U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E. **Semester: VI**
Branch: Medical Electronics **Duration: 3 hrs.**
Course Code: 19ML6HSCFS **Max Marks: 100**
Course: Forensics Science **Date: 27.09.2023**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a)	Examine the basic individual ridge characteristics that compose a finger print pattern.	**10**
	b)	Explain the three basic principles underlying the use of fingerprints in criminal investigations.	**10**

UNIT - II

2	a)	Inspect various methods used by Document Examiners for Questioned Document Analysis	**10**
	b)	List various precautions taken for the Care, handling and preservation of documents.	**10**

UNIT - III

3	a)	Develop an expression for analysing the emission spectrum of hydrogen and also plot the spectrum.	**10**
	b)	With a neat diagram explain the construction and working of photomultiplier tube (PMT)	**10**

OR

4	a)	Describe Wavelength Dispersive X-ray analysis using necessary diagrams.	**10**
	b)	Explain the instrumentation of Infrared Spectroscopy in determination of a molecular fingerprint.	**10**

UNIT - IV

5	a)	Using a schematic diagram, explain the working of UV-Vis. Spectrophotometer.	**10**
	b)	Explain Electron Spectroscopy (ESCA) and mention the major applications.	**10**

OR

6	a)	Explain the effect of chemical Structure on absorption spectra in UV/visible spectroscopy	**10**
	b)	With the help of a block diagram explain the hands on operation of FTIR Spectrometer.	**10**

UNIT - V

7	a)	With the help of a neat diagram, explain the principle and working of Thin Layer Chromatography (TLC)	**10**
	b)	Explain the uses and applications of Electrostatic Detection Apparatus (ESDA).	**10**

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