



Bioinformatics Institute of India

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INDUSTRY PROGRAM IN FORENSIC SCIENCE & CRIMINOLOGY



Examination Assignments

April, 2017



Instructions for Examination Assignments – April, 2017

- Electronic (email, fax) submission of the assignments will be accepted.
- The assignments have to be submitted by the student on standard A4 size paper in eligible hand written, typed or printed format only.
- Do not copy from the answers of other participants. If it is noticed the assignment of such participants will not be accepted.
- The assignment for each paper should be written separately. Do not write the assignment for all the papers in continuity. However, all the assignments are to be submitted together.
- No two or more participants should submit their assignments in same envelope.
- The participants should mention their Name and Enrollment Number on each page of submitted assignment copy.
- The last date of submission of Assignments is **30th June, 2017**.
- The assignments have to be submitted to:

The Program Director

Bioinformatics Institute of India

H-109, Ground Floor, Sector-63, (Behind Haldiram) Noida-201307

U.P. INDIA

- Participants are advised to keep a photocopy of submitted assignments.
- The participants should mention their Name and Enrollment Number on the envelope.
- The participant should also mention “Examination Assignment” at the top of the envelope.
- The result will be announced by 2nd week of June, 2017.
- For any query mail us on info@bii.in



**Module 1: Introduction to Forensic Science
Examination Assignment April, 2017**

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. Define Aerobiology.
2. What is STR (short tandem repeat) technology?
3. What is DNA fingerprinting?
4. What are neurotransmitters?
5. What do you understand by study of tree rings & its role in forensics?
6. Do speech & voice are considered as evidence in identification? If yes, how?
7. Write an essay on forensic biotechnology.

SECTION - B

Long answer type questions: (250-300 Words)

5 × 10 = 50 Marks

1. What is biochemical analysis in forensic science; explain it through evidence of relationship b/w plasma cortisol and criminal behavior. (overall consistency score is 75%)
2. Explain the major aspects of pollen analysis.
3. Discuss different types of trace elements/minute traces which can be found at crime scene and how they help in solving of a criminal case.
4. Give applications of genetics and DNA in forensic science.
5. Describe the term psychopath.
6. Discuss in detail the drug interactions along with types of effects posed by drug interactions.
7. What are different ways to determine the time of death?

Module 2: Forensic Medicine and Medico-legal Aspects
Examination Assignment April, 2017

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. What is Adipocere?
2. Write pharmacist oath.
3. What are the positive sign for pregnancy?
4. Define the term Haemorrhage.
5. What is the role of coroner in medical forensic?
6. When a sex is considered as rape by Husband?
7. Give any two points from declaration of Geneva 1948.

SECTION - B

Long answer type questions: (250-300 Words)

5 × 10 = 50 Marks

1. There are increasing cases of rape crimes every day in the country? Is there any need of amendment in laws in this context, discuss.
2. What are the three main operational measures of criminal behavior? Explain.
3. What are the legal provisions of IPC in forensic toxicology?
4. Give the classification of injuries.
5. What is autopsy and different evidences which are collected for autopsy.
6. How forensic science is helpful in punishment of criminal? And how it can become more accurate in detection of crime?
7. Write the advantages and disadvantages of Victimization Data.

Module 3: Biological Anthropology**Examination Assignment April, 2017****Max. Marks: 75****Instructions:**

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION - A**Short Answer Type Questions: (60-80 Words)****5 × 5 = 25 Marks**

1. Give the position of globella in humans.
2. What is standard error?
3. What are the major changes observed within 36-48 hrs of death?
4. What is Scaphocephaly?
5. Give the psychology of a person with 6 or more than 6 loops in fingerprint.
6. What are the major changes observed within 36-48 hrs of death?
7. What is the use of Osmium Tetraoxide at crime scene

SECTION - B**Long answer type questions: (250-300 Words)****5 × 10 = 50 Marks**

1. Give a review on history of dermatoglyphics, palmistry and character identity.
2. What is somatometry & how it is useful in forensic studies?
3. How it is possible to identify a person through dental anomalies.
4. Give table for common cranial traits used in determination of sex from skull.
5. How old diseases and injuries affect the human skeleton? Explain with example.
6. How will you distinguish the color of the skin according to the somatoscopic techniques?
7. What is the role and importance of forensic anthropology in criminal analysis?



Module 4: Forensic Toxicology
Examination Assignment April, 2017

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION - A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. What is contusion?
2. What are secretors?
3. Write short note on Hemorrhage.
4. What do you mean by rigor mortis?
5. Write short note on animal poisoning.
6. What do you mean by spurting?
7. Write a note on Poroscopy.

SECTION - B

Long answer type questions: (250-300 Words)

5 × 10 = 50 Marks

1. If a corpse of a woman is found at a crime scene, how will you diagnose if she was pregnant or not?
2. Explain in details The Drugs Act, 1940.
3. Differentiate between impotence and sterility.
4. What are the conditions for a lawful abortion?
5. What are the statistical methods use to determine averages?
6. Describe in details Strangulation.
7. What are the causes of death from injuries?
8. What are the conditions for a lawful abortion?



Module 5: Forensic Serology

Examination Assignment April, 2017

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. What is lattes crust method?
2. Define dispersion staining.
3. Give the use of X-ray diffraction.
4. What is the use of double diffusion method?
5. Write a short note on plasticizer?
6. Define neutron activation analysis.
7. What is electrophoresis? Write its Principle.

SECTION - B

Long answer type questions: (250-300 Words)

5 × 10 = 50 Marks

1. Write an essay on biochemical analysis methods of alcohol.
2. Give a review on biochemical basis of antigenic variation.
3. How laboratory examination of bomb & explosive evidences are done?
4. What do you understand by genetic variation?
5. Write an essay on collection identification and preservation of specimens (Blood & Urine).
6. Explain types of fractures in glass.
7. Explain principle, method and limitations of diatom test.



**Module 6: Introduction to Criminology
Examination Assignment April, 2017**

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. Define scientific penology.
2. What is Japanese Cyber Law?
3. Give the personality aspect of Donald Taft.
4. Define Accessing Protected System (Section-70).
5. What is E-mail spoofing?
6. Give the categorization of different types of Criminal organization.
7. Give the motive behind set up of National committee on Drug Addiction (1976).

SECTION - B

Long answer type questions: (250-300 Words)

2 × 10 = 20 Marks

1. Explain the concept of shelter homes for juveniles?
2. Give your view on "possibilities of science of criminology."
3. What is the relationship between economic structure and crime?
4. What is the significance of Medical Termination of Pregnancy Act, 1971?
5. Write an essay on white collar crime in professions.
6. What is human trafficking and what are the measures taken against this crime at global level?
7. What are the fundamentals of modern criminal law?



**Module 7: Documentation & Forensic Analysis
of Biological Evidence
Examination Assignment April, 2017**

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. Give the use of Tannic acid.
2. What is monoamine oxidase?
3. What is Infrared spectroscopy?
4. What is Hindu folk fingerprint formula?
5. Define the term DNA Typing?
6. What are Traditional Genetic Markers? Give some names.
7. Write a short on Evidence Collection and Preservation.

SECTION - B

Long answer type questions: (250-300 Words)

5× 10 = 50 Marks

1. Give the Performa for examination and report of victim of sodomy.
2. What are the conditions under which a testamentary will is valid or invalid?
3. Give the importance of fingerprints as evidence.
4. Explain Immunological Species Tests.
5. How DNA can be potential evidence in crime scene?
6. Describe the determination of species by DNA analysis method.
7. What are the Scope of Forensic Biological Evidence Analysis



Module 8: Computer Forensics

Examination Assignment April, 2017

Max. Marks: 75

Instructions:

- SECTION-A: Attempt any five questions.
- SECTION-B: Attempt any five questions.

SECTION-A

Short Answer Type Questions: (60-80 Words)

5 × 5 = 25 Marks

1. What is real evidence?
2. Define Basic PSYOP Study (BPS).
3. What are the ways to protect the network from hackers?
4. What is technical intelligence?
5. What comes under Internet-Related investigation program?
6. Define server side includes (SSA).
7. Give any two emergency guidelines for preserving digital evidence.

SECTION - B

Long answer type questions: (250-300 Words)

5 × 10 = 50 Marks

1. What is Cyber foot print and criminal tracking?
2. Write some Dos and Don'ts that might prove to be beneficial while working with evidence
3. Wireless Internet - A friend or a foe. Explain.
4. What is the concept behind electromagnetic bomb?
5. How information system becomes one of the lethal tools used by terrorists?
6. Explain Cyber Crime.
7. Write a detailed note on global positioning system (GPS)?