**IV UNIT TEST**

**CLASS XII MATHS**

**Time -40 min One mark Questions M.M.40**

**NOTE- *Attempt all questions*.**

**1.Write the direction cosine of a line equally inclined to the three coordinate axes.**

**2.Write the equation of a line passing through origin and parallel to x-axis.**

**3. *Write the vector equation of a line passing (1,2,3) and perpendicular to the plane x + 2y -5z +9 = 0.***

***4.* write the vector form of the line**

**5. Write order and degree of the given differential equation **

**6 A card is drawn from a well shuffled deck of playing cards then find the probability of getting a king ,it is known that drawn card is of red colour.**

**Two marks Questions**

**7. If the lines are perpendicular. Find the value of p.**

**8.Two events A and B are such that P(A) = ,P(A and P(B) = p. Find the value of p if A and B are independent events.**

**9.Let  and  are such that = 3 ,= 2 and .=6 .Find .**

**Four Marks Questions**

**10. . In a test, an examinee either guess or copies or knows the answers to a multiple choice questions with four choices and only one correct option. The probability that he makes a guess is , The probability that he copies the answer is .The probability that the answer is correct, given that he copied it is .Find the probability that he knew the answer to the question ,given that he correctly answered it.**

***11.Find the coordinates of the foot and the length of the perpendicular drown from a point A(2,-1,5)* to the line = = .**

**12. For any three vectors, and find the value of x ( + )+ x (++ x (+).**

**13. If + + = 0 and І І =3, І І =5 and І І =7 show that the angle between and is 600. Six Marks Questions**

**14.A manufacturing company makes two models A and B of a product. Each piece of Model A requires 9 labour hours for fabricating and 1 labour hour for finishing. Each piece of Model B requires 12 labour hours for fabricating and 3 labour hours for finishing. For fabricating and finishing, the maximum labour hours available are 180 and 30 respectively. The company makes a profit of Rs 8000 on each piece of model A and Rs 12000 on each piece of Model B. How many pieces of Model A and Model B should be manufactured per week to realise a maximum profit? What is the maximum profit per week?**

**15.*Find the equation of the plane passing through the line of intersection of the planes 2x + y – z --3 = 0 and 5x – 3y + 4z --9 = 0 and parallel to the line***

**THE END**