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Roll No

BP-803T(E)/PY-803(E)-CBGS

B.Pharmacy VIII Semester (PCI Scheme)/ (Non-PCI Scheme)

Examination, June 2020

Choice Based Grading System (CBGS)

Advanced Instrumentation Techniques

Time : Three Hours

Maximum Marks : 75

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Subparts of the question should be attempted in continuation.
1. a) What is Chemical shift? Elaborate factors affecting spin-spin coupling.
b) Compare the principle and applications of H-NMR and C-NMR.
 2. What is the role of ionization techniques in Mass spectroscopy? Discuss the various detectors used along with its application in pharmaceutical industry.
 3. a) Describe the principle of TGA and DTA methods.
b) What is the instrumentation and application of DSC?
 4. Compare calibration and validation. Briefly explain the process of calibration of UV spectrophotometer.

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5. Discuss the importance of hyphenated techniques in analysis with special reference to LC-MS/MS.
6. What is the concept of rotating crystal techniques? How powder diffraction XRD is useful in structure elucidation of pharmaceutical compounds?
7. Explain the following.
 - a) Validation of HPLC.
 - b) Fragmentation in Mass spectroscopy.
8. Write short notes on any two of the following.
 - a) Solid phase extraction.
 - b) Radio-immuno assay.
 - c) HPTLC-MS.

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