

II B.Tech I Semester(RR) Supplementary Examinations, May/June 2010  
GENETICS  
(Bio-Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. What is multiple allelism? Explain giving suitable examples. [4+12]
2. Several years after Griffith described the transferring principle, Avery, McLeod and McCarty investigated the same phenomenon.
  - (a) Describe their experiments.
  - (b) What did their experiments demonstrate beyond Griffith's? [8+8]
3. Describe the mechanism of crossing over? [6+10]
4. Describe the conditions under which genetic recombination may occur in bacteriophage? [4+12]
5. What are deletions? Illustrate your answer with suitable examples. [4+12]
6. Briefly describe physical, chemical and biological methods of developing new mutations. [6+10]
7. Relate the potential effect of the Lyon hypothesis on the retina of a human female heterozygous for the X-linked red-green color-blindness. [8+8]
8. What genetic criteria distinguish a case of extrachromosomal inheritance from a case of Mendelian autosomal inheritance? [4+12]

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