Reg. No. :

Question Paper Code: 91005

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

First Semester

Computer Science and Engineering

19UCY105 - APPLIED CHEMISTRY

(Common to EEE, ECE,IT and Biomedical Engineering)

(Regulation 2019)

Duration: 1:45 hour   Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1.	State Pauli's Exclusion principle.	CO1- R
2.	Distinguish between carbonate and non-carbonate hardness of water.	CO2- R
3.	Define Calgon Conditioning.	CO3- R
4.	Define piezo-electric material.	CO4- R
5.	List out the applications of fuel cells.	CO5- R
6.	Define 'e' waste	CO3- R
7.	The liquid crystals that posses a thread structure are called	CO3- R
8.	Which of the following in not a characteristic of lithium batteries?	CO4- R
9.	During charging, the density of the electrolyte of a lead acid battery	CO4- R
10.	A fuel cell is used to convert chemical energy into	CO4- R
11	State Aufbau principle	CO1- R
12	Define Hard Water	CO2- R
13	Why is Calgon conditioning better than phosphate conditioning?	CO3- R
14	What is liquid crystal phase?	CO4- R
15	How does a fuel cell differ from a galvanic cell?	CO5- R

(Answer any three of the following questions)

16. Describe the characteristics properties of Ionic compounds.   CO1-U   (10)

17. How is hardness of water determined by complexomteric method? Write   CO2- U   (10)
     the necessary calculation.

18. With help of a neat diagram explain the reverse osmosis method for   CO2- U   (10)
     desalination of brackish water.

19. Discuss the structure and applications of liquid crystals   CO3- U   (10)

20. Explain the construction and application of a lead acid battery along CO4- U   (10)
·   with reaction involved during charging and discharging.

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