



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION - MEDICAL LAB. TECHNOLOGY**

**THIRD SEMESTER – NOVEMBER 2013**

**ML 3954 - FORENSIC SCIENCE AND TOXICOLOGY**

Date : 09/11/2013

Dept. No.

Max. : 100 Marks

Time : 9:00 - 12:00

**SECTION – A**

**Answer ALL questions**

**10x2=20 marks**

1. Define pharmacokinetics and pharmacodynamics.
2. Write down the examples for use of poisons with criminal intent.
3. What is nuclear energy?
4. Expand CODIS and RFLP.
5. Define short tandem repeats with an example.
6. List down the major cytochrome p450 gene families.
7. What is forensic pathology?
8. Mention the steps involved in DNA sample processing.
9. Differentiate dominant allele from recessive allele.
10. What are the factors that affect the distribution of drug in human body?

**SECTION – B**

**Answer any FOUR of the following**

**4x10=40 marks**

11. Write down the biotransformation reactions of drugs.
12. Give an account on harmful effects of radiation and add a note on precaution.
13. Explain the three concepts that are important in forensic science.
14. Describe the mechanism of drug absorption.
15. Elaborate the sources and nature of poisoning.
16. Give an account on the application of DNA profiling in disputed paternity cases.

**SECTION – C**

**Answer any TWO of the following**

**2x20=40 marks**

17. Describe the DNA typing systems.
18. Elaborate the forensic toxicology of ethyl alcohol.
19. Give an account on factors influencing the actions of poison in the body.
20. Explain various branches of pharmacology.

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