

Question Paper

Exam Date & Time: 09-Jun-2025 (10:00 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. MEDICAL (ANATOMY, PHYSIOLOGY, BIOCHEMISTRY, PHARMACOLOGY, MICROBIOLOGY) / MSc. FORENSIC SCIENCE DEGREE EXAMINATION - JUNE 2025

SUBJECT: MCC 602 - COMMON CORE: INTRODUCTION TO RESEARCH

MCC 602 - COMMON CORE: RESEARCH METHODOLOGIES, ETHICS, STATISTICS, PUBLISHING PAPER, TEACHING METHODOLOGIES ETC.

MFS 602 - COMMON CORE-2: RESEARCH METHODOLOGY

Marks: 50

Duration: 150 mins.

Answer all the questions.

- 1) Explain the importance of Statistics in health sciences and its applications in the health care delivery system. (10)
- 2) Describe the steps involved in research process. (10)
- 3A) Discuss the ethical principles governing research in health sciences. (5)
- 3B) Describe the characteristics of normal distribution curve. (5)
- 3C) Explain the concept of case control study in epidemiological research. (5)
- 3D) Describe the different types of statistical hypothesis and write a note on Student t test. (5)
- 3E) The haemoglobin levels (g%) of 10 boys was found to be as follows. Calculate the various measures of central tendency
10.8 12.2 11.8 13.0 13.2 14.0 13.4 14.0 13.0 12.6 (5)
- 3F) Write a note on correlation analysis. (5)

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Question Paper

Exam Date & Time: 10-Jun-2025 (10:00 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION - JUNE 2025
SUBJECT: MFS 606 - BASICS & APPLIED CYBER FORENSICS

Marks: 50

Duration: 150 mins.

Answer all the questions.

- 1) Discuss the Salient features of IT ACT - 2008 with emphasis on aspects relating to offences, punishments, investigative powers & regulations. (10)
- 2A) Explain the types of credit card frauds. (4)
- 2B) How do cyber experts conduct credit card fraud investigation? (4)
- 2C) Mention any four safety measures to prevent credit card frauds. (2)
- 3A) Explain the role of "*Mens rea*" & *criminal liability* in cybercrimes. (5)
- 3B) What is blended cyber threat & how does it work? (5)
- 3C) How does website defacement happen? Write a note on the consequences of website defacement. (5)
- 3D) Distinguish between "*Volatile Memory*" & "*Non-Volatile Memory*". (5)
- 3E) Explain the role of *Cyber Security* in prevention of *Cyber Warfare*. (5)
- 3F) Write short notes on "*cyber terrorism*". (5)

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Question Paper

Exam Date & Time: 12-Jun-2025 (10:00 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION - JUNE 2025
SUBJECT: MFS 608 - APPLIED FORENSIC CHEMISTRY AND INSTRUMENTATION

Marks: 50

Duration: 150 mins.

Answer all the questions.

- 1) What is Radioactivity? Write a detailed note on different types of detectors used to measure radioactivity. (10)
- 2) Explain the Principle and instrumentation of Gas Chromatography. (10)

3. Write short notes on:

- 3A) Preparation and application of any three polyamides (5)
- 3B) Isoelectric focusing (5)
- 3C) Molecular stretching and bending vibrations. (5)
- 3D) Laser Spectroscopy (5)
- 3E) Phase contrast microscope (5)
- 3F) Excretion of alcohol from human body (5)

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Question Paper

Exam Date & Time: 11-Jun-2025 (10:00 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION - JUNE 2025
SUBJECT: MFS 612 - FORENSIC APPROACH IN CRIME SCENE INVESTIGATION

Marks: 50

Duration: 150 mins.

Answer all the questions.

Long answer questions:

- 1) What is crime scene management? Add a note on information and manpower management. (10)
(2+8 = 10 marks)
- 2) Critically analyse any two case reports relating to Homicide. Add a note on the collection of evidence from the homicide scene. (10)

3. Write short notes on:

- 3A) Investigation of the Explosion scene. (5)
- 3B) Laws relating to investigation (5)
- 3C) Crime scene security (5)
- 3D) Note-making in crime scene (5)
- 3E) Differentiate primary and secondary crime scenes. Explain linkage theory in crime scene analysis (5)
- 3F) Ethics in crime scene analysis (5)

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