

**B.sc. SEM V  
BOT-A  
CC 11-P (Cell and Molecular Biology)  
Practical Examination  
2020**

**Time: 1 hr 30 min**

**FM 30**

**Answer the following questions:**

1. a. What is micrometry? 2  
 b. What is the value of one division of stage micrometer? 1  
 c. Write the calibration method (formula) of micrometry. 3  
 d. Write down the calculation procedure for counting number of cells/ ml of suspension using haemocytometer. 4
  
2. a. Write the composition of pyronine-methyl green stain. 3  
 b. Write down the observation of DNA- pyronine-methyl green staining. 2  
 c. What is the full form of DPA stain? 1  
 d. How do you prepare fresh DPA reagent? 2  
 e. How do you calculate the amount of DNA content of a sample using DPA staining? 2
  
3. a. What are the chemical requirements to study the nucleolar frequency? 2  
 b. Calculate the necleolar frequency from the following data 5

Observation	No of cells / microscopic field	No of nucleolus	necleolar frequency
1	50	23	?
2	55	29	
3	49	25	
4	47	22	
5	59	32	

- c. Write the principal of RNA estimation through orcinol method 3