

**Subject Code: PAQA31B/[R13]**

**M. Pharm I Semester Regular Examinations, March, 2014  
CHROMATOGRAPHIC AND OTHER SPECIAL TECHNIQUES  
(Com to PA&QA and PA&QC)**

**Time: 3 Hours**

**Max Marks: 60**

**Answer any FIVE questions  
All questions carry EQUAL marks**

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1. a) Discuss, principle and instrumentation of TLC with special emphasis on stationary phases, mobile phases, sample preparation, sample application, development techniques, Detection technique and applications  
b) Write a note on column chromatography.
2. Describe briefly the principles of GLC describe the construction and working of a gas chromatograph with a neat sketch. Write a note on derivatization methods in GLC. Enumerate the applications of GLC in pharmaceutical analysis.
3. Explain the instrumentation of HPLC with a block diagram. Critically discuss various stationary phases employed in HPLC. Comment on the application of fluorescence and refractive index detector.
4. Describe the instrumentation and applications of HPTLC in standardisation of crude drugs.
5. Discuss the following with reference to instrumentation and applications
  - a) HPCPC
  - b) SFC.
6. Discuss principle, methodology and applications of RIA.
7. Discuss instrumentation and applications of Gel Electrophoresis.
8. Write a note on
  - a) Paper chromatography.
  - b) Ion-Exchange chromatography.