## eExam Question Bank

## Coursecode:






| $\square$ | MCQ | The 3rd and 7th term of a G.P. are 81 and16 respectively, find the 1st and 5th term | 250 and 43 | 729/4 and 36 | 120 and 24 | 402/5 and 53 | B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\square$ | MCQ | For a sequence $128,64,32$, $\qquad$ what is the value 12th term of this sequence? | (1/16) | (1/32) | 2 | 4 | A |
| $\square$ | MCQ | Given two set $A=$ $\{5,6,7,8,9,10\}$ and $B=$ $\{x: 5<x<10\}$. Find $A / B$ | \{5,6\} | \{6,8\} | $\{5,10\}$ | \{9,10\} | C |
| $\square$ | MCQ | Suppose a factory has three machines M1, M2, M3 which produce $60 \%, 30 \%$ and $10 \%$ of the total production respectively. Of their output, machine M1 produces 2\% defective items, machine M2 produce $3 \%$ defective items while machine M3 produces $4 \%$ defective items. Find the probability that a part selected at random is defective. | 0.054 | 0.253 | 0.125 | 0.025 | D |
| $\square$ | MCQ | Identify the expression for the moment generating function of a poisson random variable | $\begin{aligned} & \$ \$ e^{\wedge}\{\backslash a m b d a\} \\ & \left(e^{\wedge}\{t\}-1\right) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ e^{\wedge}\{\text { lalpha \} } \\ & \left(\mathrm{t}^{\wedge}\{\mathrm{e}\}-2\right) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ e^{\wedge}\{\mid G a m m a\} \\ & \left(e^{\wedge}\{t\}-1\right) \$ \$ \end{aligned}$ | $\begin{aligned} & \$ \$ e^{\wedge}\{\text { lbeta }\} \\ & \left(e^{\wedge}\{2 t\}-3\right) \$ \$ \end{aligned}$ | A |
| $\square$ | MCQ | If the probability is 0.40 that a child exposed to a certain contagious will catch it, what is the probability that the tenth child exposed to the disease will be the third to catch it? | 0.0523 | 0.2333 | 0.0645 | 0.6451 | C |
| $\square$ | MCQ | Two fair dies are rolled once. Find the probability that the sum of the numbers on the two faces is greater than Ten | $2 / 5$ | 1/12 | 1/6 | $3 / 4$ | B |
| $\square$ | MCQ | The rth moment about the origin of the gamma distribution is given by | \$\$u_\{r\}^\{'\}=\|frac\{lbeta <br> ${ }^{\wedge}\{r\} \mid G a m m a$ (lalpha <br> +r) $\}\{$ Gamma (lbeta <br> ) $\$ \$$ | \$\$u_\{r\}^\{'\}=\|frac\{lalpha <br> ${ }^{\wedge}\{r\} \backslash$ Gamma (lalpha <br> +r) \}\{Gamma (lalpha <br> )\}\$\$ | $\begin{aligned} & \text { \$\$u_\{r\}^\{'\}=\|frac\{lbeta } \\ & \wedge\{r\} \mid G a m m a(\text { lbeta } \\ & \text { rr)\}\{\Gamma (lalpha } \\ & \text { )\}\$ } \end{aligned}$ | \$\$u_\{r\}^\{'\}=\|frac\{lbeta <br> ${ }^{\wedge}\{r\} \backslash$ Gamma (lalpha <br> +r) $\}\{$ IGamma (lalpha )\}\$ | D |
| $\square$ | MCQ | For X a continuous random variable with pdf $\$ \$ f(x)=$ llambda $e^{\wedge}\{$-llambda $\mathrm{x}\} \$ \$$, for x greater than zero and less than infinity, find the mean of | \$\$\|frac $\{1\} \backslash$ beta\} ${ }^{\text {S }}$ \$ | \$\$\|frac \{1\}\{\lambda\}\$\$ | \$\$\|frac $\{1\}$ lalpha\}\$\$ | \$\$\|frac $\{1\}\{e\} \$ \$$ | B |
| $\square$ | MCQ | Find the expected value of the random variable Y whose probability density is given by $\$ \$ f(y)=$ lfrac $\{1\}\{8\}(y+1) \$ \$$ for $2<y<4$ | 37/12 | 41/12 | 30/13 | 16/17 | A |
| $\square$ | MCQ | A random variable having its probability density function given by $\$ \$ P(x)=\backslash$ binom $\{x-1\}$ $\{r-1\} p^{\wedge}\{r\}(1-p)^{\wedge}\{x-r\} \$ \$$ is called $\qquad$ | Binomial | Exponential | Negative Binomial | Weilbull | C |

