INTERNATIONAL CENTRE FOR APPLIED SCIENCES
MAHE, MANIPAL

B.Sc. (Applied Sciences) in Engg.

End – Semester Theory Examinations – Nov./ Dec. 2020

III SEMESTER - ORGANIC CHEMISTRY-II (ICH 232)

(Branch: Chemical)

Time: 3 Hours **Date: 30 November 2020** **Max. Marks: 50**

- ✓ **Answer ALL the questions.**
- ✓ **Missing data, if any, may be suitably assumed**
- ✓ **Write diagrams, equations or examples wherever necessary.**

1A. What is cracking of petroleum? Explain the Fixed-bed and Moving-bed catalytic cracking of petroleum.

1B. Discuss the preparation, properties and uses of the following:

(a) Nitro cellulose
(b) Cuprammonium
(c) Methyl cellulose

1C. Discuss the each of the classification of antibiotics its significance

(5+3+2= 10 marks)

2A. Explain the following:

(a) Discuss the structural composition of oils and fats. Why are animal fats solid and vegetable oils liquid?
(b) Boiling process for the manufacturing of soap

2B. Discuss the manufacturing of soap by Ittner process and Modern Continuous process.

2C. Write an account on hydrolytic and oxidative rancidity.

(5+3+2= 10 marks)

3A. Explain the experimental determination of average molecular weight of polymers by viscosity method with suitable diagram.

3B. Write a note on biopolymers including:

(a) Carbohydrates **(b)** Proteins **(c)** Nucleic acids

3C. Discuss the processing of latex to obtain smoked and crepe rubber.

(5+3+2= 10 marks)

4A. Justify the following:

(a) Polymers do not have exact molecular weight.
(b) SBR is a copolymer. Illustrate with structure of SBR
(c) Why does any fat or oil develop a disagreeable odour when left exposed to warm/ moist air for any length of time?
(d) The polymer obtained by bulk polymerization method is purer than that obtained by other methods.
(e) Why can't potassium soaps be manufactured by the boiling process?

4B. Explain the following polymerization techniques with their advantage and disadvantage:

(a) Suspension **(b)** Bulk **(c)** Solution

4C. Give an account on pharmaceuticals chemistry.

(5+3+2= 10 marks)

5A. Discuss copolymerization equation and reactivity ratio.

5B. Give an account on the structure, properties and isolation of quinine.

5C. Explain the chemical composition and one application of the natural rubber**.**

(5+3+2= 10 marks)

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