 30 days. The probability that , rain will fall on just 3 days of a given week is

A. $35\left(\dfrac{1}{5}\right)^3$

B. $35\left(\dfrac{2}{5}\right)^3\left(\dfrac{3}{5}\right)^4$

C. $35\left(\dfrac{1}{5}\right)^3\left(\dfrac{2}{5}\right)^4$

D. none

Answer: B

105. A fair coin is tossed a fixed number times . If the probability of getting seven heads is equal to that of getting

nine heads then the probability of getting two heads is

A. $15/2^8$

B. $2/15$

C. $15/2^{13}$

D. $4/15$

Answer: C

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106. If X follows a binomial distribution with parameters n=8 and $p = 1/2$, then $P(|X - 4| \leq 2) =$

A. $7/128$

B. $127/256$

C. $119/128$

D. $235/256$

Answer: C

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107. A die is thrown $2n + 1$ times. The probability of getting

1 or 4 atmost n times is

A. $1/2$

B. $1/n$

C. $n/(2n + 1)$

D. $1/(2n + 1)$

Answer: A

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108. Out of 10,000 families with 4 children each , the probability number of families all of whose children are daughters is

A. 625

B. 1250

C. 2500

D. 9375

Answer: A

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109. Out of 2560 families with 5 children each, the probability number of families all of whose children are girls is

A. 80

B. 60

C. 50

D. 100

Answer: A

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110. Five coins are tossed 3200 times. The number of times getting exactly two heads is

A. 1000

B. 1500

C. 2000

D. 500

Answer: A

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111. 12 coins are tossed 4096 times. The number of times that one can get atleast 2 heads is

A. 4080

B. 4081

C. 4082

D. 4083

Answer: D

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112. Six dice are thrown 729 times. The number of times you expect atleast 3 dice to show either 5 or 6 is

A. 233

B. 249

C. 296

D. 433

Answer: A

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113. 100 sets of 10 tossed of a perfect coin are taken . In how many sets (approx) do you expect to get 8 heads at least ?

A. 5

B. 8

C. 12

D. 13

Answer: A

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114. The mean of a Poisson distribution is 2.25. The standard deviation is

A. 3.5

B. 2.5

C. 1.1

D. 1.5

Answer: D

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115. If the standerd deviation of a Poisson distribution is 2, then the parameter is

A. 4

B. 2

C. 3

D. 10

Answer: A

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116. If a random variable X has a Poisson distribution with parameter $1/2$, then P(X=2)=

A. $\dfrac{1}{8\sqrt{e}}$

B. $\dfrac{1}{4\sqrt{e}}$

C. $\dfrac{1}{2\sqrt{e}}$

D. $\dfrac{1}{\sqrt{8}}$

Answer: A

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117. If a random variable X has a Poisson distribution with parameter 2, then $P(X > 3) =$

A. $19 - \dfrac{19}{3e^2}$

B. $1 - \dfrac{19}{3e^2}$

C. $9 - \dfrac{9}{3e^2}$

D. $1 - \dfrac{19}{2e^2}$

Answer: B

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118. A random variable X has Poisson distribution with mean

2. Then $P(X > 1.5) =$

A. $\dfrac{2}{e^2}$

B. 0

C. $1 - \dfrac{3}{e^2}$

D. $\dfrac{3}{e^2}$

Answer: C

119. If X is a Poisson variate such that

$P(X = 0) = P(X = 1)$, then the parameter $\lambda =$

A. 1

B. 2

C. $1/2$

D. $3/2$

Answer: A

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120. In a Poisson distribution if

$P(X = 0) = P(X = 1) = k$, the value of k is

A. 1

B. $1/e$

C. e

D. $\sqrt{e}$

Answer: B

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121. If X is a Poisson variable with $P(X = 0) = P(X = 1)$

then $P(X = 2) =$

A. $e/2$

B. $e/6$

C. $1/6e$

D. $1/2e$

122. If X is a Poisson distribution such that $P(X = 0) = P(X = 1)$, then $P(X = 3) =$

A. $\dfrac{1}{6e}$

B. $\dfrac{1}{120e}$

C. $\dfrac{1}{(k!)e}$

D. $\dfrac{1}{e^2}$

Answer: A

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123. If X is a Poisson distribution such that P(X=1)=P(X=2) then

the parameter is

A. 1

B. 3

C. 4

D. 2

Answer: D

124. If a random variable X has a Poisson distribution such that P(X=2)=P(X=3) then its mean and variance are

A. 1, 1

B. 3, 3

C. 2, $\sqrt{3}$

D. 2, 4

Answer: B

125. X is a Poisson variate and P(X=1)=P(X=2). Then P(X=0)=

A. 1

B. 2

C. $1/e$

D. $1/e^2$

Answer: D

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126. If X is a random Poisson variate such that $\alpha = P(X = 1) = P(X = 2)$ then P(X=4)=

A. 2α

B. $\alpha/3$

C. αe^{-2}

D. αe^2

Answer: B

127. Suppose that a random variable X follows Poisson distribution . If P(X=1)=P(X=2)then P(X=5)=

A. $\dfrac{2}{3}e^{-2}$

B. $\dfrac{3}{4}e^{-2}$
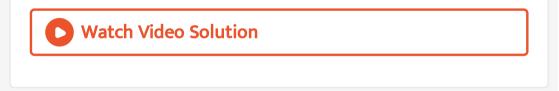
C. $\dfrac{4}{15}e^{-2}$

D. $\dfrac{7}{8}e^{-2}$

Answer: C

128. If X is a Poisson variate and P(X=1)=2P(X=2) them P(X=3)=

A. $\dfrac{e^{-1}}{6}$

B. $\dfrac{e^{-2}}{2}$

C. $\dfrac{e^{-1}}{2}$

D. $\dfrac{e^{-1}}{3}$

Answer: A

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129. In a Poisson distribution P(X=0) is twice the P(X=1). The mean is

A. 1

B. 2

C. $1/2$

D. $3/2$

Answer: C

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130. In a Poisson distribution P(X=0) =2P(X=1) then the standard deviation =

A. $1/2$

B. $1/\sqrt{2}$

C. $1/3$

D. $1/\sqrt{3}$

Answer: B

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131. If X is a Poisson variate such that $P(X = 2) = 9P(X = 4)$, then the mean and variance of X are

A. 1, 1

B. 2, 2

C. $\dfrac{2}{3}, \dfrac{2}{3}$

D. $\dfrac{2}{\sqrt{3}}, \dfrac{2}{\sqrt{3}}$
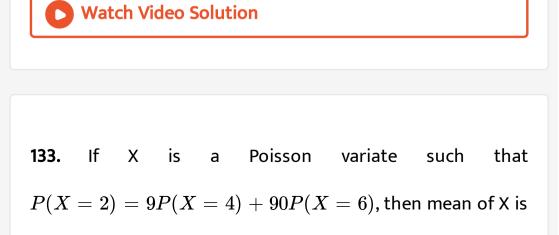
Answer: D

132. If x is a Poisson distribution such that $P(X = 2) = \dfrac{2}{3}P(X = 1) then P(X = 3)$=

A. $e^{-4/3}$

B. $\dfrac{32e^{-4/3}}{81}$

C. $\dfrac{12e^{-4/3}}{81}$

D. $\dfrac{1}{e}$

Answer: B

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133. If X is a Poisson variate such that

$P(X = 2) = 9P(X = 4) + 90P(X = 6)$, then mean of X is

A. 1

B. 2

C. 1/2

D. 3/2

Answer: A

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134. In a Poission X, If P(X=0)=0.2 then the variance of the distribution is

A. 2

B. 1

C. e

D. log 5

Answer: D

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135. If X is a Poisson variate with P(X=0)=0.8, then the variance of X is

A. $\log_e 20$

B. $\log_{10} 20$

C. $\dfrac{\log_e(5)}{4}$

D. 0

Answer: C

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136. If X is a Poisson distribution with parameter $\lambda = 3/2$ and $e^{-3/2} = 0.2231$ then P(X =2)=

A. 0.9

B. 1.1345

C. 2.1913

D. 0.2509

Answer: D

137. At a telephone enquiry system the number of phone calls regarding relevant enquiry follow Poisson distribution with an average of 5 phone calls during 10 minute time intervals. The probability that there is at the most one phone calls during a 10 minute time period is

    A. $6/55$

    B. $6/e^5$

    C. $6/5^e$

    D. $5/6$

Answer: B

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138. In a Poisson distribution the variance is m . The sum of the terms in odd places in this distribution is

A. e^{-m}

B. $e^{-m} \cosh m$

C. $e^{-m} \sinh m$

D. $e^{-m} \coth m$

Answer: B

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139. If 3% of electric bulbs manufactured by a company are defective , then the probability that a sample of 100 bulbs has no defective is

A. 0

B. e^{-3}

C. $1 - e^{-3}$

D. $3e^{-3}$

Answer: B

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140. If 2% of a given lot of manufactured parts are defective , then the probability that in a sample of 100 items has no defective is

A. $1/e^2$

B. $2/e^2$

C. $1/e$

D. e^2

Answer: A

141. If 3% of the electric bulbs manufactured by a company

are defective , then the probability that in a sample of 100

bulbs, exactly 5 bulbs are defective is

A. $e^{-3}\dfrac{3^5}{5!}$

B. $e^{-3}\dfrac{4^5}{5!}$

C. $e^{-3}\dfrac{2^5}{5!}$

D. none

142. A book contains 100 misprints distributed randomly through out its 100 pages. The probability that a page observed at random contains atleast two misprints is

A. $1/e$

B. $1 - 1/e$

C. $1 - 2/e$

D. $2/e$

Answer: C

143. In a book of 500 pages , it is found that there are 250 typing errors . Assume that Poisson law holds for the number of errors per page . Then, the probability that a random sample of 2 pages will contains no error is

A. $e^{-0.3}$

B. $e^{-0.5}$

C. e^{-1}

D. e^{-2}

Answer: C

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144. Suppose on an average 1 house in 1000 in a certain district has a fire during a year . If there are 2000 houses in the district , then the probability that exactly 5 houses will have a fire during the year is

A. $\dfrac{1}{15e^2}$

B. $\dfrac{4}{e^2}$

C. $\dfrac{2}{25e^2}$

D. $\dfrac{4}{15e^2}$

Answer: D

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145. If on an average 5 precent of the output of a factory making certain parts is defective and that 200 units are in a packeage , then the probability that atmost 4 defective parts may be found in a package is

A. $e^{-10} \left[1 + \dfrac{100}{1!} + \dfrac{100^2}{2!} + \dfrac{100^3}{3!} + \dfrac{100^4}{4!} \right]$

B. $e^{-10} \left[1 + \dfrac{10}{1!} + \dfrac{10^2}{2!} + \dfrac{10^3}{3!} + \dfrac{10^4}{4!} \right]$

C. $\left[1 + \dfrac{10}{1!} + \dfrac{10^2}{2!} + \dfrac{10^3}{3!} + \dfrac{10^4}{4!} \right]$

D. $2e^{-10} \left[1 + \dfrac{20}{1!} + \dfrac{30^2}{2!} + \dfrac{40^3}{3!} + \dfrac{50^4}{4!} \right]$

Answer: B

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146. In a city 10 accident take place in a span of 50 days. Assuming that the number of accidents follow the Poisson distribution, the probability that three or more accident occure in a day , is

A. $\displaystyle\sum_{k=3}^{\infty} \frac{e^{-\lambda}\lambda^{k}}{k!}, \lambda = 0.2$

B. $\displaystyle\sum_{k=3}^{\infty} \frac{e^{\lambda}\lambda^{k}}{k}, \lambda = 0.2$

C. $\displaystyle\sum_{k=0}^{3} \frac{e^{-\lambda}\lambda^{k}}{k!}, \lambda = 0.2$

D. $\displaystyle\sum_{k=0}^{3} \frac{e^{-\lambda}\lambda^{k}}{k!}, \lambda = 0.02$

Answer: A

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147. If ten precent of the tools produced in a factory turn out to be defective , then the probability that in a smple of 10 tools chosen at random, exactly two will be defective by using Poisson distribution is

A. e^2

B. $1/e^2$

C. $1/e$

D. $1/2e$

Answer: D

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148. A company knows on the basis of past experience that 2% of its blades are defective. The probability of having 3 defective blades in a sample of 100 bleades $\left(e^{-2} = 0.1353\right)$

A. 0.1804

B. 0.2804

C. 0.4804

D. none

Answer: A

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149. The probability that an idividual suffers a bad reaction from an injection is 0.001. The probability that out of 2000

individulas exactly three will suffer bad reaction is

A. $\dfrac{1}{e^2}$

B. $\dfrac{2}{3e^2}$

C. $\dfrac{8}{3e^2}$

D. $\dfrac{4}{3e^2}$

Answer: D

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150. The incidence of an occupation disease to the workers of a factory is found to be $1/5000$. If there are 10000 workers in a factory then the probability that none of them will get the disease is

A. e^{-1}

B. e^{-2}

C. e^3

D. e^4

Answer: B

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151. Five coins are tossed 3200 times. Using the Poisson distribution , the approximate probability of getting five heads 2 times is

A. $\dfrac{1000}{e^{100}}$

B. $\dfrac{2500}{e^{100}}$

C. $\dfrac{5000}{e^{50}}$

D. $\dfrac{5000}{e^{100}}$

Answer: D

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152. Cycle tyres are supplied in lots of 10 and there is a chance of 2 in 100 tyres to be defective . Using Poisson's distribution the approximate number of lots containing no defective tyres in a consignment of 1000 lots is e^-0.2=0.819

A. 188

B. 189

C. 819

D. 918

Answer: C

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153. Cycle tyres are supplied in lots of 10 and there is a chance of 1 in 500 tyres to be defective. Using Poisson's distribution the approximate number of lots containing no defective tyres in a consignment of 10,000 lots is e^-0.02=0.9802

A. 9980

B. 9998

C. 9802

D. 9982

Answer: C

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1. A random variable X follows the following distribution

$$(X = x_i:, 0, 1, 2, 3), (P(X = x_i):, 2/6, 3/6, 0/6, 1/6,)$$

The mean and the variance are

A. only I is true

B. only II is true

C. both I and II are true

D. neither I nor II true

Answer: C

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2. If a binomial distribution has mean 2.4 and variance is 1.44, then

$I: n = 5,$ $II: p = 0.4.$

A. only I is true

B. only II is true

C. both I and II are true

D. neither I nor II true

Answer: C

3. I : In a binomial distribution the mean is 2 and the standard deviation is $\sqrt{3}$. Then the distribution is $\left(\frac{1}{4} + \frac{3}{4}\right)^{16}$

II : In a binomial distribution , n=5 the sum mean and variance is 1.8. Then the distribution is $\left(\frac{4}{5} + \frac{1}{5}\right)^{5}$

    A. only I is true

    B. only II is true

    C. both I and II are true

    D. neither I nor II true

Answer: C

4. If a random variable X has a Poisson distribution such that

P(X=1)=P(X=2) then

I: its mean is 2 II: its variance is 1

    A. only I is true

    B. only II is true

    C. both I and II are true

    D. neither I nor II true

Answer: A

1. A random avriable X has its range $\{1, 2, 3\}$. $P(X = 1) = 1/6, P(X = 2) = 1/3, P(X = 3) = 1/2.$ If mean =a, variance =b and standard =c then the descending order of a,b,c, is

   A. a,b,c

   B. b,c,a

   C. c,a,b

   D. a,c,b

Answer: D

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2. If a,b,c are the means of the binomial distribution $(2/3 + 1/3)^{12}, (3/4 + 1/4)^{12}, (5/6 + 1/6)^{12}$ respective then the ascending order of a,b,c is

   A. a,b,c

   B. b,c,a

   C. c,a,b

   D. c,b,a

Answer: D

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3. If a,b,c are the variance of the binomial distribution $(2/3 + 1/3)^{12}, (3/4 + 1/4)^{12}, (5/6 + 1/6)^{12}$ respectively

then the ascending order of a,b,c is

A. a,b,c

B. b,c,a

C. c,b,a

D. a,c,b

Answer: C

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Exercise 2 Special Type Questions Choose The Correct Answer From The Alternatives 1 2 3 Or 4 Given Set 3

1. A random variable X has the following distribution

x	1	2	3	4
$P(X = x)$	c	$2c$	$3c$	$4c$

Match the following .

I. $c =$ $(a)1$
II.   Mean= $(b)0.1$
III.   Variance= $(c)3$

   A. a,b,c

   B. b,c,a

   C. c,a,b

   D. a,c,b

Answer: B

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2. X follows binomial distribution with parameters n, p.

Match the following

I. Mean $= 5$,	Variance $= 4$	(a) $n = 24, p = 1/2$
II. Mean $= 20$,	Variance $= 15$	(b) $n = 25, p = 1/5$
III. Mean $= 12$,	Variance $= 6$	(c) $n = 80, p = 1/4$

A. c,b,a

B. b,c,a

C. a,c,b

D. c,a,b

Answer: B

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3. X following binomial distribution with parameter n, p.

Match the following.

I.	If n $= 5, P(X = 1) = 8P(X = 3)$ then p $=$	(a) $1/3$
II.	If n $= 6, P(X = 2) = 4P(X = 4)$ then p $=$	(b) $1/4$
III.	If n $= 6, P(X = 2) = 9P(X = 4)$ then p $=$	(c) $1/5$

A. c,b,a

B. b,c,a

C. c,a,b

D. a,c,b

Answer: C

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4. X follows poisson distribution with parameter λ . Match

the following

$I.$ If $P(X = 0) = P(X = 1)$then$\lambda =$ (a) 1

$II.$ If $P(X = 1) = P(X = 2)$then$\lambda =$ (b) 2

$III.$ If $P(X = 0) = 2P(X = 1)$then$\lambda =$ (c) $1/2$

A. a,b,c

B. b,c,a

C. c,a,b

D. a,c,b

Answer: A

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Exercise 2 Special Type Questions Choose The Correct Answer From The Alternatives 1 2 3 Or 4 Given Set 4

1. A: A random variable X has the range {1,2,3}. If P(X=1)=c, P(X=2)=3c,P(X=3)=6c then $c = 1/10$.

R: If $:S \rightarrow R$ is a discreate random variable with range $(x_1, x_2, x_3, \ldots\ldots\ldots)$ then $\sum_{r=1}^{\infty} (X = x) = 1$

A. Both A and R are true and R is the correct explanation

of A

B. Both A and R are true but R is not correct explanation

of A

C. A is true but R is false

D. A is false but R is true

Answer: A

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2. A: In a binomial distribution, if n=40, q =0.75 then mean

=10.

R: If follows binomial distribution with parameters n, p then mean =np.

A. Both A and R are true and R is the correct explaination of A

B. Both A and R are true but R is not correct explanation of A

C. A is true but R is false

D. A is false but R is true

Answer: A

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3. A : In a binomial distribution , if n=10, q=0.6 then variance

=2.4.

R : If X follows binomial distribution with parameters n, p

then variance =npq.

    A. Both A and R are true and R is the correct explanation

      of A

    B. Both A and R are true but R is not correct explanation

      of A

    C. A is true but R is false

    D. A is false but R is true

Answer: A

4. A : If the difference between the mean and variance of a binomial distribution for 5 trials is $5/9$ then the distribution o is $(2/3 + 1/3)^5$

R : The binomial distribution with parameters n, p is $(q + p)^n$

A. Both A and R are true and R is the correct explanation of A

B. Both A and R are true but R is not correct explanation of A

C. A is true but R is false

D. A is false but R is true

Answer: A

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5. A : If X is a poisson variate such that P(X=2)=9P(X=4) then

variance $= 2/3$

R : The variancen of a poisson variate with parameter λ.

    A. Both A and R are true and R is the correct explanation

       of A

    B. Both A and R are true but R is not correct explanation

       of A

    C. A is true but R is false

    D. A is false but R is true

Answer: D