B.Sc.(Hons) Sem VI
Practical examination 2021
BOTA
Paper CC 13 (Plant Physiology)

F.M. 30 **Time:1 hour 30 mins**

Answer **any three** of the followings: (3x10)

1.a) What is Transpiration? Differentiate it with Evaporation. (1+2)
b) Compare about the set up processes of Transpiration and Evaporation. (3)
c) Make a comment on the comparison of Transpiration and Evaporation process. (4)

2.a) What is Osmotic Potential?
Comment on the equation P=cRT (1+2)
b) Write a note on the preparation of different types of Molar solutions during the experiment on the measurement of osmotic pressure by plasmolytic method. (4)
c) Compare about the measurement of osmotic pressure by weighing method and plasmolytic method. (3)

3.a) What is inbibition? (1)
b) What you will observe if you put different types of seeds in water during the process of imbibitions? Comment on your observation. (3+3)
c) comment on the physiological cause behind the higher water uptake by proteinaceous seeds than fatty seeds. (3)

4.a) Explain Q_{10} .
Write the theory of determination of effect of temperature on absorption of water by storage tissue. (1+2)
b) What precautions you should take during the above mentioned experiment. (3)
c) In room temperature (27^oC), make a hypothetical table on water absorption by storage tissue and calculate Q_{10} . (4)

5.a) How stoma affects the loss os water in plants? (3)
c) Make a comparison on water loss by stoma by dorsiventral and isobilateral leaf. (3)
d) How can you determine the loss of water per stoma per hour? (4)

B.Sc.(Hons) Sem VI
Practical examination 2021
BOTA
Paper CC 14 (Plant Metabolism)

F.M. 30 **Time:1 hour 30 mins**

Answer **any three** of the followings: (3x10)

1. a. What is Chromatography? (2)
   b. What are the moving and stationary phases in paper chromatography? (3)
   c. Illustrate with suitable diagram the process of Thin Layer Chromatography. (5)

2. a. What *Rf* value or Retention factor? (2)
   b. Write the Principal and Paper Chromatography. (2)
   c. Write the procedure and Comment on the chromatographic technique showed in the Figure 1 below (4+2)

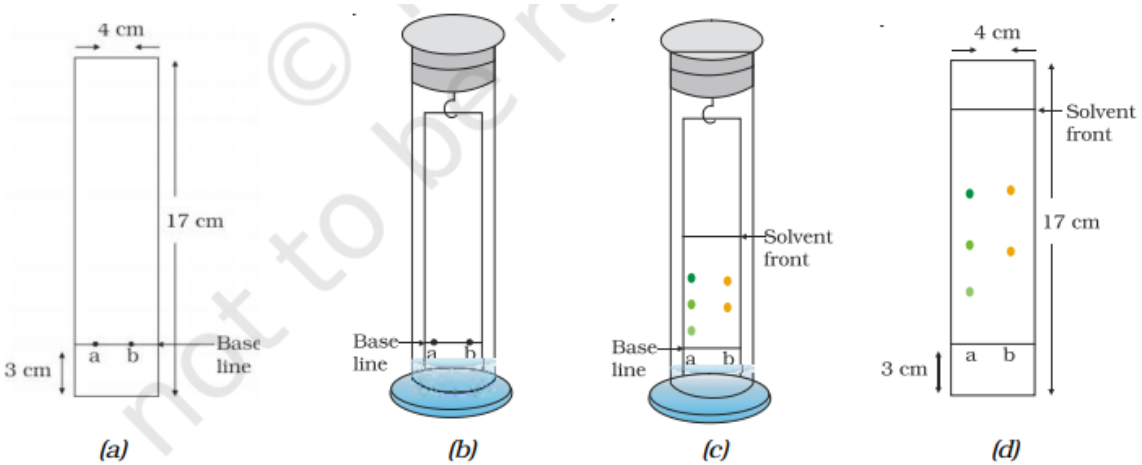

Figure 1

3. a. Define Analyte? (2)
   b. Write with suitable flowchart the procedure of separation of plastidial pigment by solvent. (5)
   c. Write the observation and comment on the said experiment. (3)

4. a. Calculate and compare the rate of germination of two plant sample (10 gm each and incubate for 15 min in the respiroscope) from the following data. (6)

Material	Vol. of O_2 uptake (ml)
Sample 1	1.8
Sample 2	2.1

   b. Comment on your calculation. (4)

5. a. Write the principal and procedure for determination of the RQ of germinating seeds. (8)
   b. Write the formula for calculation of RQ. (2)