Q.P. Code :08713

[Time: 2½ Hours] **[Marks:60c]**

Please check whether you have got the right question paper.

N.B:
1. **All** questions are **compulsory**.
2. **Figures** to the **right** indicate **full marks**.
3. **Draw neat labeled diagrams wherever necessary.**

Q.1 A) 1. _____is a destructive detector in GC. 06
2. _____ is used to study near absorption band of optically active compounds.
3. In 'Silica Gel 60F' F stands for_____.
4. Fronting of peaks are usually the result of _____.
5. The chiral stationary phase can be prepared by attaching chiral compound to the_____.
6. Heavy metals can be best estimated by_____.

Q.1 B) Answer in one sentence (any 3) 06
1. Define derivatization in GC.
2. Explain chamber saturation in HPTLC.
3. Give examples of universal and specific detectors of HPLC
4. Give types of light sources used in AAS.
5. Define column switching.

Q.2 A) Justify "HPTLC is an improvised form of TLC" and add a note on HPTLC finger printing. 12

OR

Q.2 Explain in brief the principle, instrumentation of HPTLC and add a note on trouble shooting approaches 12

Q.3 A) Discuss the importance of automation in HPLC 06
B) Explain the concept of column switching with respect to HPLC 06

OR

Q.3 Give a brief account on different type of detectors used in HPLC and elaborate on its applications. 12

Q.4 A) How are the detectors in GC classified? Give two examples of any one type of detector. 06
B) Justify derivatization improves detectability of an analyte in GC". 06

OR

Q.4 What are various biological matrices? Why is it necessary to isolate analytes from biological matrices for GC analysis? Explain with two examples. 12

Q.5 A) Justify AAS is an important tool in analysis of heavy metals. 08
B) Give the applications of XRD. 04

OR

Q.5 Give the principles, instrumentation and applications of CD and ORD. 12