

ACTIVITY CODE: 1903028031

B.Sc. 6th Semester (Honours) Practical Examinations, October 2020

Subject: Chemistry

Course ID: 61426

Course Code: UG/CHEM/603/DSE-3(P)

Course Title: Analytical Methods in Chemistry

Full Marks: 10

Time: 1 Hours 30 Minutes

*The figures in the margin indicate full marks
Candidates are required to give their answers in their own words as far as possible*

1. Answer *any one* question: 10×1 = 10
- (a) (i) Briefly elucidate the principle of separation and identification of glucose and fructose present in their mixture by paper chromatography.
- (ii) How can you determine pH of soil experimentally? 5+5 = 10
- (b) (i) Briefly discuss the principle of separation of a mixture containing Fe²⁺ and Ni²⁺ by complexation with DMG and extracting the Ni-DMG complex in chloroform.
- (ii) Briefly discuss the procedure of estimation of phosphate and nitrate in soil. 5+5 = 10
- (c) (i) How can you determine Chemical Oxygen Demand (COD) spectrophotometrically?
- (ii) Briefly discuss the procedure of estimation of calcium and magnesium in soil. 5+5 = 10