

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)BSc DEGREE EXAMINATION MAY 2019  
(Fourth Semester)

Branch – PHYSICS

CHEMISTRY – II

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 What do you mean by Standard Deviation? Give an example.
- 2 With suitable example, give the importance of significant figures.
- 3 Distinguish between amino acids and proteins.
- 4 List out the various types of detergents.
- 5 Calculate the pH of a decinormal solution of sodium hydroxide.
- 6 What do you mean by passivity?
- 7 State first law of thermodynamics. Give its mathematical form.
- 8 Compare isothermal and adiabatic processes.
- 9 How will you prevent thermal pollution?
- 10 What are pollutants? Give any two examples.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Explain the following terms: (i) Precision and (ii) Accuracy.  
OR
- b Give any five first aid procedure that has been followed in chemistry laboratory.
- 12 a Compare the properties of soap and detergents.  
OR
- b How will you classify amino acids? Also give any two uses of amino acids.
- 13 a Explain the following: (i) Kohlraush law and (ii) Oswald's dilution law.  
OR
- b Discuss the theory of buffer action with example.
- 14 a Illustrate the principle and instrumentation of infrared spectroscopy.  
OR
- b Describe the Joule-Thomson effect.
- 15 a How will you classify pollutants? Explain it with example.  
OR
- b Explain the sources and effect of thermal pollution.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 With suitable example, elaborate the minimization of errors.
- 17 Outline the manufacture and cleansing action of soap.
- 18 Illustrate any two types of conductometric titrations with example.
- 19 Derive thermodynamically the relationship between  $C_p$  and  $C_v$ .
- 20 Elaborate the sources, effect and control measures of noise pollution.