18-12-24

CP16101PS

THREE YEAR U.G. (CBCS) DEGREE EXAMINATION, NOVEMBER/DECEMBER 2024.

FIRST SEMESTER

Course I : ESSENTIALS AND APPLICATIONS OF MATHEMATICAL PHYSICAL AND CHEMICAL SCIENCES

Time : Three hours Maximum : 70 marks

(No additional sheet will be supplied)

PART A — (5 × 4 = 20 marks)

Answer any FIVE questions.

Each answer carries 4 marks.

Each unit given 2 questions compulsory.

1. Write short notes on general form of a complex number.
2. Define and explain mean and median.
3. Explain the electromagnetic interactions.
4. Write short notes on uncertainty principle.
5. Write short notes on electronic configuration.
6. What are biomolecules explain?
7. Explain food adulteration.
8. Write short notes on Quality Control and Instrumentation.
9. Write short notes on Firewals.
10. Discuss about Malware.

PART B — (5 × 10 = 50 marks)

Answer ALL the following the questions.

Two questions (A & B) are to be given from each unit in the syllabus.

(Internal choice in each unit)

11. (a) Write a brief note on trigonometric ratios and relations.

Or

(b) Give an account amplitude form and conversions with suitable examples.

12. (a) Explain different laws of Thermodynamics.

Or

(b) Write a brief note on Acoustic waves and electromagnetic waves.

13. (a) What is Chemistry? Explain Scope of Chemistry and its importance in daily life.

Or

(b) Give an account of Periodic Table and its properties.

14. (a) Write a brief note on Pharmaceuticals and Drug Discovery.

Or

(b) Write a brief note on Environmental Monitoring and sustainable technologies.

15. (a) Give a brief account of different types of Network.

Or

(b) Write a brief note on Internet service providers.

20-12-24, Fri

CP 16102 PS

THREE YEAR B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER/DECEMBER 2024.

FIRST SEMESTER

Course 2 – ADVANCES IN MATHEMATICAL, PHYSICAL AND CHEMICAL SCIENCES

Time : Three hours Maximum : 70 marks

SECTION A — (5 × 4 = 20 marks)

Answer any FIVE questions.

Each answer carries 4 marks

1. Explain Point of intersection of two straight lines.
2. Write short notes on standard limit.
3. Explain quantum dots.
4. Write short notes on recent advances in biophysics.
5. Write short notes on catalysis method.
6. Define and explain Chemical biology.
7. Write short notes on Nanomedicine.
8. Discuss Biophysical Imaging.
9. Write short notes on Multiplexing.
10. Explain transmission media.

SECTION B — (5 × 10 = 50 marks)

Answer ALL the following questions

(Internal choice in each unit)

11. (a) Explain the reduction of general equation into various forms.

Or

(b) Explain different types of matrices.

12. (a) Explain Energy - efficient materials and devices.

Or

(b) Write a brief note on recent advances in medical physics.

13. (a) What are chemical pollutants and give their effect on ecosystem and human health?

Or

(b) Give an account of different methods of dyes removal.

14. (a) Write a brief note on Solid Waste Management.

Or

(b) Write a brief note on radiation therapy.

15. (a) Give a brief account of Transmission media.

Or

(b) Write a brief note on Repeater, Hub, Bridge, Switch.
