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**D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1**

**SEMESTER EXAMINATIONS**

**APRIL - 2017**

**16CPZO2A**

**GENETICS**

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**Time: 3 Hrs**

**Max.Marks : 75**

**SECTION-A (5x 6 =30)**

**Answer ALL the questions.**

1. (a) Write a brief note on RNA replication.  
(Or)  
(b) "One gene one polypeptide" – Discuss.
2. (a) Discuss the GAL operon system with suitable example.  
(Or)  
(b) Give an account on the principles and methods of pedigree analysis.
3. (a) Write about the evolution of sex chromosomes.  
(Or)  
(b) Explain about the evidences of regulation of gene action.
4. (a) Describe the mechanism of chromosomal breakage.  
(Or)  
(b) Write about the sex linked genes.
5. (a) Write a note on DNA recombinant techniques.  
(Or)  
(b) Explain about the "studies on twins".

**SECTION-B (3x15 =45)**

**Answer any THREE of the following questions.**

6. Describe about the conjugation and transformation process in E.coli.
7. Discuss the inborn errors of metabolism in man with special reference to protein metabolism.
8. Discuss in detail about the variations in karyotype with reference to syndromes in man.
9. Describe the factors affecting Hardy- Weinberg law of equilibrium.
10. Explain about the applications of genetics with reference to animal breeding.

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