# SRI VASAVI INSTITUTE OF ENGINEERING & TECHNOLOGY

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## QUIZ

Branch: II B.Tech II Sem ECE

Subject: RVSP

1. The probability distribution function cannot have_____values.
2. The relationship between probability distribution function F(x) and the probability density function f(x)is _____
3. The other name of the moments about mean is_____
4. Binomial distribution is_____ if p = q = ½.
5. If X is a poisson variate suchthat $P(X = 2) = 9P(X = 4) + 90 P(X = 6)$,Find the variance_____
6. The MGF of Binomial distribution is _____
7. If 'X' is a uniform variable in [-2,2], find the mean and variance of 'X'_____
8. The random variable X has the p.m.f.$P(x) = x/15$,x=1,2,3,4,5 and =0 elsewhere.find $P(1/2<X<5/2/X>1)$_____
9. A dice is thrown 3 times.If getting a '6' is considered a success,find the probability of atleast twosuccesses_____
10. $E(XY) = E(X)E(Y)$ if X and Y are_____variables.
11. Say True or False: The variance of the sum of the random variables equals the sum of the variances if the random variables are uncorrelated_____
12. Say True or False:Correlation between X and Y can be infinity_____
13. The regression lines of X on Y and Y on X are $5x - y = 22, 64x - 45y = 24$ respectively. Find the meansof X and Y_____
14. A true SSS process ranges from _____to_____
15. The PSD of a WSS is always_____
16. If X(t) and Y(t) are orthogonal process, then their cross correlation is _____ and their cross PSD is _____
17. If the input for an LTI system is Gaussian process, then the output is _____
18. In white noise, the PSD contains all frequencies in _____amount.
19. A_____is a functional relationship between the input and the output.
20. What is a stable system?_____

# QUIZ Answers

1. Negative

2. $f(x) = \dfrac{d}{dx} F(x)$

3. Central moments

4. Symmetrical

5. 1

6. $(q + pe^t)^n$

7. 0, 4/3

8. 1/7

9. p = 1/6,q=5/6,n=3,P(atleast two successes) = 2/27

10. Independent

11. True

12. False

13. 6,8

14. $-\infty , \infty$

15. Non-Negative

16. zero, zero

17. Gaussian

18. Equal

19. System

20. A linear time invariant system is said to be stable if ite response to any bounded input is bounded.