U.S.N.										

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

Autonomous Institute Affiliated to VTU

July 2023 Semester End Main Examinations

Programme: B.E. **Semester: VI**
Branch: Medical Electronics Engineering **Duration: 3 hrs.**
Course Code: 19ML6HSCFS **Max Marks: 100**
Course: Forensics Science **Date: 14.07.2023**

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

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

		UNIT - I	*CO*	*PO*	Marks
1	a)	Elaborate on the types of biometrics.	*CO1*	*PO1*	**10**
	b)	Mention the pre-processing steps involved in Iris recognition.	*CO1*	*PO1*	**05**
	c)	Enumerate the criteria used to examine the effectiveness and viability of retinal recognition.	*CO1*	*PO1*	**05**
		OR			
2	a)	Discuss the various stages that need to be implemented to develop a fingerprint recognition system.	*CO1*	*PO1*	**10**
	b)	State the advantages and disadvantages of retinal recognition.	*CO1*	*PO1*	**05**
	c)	Summarize on the three basic principles used for finger print analysis in forensic science.	*CO1*	*PO1*	**05**
		UNIT - II			
3	a)	Inspect various methods used by document examiners for questioned document analysis.	*CO2*	*PO2*	**10**
	b)	Elaborate on the ways by which the documents are cared, handled and preserved.	*CO2*	*PO2*	**10**
		OR			
4	a)	Examine the applications of forensic document examination.	*CO2*	*PO2*	**05**
	b)	Identify various methods used by document examiners for handwriting examination.	*CO2*	*PO2*	**10**
	c)	Identify the types of documents that are subjected to forensic document examination.	*CO2*	*PO2*	**05**
		UNIT – III			
5	a)	Illustrate the atomic emission spectra of hydrogen using necessary diagrams.	*CO3*	*PO4*	**05**

		b)	Distinguish between thermal and photoelectric detectors with relevant figures.	*CO3*	*PO4*	**10**
		c)	Enumerate the applications of x-ray fluorescence.	*CO3*	*PO4*	**05**
			UNIT - IV			
	6	a)	Enumerate the applications of UV/visible spectroscopy in forensic science.	*CO3*	*PO4*	**05**
		b)	Explain the steps involved in the hands-on operation of an FTIR spectrometer.	*CO3*	*PO4*	**09**
		c)	Briefly explain direct current plasma excitation based atomic emission spectrometry.	*CO3*	*PO4*	**06**
			UNIT - V			
	7	a)	Enumerate the applications of video spectral comparator for the visual examination of questioned documents and security documents.	*CO4*	*PO4*	**05**
		b)	With the help of a neat diagram explain the principle and working of thin layer chromatography (TLC).	*CO4*	*PO4*	**10**
		c)	Summarize on the importance of docucenter and poliview.	*CO4*	*PO4*	**05**

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