UG Odd Semester Examination, 2022

EDUCATION B.Sc. B.Ed
(3rd Semester)

Course No.: BSCH-302
(General Chemistry)

Full Marks: 50
Pass Marks: 20

Time: 2 hours

The figures in the right margin indicate full marks for the question.
Answer the following five (5) questions

1. (a) Starting from one dimensions, develop the schrodinger's wave equation in three dimensions and explain the terms associated with the equation. 3+2=5

   (b) Write a note on the structure of diborane. 5

Or

2. Discuss about the different types of carbon allotropes. 10

3. (a) How will you prepare citric acid? 5

   (b) State the mechanism of Fischer esterification reaction. 5

Or

4. (a) How will you prepare oxime derivative? 5

   (b) Write down the mechanism of ester hydrolysis. 5

5. (a) Discuss about the concept of cracking. 5

   (b) How will you prepare Methyl orange? 5

Or

6. (a) Write down the mechanism of methylene blue formation. 5

   (b) Write a note on preservatives. 5

7. Discuss about the details of Joule-Thomson experiment. 10

Or

8. Write notes on permutation and combination. 5+5=10

9. From Maxwel distribution, derive the formulae of RMS velocity and most probable velocity. 5+5=10

Or

10. (a) Explaining each term associated with write down the mathematical expression of RMS velocity and most probable velocity. 5

    (b) Generate a relationship between the RMS velocity and most probable velocity. 5

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