


**NAVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Science
Program/s: BMS
Year: 1st **Semester:** I
Examination: End-Semester Examination
Examination year: December 2022

Course Code: BM122 **Course Name:** Chemistry for Biologists
Date: 13/12/2022
Time: 08:30 am to 10:30 am

Total Marks: 40
Total Pages: 2

Instructions: IQAC Copy

- Write each answer on a new page.
- Use of a calculator is permitted.
- Please write to the point. For Q1A, Q1B and Q1C please justify the choice you make in one or two sentences.

Q. No.	Details	Marks	COs*	BTL*
Q.1	<p>(A) Amino acids are joined during a(n) _____ reaction and a(n) _____ bond/linkage is formed. [Marks 2]</p> <p>(i) hydrolysis; peptide (ii) condensation; amide (iii) neutralization; ether (iv) oxidation; ester</p> <p>(B) Calculate the $[H_3O]^+$ and OH^- concentrations in the following solutions. Each is either a strong acid or a strong base. [Marks 2]</p> <p>a) 0.013 M $Li(OH)_3$ b) 0.15 M HNO_3</p> <p>(C) The components of poison ivy and poison oak that produce the characteristic itchy rash are catechol's substituted with long-chain alkyl groups. If you were exposed to poison ivy, which of the treatments below would you apply to the affected area? Justify your choice. [Marks 1+2]</p> <div style="text-align: center;"> <p>$pK_a \sim 8$</p> </div> <p>(a) Wash the area with cold water. (b) Wash the area with dilute vinegar or lemon juice. (c) Wash the area with soap and water. (d) Wash the area with soap, water, and baking soda (sodium bicarbonate).</p>	7	CO1 CO2	BT1. BT2 BT3 BTL4 BTL5

