



**Q1:** Define the following terms (Answer only five)(25)

*Dominant effect , Probability, Chromosome, Regression, Meiosis, Gene frequency, Mutation, Random mating, Migration, Low of Purity of gametes..*

**Q2:** Calculate correlation and regression from the following data ( $\sum x=388.2, \sum y=476.4, \sum x^2=13890.5, \sum y^2=20833.1, \sum xy=16990.4, n=11$ )?(20)

**Q3/A:** Mention factors affecting gene frequency and explain one of them? (15)

**Q3/B:** Write types of gene action and explain one of them ? (15)

**Q4:** Suppose we have the following genotypes and their numbers( $BB=36$ ),( $Bb=44$ )and ( $bb=20$ ) calculate gene frequency, gametic array , zygotic array and if the population is equilibrium ? (25)

**Q5/A:** Suppose we have 20 animals from a population with  $q_i=0.8$  and then they added to another group containing 80 animals with  $q=0.6$  calculate gene frequency in the population after migration and change of gene frequency rate?(15)

**Q5/B:** Mention types of Mutation and the examples of good mutation?(10)

**Note:** Answer only 4 questions.

*GOOD LUCK*

*Parizan Wshyar*  
*Assist.lecturer*

