

Code No: PH302

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****Pharm.D III Year Supplementary Examinations, October/November - 2019****PHARMACEUTICAL ANALYSIS****Time: 3hours****Max.Marks:70****Answer any five questions****All questions carry equal marks**

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- 1.a) Write notes on quality control charts.
- b) Write the concept of quality assurance.
- c) Write the benefits of total quality management. [5+4+5]
- 2.a) Write the principle of thin layer chromatography (TLC) and add note on developing reagents in TLC.
- b) Write the principle and applications of paper chromatography. [7+7]
- 3.a) Explain the following:  
i) HETP ii) Normal phase chromatography
- b) Write in detail about the theory and instrumentation of GLC. [6+8]
- 4.a) Write about the following:  
i) Principle and applications of HPTLC ii) Ion exchange chromatography.
- b) Write the instrumentation and applications of HPLC. [8+6]
- 5.a) Write the construction and working of glass membrane electrode.
- b) Write about the following:  
i) Dropping mercury electrode ii) Principle of conductometric titrations. [7+7]
- 6.a) Write the theory involved and applications of amperometric titrations.
- b) Explain the principle and applications of affinity chromatography. [7+7]
- 7.a) Explain in detail about Beer-Lambert law and its limitations.
- b) Write about the following:  
i) Monochromators ii) Pyroelectric detector. [8+6]
- 8.a) Write about the theoretical principle and applications of atomic absorption spectrometry.
- b) Write short notes on optical rotary dispersion.
- c) Write the principle and any two applications of mass spectrometry. [6+4+4]

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