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VALLABH VIDYANAGAR – 388 120
Internal Test -2017
US05CINV04: ANALYTICAL INSTRUMENTATION
Date: 6th October 2017, Time: 11:00 am to 12:30 pm

Total Marks: 25

Q-1. **Multiple Choice Questions-** [3]

- (i) pH value is dependent on
(a) Resistance (b) Inductance (c) Voltage (d) Temperature
- (ii) Identify sample destructive technique from the given detectors.
(a) FID (b) TCD (c) ECD (d) AID
- (iii) Injection valve method is used for
(a) detection (b) heating (c) sampling (d) recording

Q-2. **Answer any two** [4]

- (i) What care should be taken to handle glass electrode?
- (ii) Draw neat labeled diagram of Gas Chromatography.
- (iii) What are drawbacks of large diameter column?



Q-3. Draw neat diagram of Reference electrode and explain it in detail. [6]

OR

Q-3. Explain Null detector type pH meter in length. [6]

Q-4. Discuss Temperature control circuit of Oven in Gas Chromatography. [6]

OR

Q-4. Describe working principle of Flame Ionization Detector with its limitations. [6]

Q-5. Explain HPLC system with flow measurement and control. [6]

OR

Q-5. Discuss operation of Reciprocating Piston pump used in LC. [6]

*****Best of Luck *****