

QP CODE: 112329

Reg. No:.....

**First Semester M.Pharm Degree Regular/Supplementary Examinations
March 2020**

M.Pharm (Pharmaceutical Analysis)

Paper II: Advanced Pharmaceutical Analysis (MPA 102T)

(Common for 2017 and 2019 Scheme)

Time: 3 Hours

Total Marks: 75

- *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 table/diagrams/flow charts wherever necessary*

Essays

(3x10=30)

1. Discuss the elemental impurities identification and instrumental analysis of Carbon, Hydrogen, Nitrogen and Sulphur
2. Elaborate the stability testing protocols
3. Describe in detail about regulatory requirements and protocols of the stability testing of Phytopharmaceuticals

Short Notes

(9x5=45)

4. Enumerate the classification of residual solvent impurities
5. Classify and write sources of elemental impurities.
6. Explain about the shelf life calculation
7. Summarize the principle and instrumentation of PCR studies for gene regulation.
8. Explain about the characterization of impurities and degradant products
9. Describe about the ICH stability guidelines for biological products
10. Recall the biological test and assay of heparin sodium IP.
11. Outline the principle and applications of fluoro immunoassay
12. Compare and contrast between enzyme and luminescence immunoassays.
