Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Science

End Sem (Odd) Examination Dec-2022

FS3EL01 Forensic Physics

Programme: B.Sc. (Hons.) Branch/Specialisation: Forensic Science

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1	i.	What is another name of spraying graffiti?	**1**
		(a) Automotive paint (b) Vandal painting	
		(c) Wall painting (d) All of these	
	ii.	MSP stand for-	**1**
		(a) Micro spectrography (b) Micro spectrophotography	
		(c) Micro spectrophotometry (d) None of these	
	iii.	Cone fracture helps to determine-	**1**
		(a) Direction of external force (b) Ingress of criminal	
		(c) Egress of criminal (d) Strength of glass	
	iv.	Wind glass of automobile is composed of-	**1**
		(a) Borosilicate glass (b) Ordinary glass	
		(c) Tempered glass (d) Fused-silica glass	
	v.	Mineral analysis of soil can be done by-	**1**
		(a) SEM-EDX (b) SEM	
		(c) Compound microscope (d) Stereo microscope	
	vi.	Petrography is the study of-	**1**
		(a) Soil (b) Pollen grains	
		(c) Rock (d) All of these	
	vii.	Ignition loss test is _____, used for cement analysis.	**1**
		(a) Physical examination (b) Chemical examination	
		(c) Molecular examination (d) None of these	

P.T.O.

viii. Soundness measures the- **1**
(a) Sound produced when a block of cement falls on a hard surface
(b) Strength of cement
(c) Strength of soil
(d) Strength of glass

ix. Optical fibre comes under- **1**
(a) Natural fiber (b) Unnatural fiber
(c) Synthetic fiber (d) Automobile fiber

x. Multiple matching of fibre- **1**
(a) Increases the significance of fiber
(b) Decrease the significance of fiber
(c) Incorrect statement
(d) None of these

Q.2 i. What is forensic physics? **2**
ii. Write about the collection and preservation of paint. **3**
iii. What are the different types of paint? Write their chemical composition. **5**
OR iv. Give a detailed note on automobile paint and its forensic significance. **5**

Q.3 i. What is becke-line? How it is forensically important? **2**
ii. What is glass? Write about its types and their forensic significance. **8**
OR iii. What is glass fracture? What are the different types of glass fracture? **8**

Q.4 i. Explain the composition of soil. **3**
ii. What are the various soil horizons? Explain it with a diagram. **7**
OR iii. Explain the different analysis techniques for soil analysis. **7**

Q.5 i. What is the difference between cement and concrete? What is the forensic significance of cement? **4**

ii. Give a detailed note on bromoform test and ignition loss test for cement. **6**
OR iii. What is cement adulteration? Explain the various identification methods for cement adulteration. **6**

Q.6 Attempt any two:
i. What is fibre? Write about the forensic significance of fibre. **5**
ii. What are the different types of fibre? Give example. **5**
iii. Explain about the different analysis methods for fibre. **5**

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Scheme of Marking

MEDI-CAPS UNIVERSITY Knowledge is Power	Faculty of Science End Sem (Odd) Examination Dec-2022 Forensic Physics FS3EL01 Programme: B.Sc. | | Branch/Specialisation:

Note: The Paper Setter should provide the answer wise splitting of the marks in the scheme below.

Q.1	i)	~~b. vandal painting~~ (a) Automotive Paint	1
	ii)	c. micro spectrophotometry	1
	iii)	a. Direction of external force	1
	iv)	c. Tempered glass ✓	1
	v)	a. SEM-EDX ✓	1
	vi)	c. Rock ✓	1
	vii)	~~a. Physical examination~~ (b) Chemical	1
	viii)	b. Strength of cement ✓	1
	ix)	~~c. synthetic fibre~~ (a) Automobile fibre	1
	x)	a. increases the significance of fibre ✓	1
Q.2	i.	Definition role	1 1
	ii.	Collection and preservation methods – 3 points	3
	iii.	Types of paint	5
OR	iv.	Various layers of automotive paint – Forensic significance	3 2
Q.3	i.	Definition Forensic significance	1 1
	ii.	Glass definition types – diagram ✓	2 6
OR	iii.	Glass fracture definition Fracture types – diagram	2 6
Q.4	i.	Soil definition	1
		Various composition –	2
	ii.	Diagram – explanation –	3 4
OR	iii.	Analysis technique	7
Q.5	i.	Difference – 2 points Forensic significance –	2 2
	ii.	Bromoform test – Observation | Process | App. Ignition loss test – – +1 –	3 3
OR	iii.	Cement adulteration definition – defi. Analysis methods – 4 Methods.	2 4
Q.6			
	i.	Fibre definition – Forensic significance –	2 3
	ii.	Types of fibres – classification with eg.	5
	iii.	Analysis methods – physical | chemical	5

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