

QP CODE: 302326

Reg. No: .....

**Third Year Pharm D Degree Supplementary Examinations  
December 2017**

**Pharmaceutical Analysis**

**Time: 3 Hours**

**Total Marks: 70**

- Answer all Questions.
- Draw Diagrams wherever necessary.

**Essays**

**(3x10=30)**

1. Draw a neat sketch of a single beam UV-Visible spectrophotometer and explain the various functions of its components.
2. Explain the theory of gas chromatographic separation. Discuss the functioning of different detectors used in gas chromatography.
3. Describe the working of a polarograph. Briefly explain the reasons for the different currents shown in a polarogram (CV curve).

**Short notes**

**(8x5=40)**

4. Explain the different types of fragmentation pattern in mass spectroscopy.
5. Discuss the various types of vibration frequencies in an organic molecule.
6. Describe the principle of separation in electrophoresis and add a note on paper electrophoresis.
7. X-ray diffraction.
8. Briefly explain the theoretical comparison of nuclear magnetic resonance and electron spin resonance spectroscopies.
9. Different types of amperometric titrations.
10. Describe the construction and working of glass electrode and calomel electrode.
11. What is plane polarized light and explain circular dichroism.

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