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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION – MARCH 2024

SUBJECT: MFS 601 – BASICS OF FORENSIC SCIENCE

Tuesday, March 05, 2024

Time: 10:00 – 12:30 Hrs.

Maximum Marks: 50

✍ Answer ALL the questions.

✍ Long Answer Questions:

1. Explain any five cybercrimes and its prevention.

(10 marks)

2. Write a note on types of lip prints.

(10 marks)

3. **Write short notes on:**

3A. Principles of forensic science

3B. Sociological theories of crime

3C. Chemistry division of FSL

3D. Analysis of Tool marks

3E. Forensic Voice analysis

3F. Collection of sunken shoe prints

(5 marks × 6 = 30 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION**FIRST SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION – MARCH 2024****SUBJECT: MFS 605 – BIOCHEMISTRY**

Wednesday, March 06, 2024

Time: 10:00 – 12:30 Hrs.

Maximum Marks: 50

✍ Long Answer questions:

1. With the help of diagrams explain the Structure and functions of m-RNA and t-RNA. List **THREE** differences between DNA and RNA.

(4+3+3 = 10 marks)

2. **Write on:**

2A. Classification of proteins based on composition and shape.

2B. Competitive enzyme inhibition with **TWO** examples.

(6+4 = 10 marks)

3. **Short answer questions:**

3A. **Write on:**

i) Kwashiorkor

ii) **TWO** detoxification mechanisms with examples.

(3+2 = 5 marks)

- 3B. Explain the role of vitamin D in serum calcium homeostasis. Add a note on deficiency of vitamin D.

(3+2 = 5 marks)

3C. **Write on the following:**

i) Draw a neat diagram of replication fork labelling the components.

ii) Activation of an amino acid during translation.

(3+2 = 5 marks)

3D. **Explain:**

i) Point mutation with **TWO** examples.

ii) Signal transduction - via steroid hormone receptor with the help of a Diagram.

(2+3 = 5 marks)

- 3E. i) Write **TWO** mechanisms by which insulin helps in maintaining blood glucose level.

ii) Write the normal serum cholesterol level and list the special products formed from cholesterol.

(2+(1+2) = 5 marks)

- 3F. Describe the absorption, transport and deficiency of iron.

(2+1½+1½ = 5 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. FORENSIC SCIENCE DEGREE EXAMINATION – MARCH 2024

SUBJECT: MFS 607 – FORENSIC PHOTOGRAPHY

Thursday, March 07, 2024

Time: 10:00 – 12:30 Hrs.

Maximum Marks: 50

✍ **Answer the following.**

✍ **Draw diagrams wherever necessary**

✍ **Long Answer Questions:**

1A. Discuss the scope of forensic photography.

1B. Explain the uses of photography in forensic laboratory work.

(4+6 = 10 marks)

2. An accident occurred in the early morning on the national highway in which a car collided with a bike. As per the history, the car was overtaking the lorry and as a result the car hit the upcoming bike in which the rider of the bike died on the spot.

As a forensic photographer, how would you proceed with your work?

(10 marks)

3. **Write short notes on:**

3A. Technical photographs.

3B. Photo super-imposition technique.

3C. Internal and External light meter.

3D. White balance.

3E. Surveillance photography.

3F. Filters in photography.

(5 marks × 6 = 30 marks)

