

92

Vivekananda College of Engineering & Technology, Puttur
 [A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
 Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08

Rev 1.11

<Basic Science>

<04/04/22>

CONTINUOUS INTERNAL EVALUATION - 3


Dept: Chemistry	Sem / Div: I/D,E, F	Sub: Engg.Chemistry	S Code:21CHE12
Date: 06/04/2022	Time:3:00-4:30pm	Max Marks: 40	Elective:N

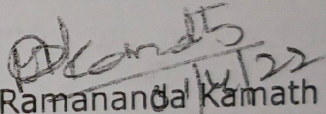
Note: Answer any 2 full questions, choosing one full question from each part.

QN	Questions	Marks	RBT	CO's
PART A				
1 a	Explain the synthesis of Paracetamol by conventional and green route from phenol.	8	L2	CO4
b	Explain the construction and working of photovoltaic cells.	8	L2	CO4
c	Describe the hydrogen production by photo electrocatalytic method.	4	L2	CO4
OR				
2 a	Briefly explain any six basic principles of green chemistry.	8	L1	CO4
b	Explain the following i) Microwave synthesis ii) Solvent free reaction	8	L2	CO4
c	Describe the construction and working of Methanol - Oxygen fuel cell.	4	L2	CO4
PART B				
3 a	Explain the theory, instrumentation and applications of flame photometry.	8	L2	CO5
b	Explain the Principle behind the variation of	8	L2	CO5

	conductance in the following titrations. (a) Strong acid Vs Strong base (b) Mixture of strong acid+ weak acid Vs Strong base			
c	Define the following units of standard solution. i) Molarity ii) Normality iii) ppm iv) Mole fraction	4	L1	CO5
OR				
4 a	Write the principles and requirement of titrimetric analysis.	8	L1/ L2	CO5
b	i) Define biological oxygen demand and chemical oxygen demand ii) 100 ml of a sample of water required 18 ml of 0.01 M EDTA. In another experiment, 100 ml of the same sample of water was gently boiled and the precipitate was removed by filtration. The filtrate required 9.0 ml of 0.01 M EDTA . Calculate total and permanent hardness	8	L1/ L3	CO5
c	Explain the sources and effects of i) Nitrogen Oxides ii) Sulphur Oxides	4	L1/ L2	CO5

Prepared by:


Dr. Chethan P.D.


HOD: Prof. M. Ramananda Kamath