

B.Sc. Semester - 2 (CBCS) Examination
July-2025 (OLD COURSE)
FORENSIC SCIENCE (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer the following question very shortly. (04)**
- 1) What is spectroscopy?
 - 2) What is spectrum?
 - 3) What is wavelength?
 - 4) What is wavenumber?
- Que.1(B) Answer the following question in brief. (Any one) (02)**
- 1) Explain wave & it's types.
 - 2) Explain principle of spectroscopy.
- Que.1(C) Answer the following question in detail. (Any one) (03)**
- 1) Describe reflection, refraction with figure.
 - 2) Explain scattering & interference.
- Que.1(D) Answer the following question in detail. (Any one) (05)**
- 1) Write a note on quantum number .
 - 2) Describe the types of spectra.
- Que.2(A) Answer the following question very shortly. (04)**
- 1) X- ray discovered by _____.
 - 2) Range of X- Ray is _____.
 - 3) Equation of Bragg's law is _____.
 - 4) Full form of WDS?
- Que.2(B) Answer the following question in brief. (Any one) (02)**
- 1) Describe origin of x-ray.
 - 2) Explain Bragg's law.
- Que.2(C) Answer the following question in detail. (Any one) (03)**
- 1) Describe auger effect.
 - 2) Theory of X-ray diffraction.
- Que.2(D) Answer the following question in detail. (Any one) (05)**
- 1) Write a note X- ray spectroscopy .
 - 2) Describe the working of X-ray.
- Que.3(A) Answer the following question very shortly. (04)**
- 1) What is UV?
 - 2) What is range of visible rays?
 - 3) Describe types of Lasers.
 - 4) What is the range of IR rays?
- Que.3(B) Answer the following question in brief. (Any one) (02)**
- 1) Explain advantage of laser.
 - 2) Write the source of UV rays.
- Que.3(C) Answer the following question in detail. (Any one) (03)**
- 1) Write the application of Laser.
 - 2) Explain source of IR .

- Que.3(D) Answer the following question in detail. (Any one) (05)**
- 1) Write a note thermal detectors & photoelectric detector.
 - 2) Describe He- Ne lasers.
- Que.4(A) Answer the following question very shortly. (04)**
- 1) What is pH?
 - 2) What is buffer capacity?
 - 3) What is full form of RCF?
 - 4) What is preparative centrifugation?
- Que.4(B) Answer the following question in brief. (Any one) (02)**
- 1) Describe buffer solution.
 - 2) What is centrifuge?
- Que.4(C) Answer the following question in detail. (Any one) (03)**
- 1) Explain the principle of centrifugation.
 - 2) Explain types of buffer solution.
- Que.4(D) Answer the following question in detail. (Any one) (05)**
- 1) Write a note on pH meter.
 - 2) Describe analytical centrifugation.
- Que.5(A) Answer the following question very shortly. (04)**
- 1) What are carbohydrates?
 - 2) What is the approximate length of DNA?
 - 3) What is central dogma?
 - 4) The distance between two peptide bond is _____.
- Que.5(B) Answer the following question in brief. (Any one) (02)**
- 1) Give the types of DNA.
 - 2) Write a source of carbohydrates.
- Que.5(C) Answer the following question in detail. (Any one) (03)**
- 1) Explain the formation of amino acid.
 - 2) Give the classification of carbohydrates.
- Que.5(D) Answer the following question in detail. (Any one) (05)**
- 1) Write a note on structure of proteins.
 - 2) Describe lipids & it's types.
