B.Sc. II Forensic Science Semester IV,

CRIMINALISTICS-II (BFST 401)

Question Bank

Define the following Term/Answer in One Sentence.

1. What is tempered glass?
2. What is cheiloscopy?
3. What is synthetic fibre?
4. What is a latent fingerprint?
5. What is the foot angle?
6. What is bulletproof glass?
7. Which compounds are used to manufacture glass?
8. What is the Direction line?
9. Who gives the classification of lip print?
10. What is the backeline effect?
11. What is a Patent fingerprint?
12. What is step width?
13. What is Skid mark?
14. Define fingerprint?
15. What is gait angle?
16. How soil is formed?
17. What is radial fracture?
18. What is concentric fracture?
19. What are the contents of soda-lime glass?
20. What is meant by destructive technique?
21. Where on the crime scene do we find ear prints?
22. What colour do we get in the Ninhydrin test to develop latent print?
23. What is a tool mark?
24. What are the types of line found on palm print?
25. What is the whorl pattern?
26. What is the loop pattern?
27. What is forensic gemology?
28. What is cheiloscopy?
29. Who gave the classification of lip prints?
30. What is Jigsaw technique?

Attempt any two of the following.

1. What is glass? Explain different types of glass.
2. Explain the casting process of footprint or shoe print.
3. What is a fingerprint? Explain types of fingerprint patterns.
4. What is paint? Explain examination of paint evidence.
5. Describe process of restoration of erased serial numbers.
6. Explain conventional methods of fingerprint development.
7. What is soil? Explain types of soil evidence.
8. Explain Gait pattern analysis with a detailed diagram.
9. Explain classification of tool mark evidence.
10. Explain the palm print characteristics
11. Explain destructive techniques to develop latent fingerprints.
12. What is latent print? Explain the process of development of print.
13. What is tiremark? How is it investigated at the crime scene?
14. Explain glass matching process by refractive index
15. Explain classification of lip prints given by Tsuchihashi and Suzuki.
16. Explain burn test for the fibre evidence.
17. Explain the process of casting of footprint and shoe print.
18. Explain forensic importance of fibre evidence.
19. Explain forensic importance of soil evidence.
20. Explain forensic importance of paint evidence.

Attempt any four of the following.

1. Write a short note on: Manufacturing of float glass.
2. Write a short note on: Examination of soil evidence
3. Explain in Brief types of fibre evidence.
4. Write a short note on: Tool mark analysis
5. Explain in brief Examination of paint evidence.
6. Write a short note on: Forensic Gemology
7. Write a short note on: Laminated glass.
8. Write a short note on: Glass fracture and direction of impact
9. Explain in Brief cyanoacrylate fuming method.
10. Write down principles of fingerprint.
11. Explain in brief Layers of paint evidence.

12.Write a short note on: Types of fingerprint found on crime scenes.
13.Explain the importance of paint evidence in Hit & Run cases.
14.Write a short note on: Examination of fibre evidence.
15.Explain in Brief process of fingerprint taking.
16.Explain process of development of ear print from suspect.
17.Write a short note on rolled prints, pain prints,
18.Write a short note on: Mechanical fit
19.Forensic importance of tool marks.
20.Forensic importance of gemology examination.
21.Write a short note on palm print.
22.Write a short note on the collection of footprints at the crime scene.
23. Write a short note on casting of tireprint.
24. How the lip print samples collected from a suspected person.
25. How does the patent print samples collected from the crime scene?

B.Sc. II Forensic Science Semester IV,

CRIMINALISTICS-II (BFST 401)

Question Bank

Define the following Term/Answer in One Sentence.

1. What is tempered glass?
2. What is cheiloscopy?
3. What is synthetic fibre?
4. What is a latent fingerprint?
5. What is the foot angle?
6. What is bulletproof glass?
7. Which compounds are used to manufacture glass?
8. What is the Direction line?
9. Who gives the classification of lip print?
10. What is the backeline effect?
11. What is a Patent fingerprint?
12. What is step width?
13. What is Skid mark?
14. Define fingerprint?
15. What is gait angle?
16. How soil is formed?
17. What is radial fracture?
18. What is concentric fracture?
19. What are the contents of soda-lime glass?
20. What is meant by destructive technique?
21. Where on the crime scene do we find ear prints?
22. What colour do we get in the Ninhydrin test to develop latent print?
23. What is a tool mark?
24. What are the types of line found on palm print?
25. What is the whorl pattern?
26. What is the loop pattern?
27. What is forensic gemology?
28. What is cheiloscopy?
29. Who gave the classification of lip prints?
30. What is Jigsaw technique?

Attempt any two of the following.

1. What is glass? Explain different types of glass.
2. Explain the casting process of footprint or shoe print.
3. What is a fingerprint? Explain types of fingerprint patterns.
4. What is paint? Explain examination of paint evidence.
5. Describe process of restoration of erased serial numbers.
6. Explain conventional methods of fingerprint development.
7. What is soil? Explain types of soil evidence.
8. Explain Gait pattern analysis with a detailed diagram.
9. Explain classification of tool mark evidence.
10. Explain the palm print characteristics
11. Explain destructive techniques to develop latent fingerprints.
12. What is latent print? Explain the process of development of print.
13. What is tiremark? How is it investigated at the crime scene?
14. Explain glass matching process by refractive index
15. Explain classification of lip prints given by Tsuchihashi and Suzuki.
16. Explain burn test for the fibre evidence.
17. Explain the process of casting of footprint and shoe print.
18. Explain forensic importance of fibre evidence.
19. Explain forensic importance of soil evidence.
20. Explain forensic importance of paint evidence.

Attempt any four of the following.

1. Write a short note on: Manufacturing of float glass.
2. Write a short note on: Examination of soil evidence
3. Explain in Brief types of fibre evidence.
4. Write a short note on: Tool mark analysis
5. Explain in brief Examination of paint evidence.
6. Write a short note on: Forensic Gemology
7. Write a short note on: Laminated glass.
8. Write a short note on: Glass fracture and direction of impact
9. Explain in Brief cyanoacrylate fuming method.
10. Write down principles of fingerprint.
11. Explain in brief Layers of paint evidence.

12. Write a short note on: Types of fingerprint found on crime scenes.
13. Explain the importance of paint evidence in Hit & Run cases.
14. Write a short note on: Examination of fibre evidence.
15. Explain in Brief process of fingerprint taking.
16. Explain process of development of ear print from suspect.
17. Write a short note on rolled prints, pain prints,
18. Write a short note on: Mechanical fit
19. Forensic importance of tool marks.
20. Forensic importance of gemology examination.
21. Write a short note on palm print.
22. Write a short note on the collection of footprints at the crime scene.
23. Write a short note on casting of tireprint.
24. How the lip print samples collected from a suspected person.
25. How does the patent print samples collected from the crime scene?

B.Sc. II Forensic Science Semester IV,

Forensic Biology-IV (BFST 403)

Question Bank

Define the following Term/Answer in One Sentence.

1. What is Enzyme?
2. Which protein is found in Hair sample?
3. What is Blotting?
4. What is Skeletone.
5. Who invented the Lock and Key hypothesis?
6. What is the role of enzyme in human body?
7. Which protein is found in Nail sample?
8. Which blotting method is used for DNA identification?
9. Haw many bones are found in Axial Skeletone?
10. Who invented the Induced fit model?
11. What is Purification?
12. What is Transition state theory?
13. Which presumptive test is used for anlysis of Semen sample?
14. Which bones are included in appendicular skeletone .
15. What is allosteric enzyme?
16. How many proteins are found in Nail sample
17. Lock and Key hypothesis are invented by which scientist?
18. What is Axial Skeleton ?
19. What is the formula of Human Teeth?
20. Which enzyme is found in saliva sample?
21. When the Transition state theory was occur?
22. Which type of Crime scene collecting Saliva sample?
23. What is the test use for Saliva sample analysis?
24. What is a Allosteric Enzyme?
25. What is MM equation?
26. What is the Salting in process?
27. What is the Salting out process?
28. What is forensic Odontology?
29. Which type of samples collecting evidence in tissue?
30. Which type of Blotting Paper is used in Southern blotting technique?

Attempt any two of the following.

1. Explain methods of Cell disruption?
2. What is Blood? Explain the Presumptive and Confirmatory test of Blood.
3. What is blotting? Explain the Western blotting technique
4. Explain the IUB classification of Enzyme?
5. Which methods is used for analysis of Semen sample?
6. What is Blotting? Explain the steps of Northern blotting technique
7. Explain Lock and key hypothesis and Induced fit model?
8. What is biological fluid? Explain any four biological fluid in detail.
9. What is Axial Skeleton and Appendicular Skeleton?
10. Which methods is used for analysis of Blood sample
11. Which methods is used for analysis of Vaginal Fluid sample
12. Which methods is used for analysis of Urine sample
13. What is Blotting? Explain the steps of Southern blotting technique
14. What is Blotting? Explain the steps of Northern blotting technique
15. Explain the DNA Amplification method.
16. Explain the Human And Animal Hair Sample.
17. Write in detail explanation about the types of Joints in Human Body
18. Which methods is used for analysis of Sweat sample.

Attempt any four of the following.

1. Write a short note on Polymerase Chain Reaction
2. Write a short note on Types of Joints
3. Write a short note on biological fluid-Semen .
4. Explain the Allosteric Enzyme.
5. Write a note on IUB Classification of Enzyme
6. Write a short note on biological fluid-Saliva
7. Write a short note on Polymerase Chain Reaction
8. Write a short note on Northern blotting technique.
9. Write a short note on biological fluid-Urine .
10. Explain the Transition State Hypothesis.
11. Write a note on Active site of enzyme
12. Write a short note on-Hair analysis
13. Write a short note on DNA Quantification.
14. Write a short note on types of Joints.
15. Write a short note on biological fluid-Urine .
16. Explain the Transition state hypothesis.
17. Write a note on Appendicular skeleton
18. Write a short note on Vaginal Fluid
19. Write a short note on applications of PCR technique.
20. Write a short note on Human and Non Human Hair sample.

21. Write a short note on: Salting in technique
22. Write a short note on: Salting out technique
23. Write a note on Skeleton System.
24. Write a short note on Skull.
25. Write a short note on palm print.
26. Write a short note on the collection and Packaging of Hair sample.
27. Write a short note on Structure of Sutures.
28. Write a short note on Cartilaginous or movable joints
29. Write a short note on Synovial joint.
30. Write a short note on Saddle joint

Forensic Science

B.Sc. II SEM IV

Forensic physics IV- BFST 404

Q. Bank

One sentence Q.

1) Define Physical properties
2) Define Density
3) Define Ballistic Coefficient
4) Define Step Index fibres
5) Define Piezoelectricity
6) Define temperature
7) Define intrinsic property
8) Give the formula for ballistic coefficient
9) Define total internal reflection
10) Give any two examples of piezoelectric substance
11) Define extrinsic properties
12) Define Radial fracture
13) Define effective range
14) Define numerical aperture
15) Define Hall effect
16) Give any 4 examples of Intensive properties
17) Give any 4 examples of Extensive properties
18) Give the relationship between Celsius scale and Fahrenheit scale
19) Give the relationship between Celsius scale and kelvin scale
20) Define forensic ballistics
21) Define firearm according to Indian arms act
22) Give any 4 components of ammunition
23) Give the specification of Geiger Muller Tube
24) Define dead time of GM counter
25) What is reverse piezoelectric effect

Long answer Q.

a) Explain in detail comparison of glass fragments

b) Write a note on theory of recoil
c) Explain in detail Optical fibre communication system
d) Explain in detail classification of glass
e) Write a note on external ballistics
f) Explain in detail Geiger-Muller Counter
g) Explain in detail classification of optical fiber
h) Write a note on Terminal ballistics
i) Explain in detail resistivity measurement with diagram
j) Explain construction, working and applications of G.M counter
k) Explain in detail Guoy's method
l) Explain in detail 2 probe method of resistivity measurement
m) Explain in detail internal ballistics
n) Explain in detail external ballistics
o) Explain in detail classification of firearms and construction of ammunition

Short Answer Q.

i) Explain difference between weight and mass
ii) Write a note on composition of glass samples
iii) Write a note on trajectory formation
iv) Explain fibre geometry in detail
v) Explain in brief FET characteristics
vi) Write a note on internal ballistics
vii) Explain in detail a method to compare refractive indices
viii) Write a short note on penetration potential
ix) Explain in detail graded index fibre
x) Write a note on applications of optical fibre
xi) Write a short note on piezoelectric materials
xii) Write a note on magnetic susceptibility
xiii) Write a note on glass fractures and its classification
xiv) Explain in detail range and its classification
xv) Explain any two applications of optical fiber
xvi) Draw a schematic diagram of Geiger Muller Counter with neat labels
xvii) Write a note on Hall voltage
xviii) Write a note on fiber geometry
xix) Write a short note on applications of Piezoelectric materials

xx) Draw a block diagram of optical fiber communication system and explain each block

xxi) Draw experimental setup of Guoy's method and explain its construction

xxii) Explain in detail intensive and extensive physical properties with examples

xxiii) Write a note on temperature and its various measuring scales

xxiv) Write a note on applications of fiber optics

xxv) Explain acceptance angle and numerical aperture and inter relation between the same

xxvi) Explain in detail maximum range of a projectile

xxvii) Write a short note on ballistic coefficient and form factor

xxviii) Write a short note on Forensic ballistics

xxix) Explain the construction of gradient column

xxx) Write a note on refractive index and its measurement

B.Sc. II Forensic Science Semester IV

BFST405 - SPECTROSCOPY

Practise Question Bank

Define the following Term/Answer in One Sentence.

1.Define Spectroscopy.
2.Explain UV visible spectroscopy principle.
3.Explain principle of mass spectroscopy.
4.Explain principle of atomic emission spectroscopy.
5.Explain principle of turbidometry.
6.Explain principle of IR spectroscopy
7.Explain principle of NMR spectroscopy.
8.Explain principle of atomic absorption spectroscopy.
9.Explain principle of nephelometry.
10.Draw a schematic diagram of UV visible spectroscopy.
11.Explain principle of mass spectroscopy.
12.Explain principle of atomic emission spectroscopy.
13.Explain principle of turbidometry.
14. Explain principle of IR spectroscopy
15. Explain principle of NMR spectroscopy.
16.What is range of Infrared in Cm^{-1} ?
17.Define Stretching.
18.Define Bending.
19.Define. Scissoring?
20.What is the range of Ultra UV in nanometer?
21. What is the principle of Mass spectroscopy?
22. Which detectors are used in Infrared Spectroscopy?
23. What is full form of PDA?
24. Why IR is known as Infrared?
25. What is NMR?

Attempt any two of the following.

1.Explain in detail principle, instrumentation, and working of UV visible spectroscopy with forensic application?
2.Explain in detail principle, instrumentation, and working of NMR spectroscopy with forensic application?

3.Explain in detail principle, instrumentation, and working of nephelometry with forensic application?
4.Explain in detail principle, instrumentation, and working of IR spectroscopy with forensic application?
5.Explain in detail principle, instrumentation, and working of atomic absorption spectroscopy with forensic application?
6.Explain in detail principle, instrumentation, and working of turbidometry with forensic application?
7.Explain in detail principle, instrumentation, and working of Mass spectroscopy with forensic application?
8.Explain in detail principle, instrumentation, and working of atomic emission spectroscopy with forensic application?
9.Define spectroscopy, Explain in detail types of spectroscopy?
10.Explain in detail principle, instrumentation, and working of Turbidometry with forensic application?
11.Explain in detail principle, instrumentation, and working of Nephelometry with forensic application?
12.Explain in detail principle, instrumentation, and working of NMR spectroscopy with forensic application?
13.Explain in detail principle, instrumentation, and working of Mass spectroscopy with forensic application?
14.Explain in detail molecular vibrations in IR spectroscopy?
15. Explain in detail principle, instrumentation, and working of vibrational spectroscopy with forensic application?

Attempt any four of the following.

1. Explain electronic transition of molecules in UV visible spectroscopy?
2.Explain instrumentation and working of IR spectroscopy?
3.Explain forensic application of mass spectroscopy?
4.Explain instrumentation and working of atomic absorption spectroscopy?
5.Explain principle and forensic application of AES?
6.Explain construction and working of Nephelometry?
7.Explain instrumentation and working of Atomic Emission Spectroscopy?
8.Explain construction and working of Turbidometry?
9.Explain principle and forensic application of NMR?
10.Explain electronic transition of molecules in UV visible spectroscopy?
11.Explain instrumentation and working of IR spectroscopy?
12.Explain instrumentation and working of mass spectroscopy?
13.Explain in detail forensic application of UV visible spectroscopy?
14.Explain molecular vibrations types with diagram in IR spectroscopy?
15.Explain instrumentation and working of mass spectroscopy?

16.Explain principle and forensic application of NMR?
17.Explain principle and forensic application of AAS?
18.Explain working and construction of Turbidometry?
19.Explain instrumentation of UV Visible spectroscopy?
20.Explain working of IR spectroscopy?
21.Explain instrumentation of NMR spectroscopy?
22.Explain working of Mass spectroscopy?
23.Explain difference between AAS and AES ?
24.Explain types of stretching ?
25.Explain types of bending?
26.Explain forensic application of UV Visible spectroscopy?
27.Explain forensic application of IR Spectroscopy?
28.What are the types of spectroscopy?
29.Explain the Forensic application of AAS ?
30.Explain the principle of NMR spectrosocpy ?

Rayat Shikshan Sanstha's
Yashavantrao Chavan Institute of Science (Autonomous), Satara
Department of Forensic Science
Practice Question Bank (SEM IV) 2022
Subject: Computer Forensic Investigation
Class: B.Sc II

Q.1 Define the following/ Answer in one Sentence.

1. What is function of IPCONFIG command ?
2. What is Chrgesheet?
3. Define Digital Evidence.
4. What is Mobile Number Portability?
5. Define hash value.
6. What define in Section 78, ITAA 2008
7. Define Active Hub.
8. Define Intranet.
9. What is Forensic Imaging?
10. Give five examples of Computer Forensic Investigation tools
11. What is Hub?
12. What is NIC?
13. Define router.
14. What is MD5 hash?
15. Give five examples of Computer Forensic Investigation tools.
16. Define MSP.
17. Define ISP.
18. What is FTK?
19. What is Encase?
20. What is Write Blocker?
21. Define FIR.
22. Define Panchanama.
23. What is Deposition of digital Evidence in court.
24. In which year UBUNTU Operating System is invented.?
25. Enlist the Software names used for Cyber crime investigation.

Q.2 Attempt any two of the following.

a) Explain the types of networking technologies?

b) Give the Advantages and Disadvantages of Wi-fi Solutions.

c) Write the Guideline for IO included in Chergesheet.

d) Explain in brief about Autopsy tool.

e) Explain in detail about Ubuntu Operating System.

f) Which steps are prescribed for Digital Crime Scene Investigation should be reflected in the Panchnama.

g) Explain in Installation Process of Ubuntu operating System.

h) Explain in detail about Ubuntu Operating System.

i) Explain the Networking Commands.

j) Explain in deatil about features of UBUNTU System.
k) What is Incident Response explain in detail.
l) Explain Networking Commands used for windows.
m) Explain Analysing & Handling Procedure of Digital data.
n) Explain the Guideline for IO on what to include in Charge sheet.
o) Explain the installation procedure of UBUNTU Operating System.

Q.3 Attempt any four of the following.

i) Which detail should mention in Seizure note.

ii) How are FTK considered as most important tool in Cyber Forensic? Explain.

iii) Enlist the software required for investigation and explain any one software.

iv) Write down the tips used to preserve Seized Digital Media

v) Write short note on LAN.

vi) Write short note on Bus Topology network.

vii) Explain Section 165 Cr. P. C and section 80 of ITAA, 2008.

viii) Write down the use of Faraday bag in Investigation.

ix) Enlist the software required for investigation and explain any one software.

x) Explain Legal Procedure after Seizure of evidence.

xi) Write short note on Switch.

xii) Write short note on Volatility tool.

xiii) Write short note on Cloud Storage.

xiv) Why there is need to examine Breadth of cyber forensic tools? Explain.

xv) How are FTK considered as most important tool in Cyber Forensic? Explain.

xvi) Write short note on Bus Topology network.

xvii) Write down the tips used to preserve Seized Digital Media.

xviii) Explain functions performed by Plain Sight Tool.

xix) Explain Guideline for IO on what to include in Charge sheet.

xx) Write Short note on Write Blocker.

xxi) Write Short note on Logical Data Extraction.

xxii) Write Short note on Physical Data Extraction.

xxiii) What are Tips to preserve seized digital media.

xxiv) Write Short note on Incident Response Methodology.

xxv) Write short note on Disk Imaging.

xxvi) Write short note on Disk Cloning.

xxvii) Write short note on Digital Autopsy tool.