JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester I) Examination December, 2024

Programme:BMLT

Course:Chemistry for Medical Laboratory Technology **Full Marks: 70**

Course Code: BMT 103 **Time: 3 Hrs.**

Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Short Answer type questions.**			**4 x 5 = 20**
a	How do molality and molarity differ?	CO1	Understand	
	or			
	Describe these: atomic weight, AMU, molecular weight & equivalent weight.	CO1	Remember	
b	Define Ionization potential and electron affinity of elements. What is trend of these properties in P.T.?	CO2	Understand	
	or			
	Differentiate between, Electrovalent, Covalent and Coordinate bond.	CO2	Understand	
c	Explain and express the law of chemical equilibrium.	CO3	Understand	
	or			
	Describe the Various concepts of acids and bases.	CO3	Understand	
d	Interpret what is Radio carbon dating?	CO5	Remember	
	or			
	Distinguish between Nuclear fission and fusion.	CO5	Analyze	
	Section II			
Long Answer type questions.				**3 x 10 = 30**
2	What is chemical bonding? What is causes of chemical bonding?	CO2	Understand	
	or			
	State Valence bond theory. What are its merits and demerits?	CO2	Understand	
3	Give ionization and ionic product of water**.**	CO3	Analyze	
	or			
	What is P^H ? Calculate the P^H of 0.005 M H_2SO_4.	CO3	Analyze	
4	What is adsorption? Gives its type.	CO4	Remember	
	or			
	Distinguish between adsorption & absorption.	CO4	Analyze	
	Section III			
	Application based questions			**1 x 20 = 20**
5	a. What is molarity and its SI unit? A solution prepared using 15 g of sodium sulphate. The solution is 125 ml find the molarity of the given solution of sodium sulphate.	CO1	Apply	
	b. What is oxidation state of oxygen in given molecules: KO_2 b) H_2O_2 c) OF_2 d) CO_2 e) H_2O	CO1	Apply	
	or			
	a. To 50 ml of 0.5M H_2SO_4,75ml of 0.25 M $H_2SO_4$is added . What is the concentration of the final solution if solution if it's volume is 125 ml?	CO1	Apply	
	b. What is oxidation state of oxygen in given molecules: a) KO_2 b) H_2O_2 c) OF_2 d) CO_2 e) H_2O	CO1	Apply	

COURSE OUTCOME

At the end of the course candidate will able to

CO1 The fundamental knowledge of measurement, chemical calculation & solutions

CO2 Learn about the properties of various elements and different types of bonding for understanding its application in paramedical domain.

CO3 Understand and apply the knowledge of chemical equilibrium as required in core area

CO4 Concept of Surface phenomena & Colloids and its application

CO5 Basic ideas & application of Radioactive elements