

QP CODE: 302326

Reg. No: .....

**Third Year Pharm D Degree Regular/Supplementary Examinations  
August 2023**

**Pharmaceutical Analysis**

**Time: 3 Hours**

**Total Marks: 70**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw Diagrams wherever necessary.*

**Essays**

**(3x10=30)**

1. Define validation and explain the validation of equipment and analytical instruments
2. Detail the construction of HPLC and its applications
3. Define Indicator electrodes. Explain about the constructions of glass electrodes

**Short notes**

**(8x5=40)**

4. Derive the Beer –Lamberts Law
5. Classify the types of vibrations in infrared analysis
6. Theory of Fluorescence and phosphorescence
7. Write the plate preparation techniques in TLC
8. What are the different types of ions produced in mass analysis
9. Enumerate the Bragg's equation.
10. Write the instrumentation of Differential scanning colorimeter
11. Detail the principle and procedure involved in Karl Fishers Titrations

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