

**SSC ANNUAL EXAMINATION 2023**  
**Rubrics CHEMISTRY SSC- II (LOCAL)**

**FINAL 28-4-2023 (6:33PM)**

Q.# / Part #	Criteria	Level 1 (Marks)	Level 2(Marks)	Level 3 (Marks)	Level 4 (Marks)	Level 5 (Marks)	Level 6 (Marks)	Level 7 (Marks)
2(i)	Necessary conditions for chemical equilibrium	Writing three correct Necessary conditions (3)	Writing two correct Necessary conditions (2)	Writing any one correct Necessary condition (1)	Any relevant information (0.5)	Wrong answer (0)		
2(ii)	Identify Bronsted acids and Bases	Identifying six correct Bronsted acids and Bases (3)	Identifying five correct Bronsted acids and Bases (2.5)	Identifying any four correct Bronsted acids and Bases (2)	Identifying any three correct Bronsted acids and Bases (1.5)	Identifying any two correct Bronsted acids and Bases (1)	Identifying any one correct Bronsted acid and Base (0.5)	Wrong answer (0)
2(iii)	Writing complete and balance chemical equation	Writing correct complete and balanced chemical equation (03)	Writing correct complete equation without balancing (2)	Partially correct response (01)	Any relevant information (0.5)	Wrong answer (0)		
2(iv)	Identifying (by encircling) functional groups	Correct identification of the three functional groups (1.5)	Correct identification of any two functional groups (1)	Correct identification of any one functional group (0.5)	Wrong answer (0)			
	Naming of Functional groups	Correctly naming the three functional groups (1.5)	Correctly naming any two functional groups (1)	Correctly naming any one functional group (0.5)	Wrong answer (0)			
2(v)	Predicting Molecular formula, structure formula and condensed structural formula of Hexane.	Writing all three correct formulas (3)	Writing any two correct formulas (2)	Writing any one correct formula (1)	Wrong answer (0)			

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2(vi)	Identifying the product and completing the reactions (first equation)	Writing/Identifying correct name of the product and correctly completing the reaction (1.5)	Partially correct response (1)	Any relevant information (0.5)	Wrong answer (0)			
	Identifying the product and completing the reactions (second equation)	Writing/Identifying correct name of product and correctly completing the reaction (1.5)	Partially correct response (1)	Any relevant information (0.5)	Wrong answer (0)			
2(vii)	Identify A and B in the reaction	Correctly writing/identifying (for A) (1.5)	Partially correct response (1)	Any relevant information (0.5)	Wrong answer (0)			
		Correctly writing/identifying (for B) (1.5)	Partially correct response (1)	Any relevant information(0.5)	Wrong answer (0)			
2(viii)	Describing Industrial waste in water and enlisting any three health problems.	Writing correct description of Industrial waste of water (1.5)	Writing partially correct description of Industrial waste of water.(1)	Any relevant information (0.5)	Wrong answer (0)			
		Enlisting any three health problems. (1.5)	Enlisting any two health problems.(1)	Enlist any one health problem (0.5)	Wrong answer (0)			
2(ix)	Identifying Functional Groups and drawing peptide linkage between two amino acids.	Writing two correct Functional Group (1)	Writing one correct Functional Group (0.5)	Wrong answer (0)				
		Drawing correct peptide linkage(2)	Partially correct drawing of peptide linkage(1)	Writing any relevant information (0.5)	Wrong answer (0)			
2(x)	Enlisting harmful	Writing any three correct	Writing any two correct	Writing any one correct	Writing any relevant	Wrong		

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	effects of nitrogen dioxide	Harmful Effects (3)	Harmful Effects (2)	Harmful Effect(1)	information (0.5)	answer (0)		
2(xi)	Describing greenhouse gases and their role in Global warming.	Correct description or Writing three correct names/formula of Greenhouse gases (1.5)	Partially correct response (1)	Any relevant information (0.5)	Wrong answer (0)			
		Writing correct role of these gases in Global warming (1.5)	Writing partially correct role of these gases in Global warming (1)	Any relevant information (0.5)	Wrong answer (0)			
2(xii)	Discussing strange behavior of density of water	Writing correct Strange behavior of density of water (3)	Writing Partially correct Strange behavior of density of water (2)	Any relevant information (1)	Wrong answer (0)			
2(xiii)	Writing the reactions of CO <sub>2</sub> with ammonical brine in Solvay's Process	Writing correct description (1)	Writing partially correct description (0.5)	Wrong answer (0)				
		Writing two correct reactions (2)	Writing one correct reaction (1)					
2(xiv)	Description of Petroleum and fractional distillation	Writing correct description of Petroleum (1.5)	Writing partially correct description of Petroleum (1)	Writing Any relevant information (0.5)	Wrong answer (0)			
		Writing correct description of fractional distillation (1.5)	Writing partially correct description of fractional distillation (1)	Writing Any relevant information pertaining to fractional distillation (0.5)	Wrong answer (0)			
2(xv)	Writing reaction of methane with chlorine in direct sunlight and trend of	Writing correct Description/reaction (1.5)	Writing partially correct Description/reaction (1)	Writing Any relevant information pertaining to fractional distillation (0.5)	Wrong answer (0)			

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	reactivity of halogens with alkane.	Writing correct trend of reactivity of halogen with alkane. (1.5)	Writing partially correct trend of reactivity of halogen with alkane (1)	Writing Any relevant information pertaining to fractional distillation (0.5)	Wrong answer (0)			
3 (a)	Writing complete and balanced equations For the manufacturing of urea in two steps and enlisting uses of urea.	Writing the correct description of two steps (2)	Writing one correct description of one step and one partially correct (1.5)	Partially correct response (1)	Any relevant information's (0.5)	Wrong answer (0)		
		Writing two correct and balanced equations (2)	Writing one correct and balanced equation and other partially correct (1.5)	Partially correct response (1)	Any relevant information's (0.5)	Wrong answer (0)		
		Enlist one use of urea. (1)	Any relevant information's (0.5)	Wrong information (0)				
3 (b)	State/define the Lewis concept of acids & bases and classify the substances.	Correctly stating/defining the concept of acids and bases (3)	Partially correct response (2)	Any relevant information (1)	Wrong answer (0)			
		Correctly classifying four substances. (2)	Correctly classifying three substances. (1.5)	Correctly classifying two substances. (1)	Correctly classifying one substance. (0.5)	Wrong answer (0)		
4 (a)	Describing methods to remove temporary hardness of water	Correctly writing one method with chemical equation ( 2.5)	Writing partially correct response (2)	Relevant information (01)	Wrong answer (0)			
		Correctly writing one method with chemical equation ( 2.5)	Writing partially correct response (2)	Relevant information (01)				
4 (b)	Enlisting Names of layers of atmosphere and explaining the 1 <sup>st</sup> two layers.	Correctly writing four names of layers (2)	Correctly writing any three names of layers (1.5)	Correctly writing any two names of layers (1)	Correctly writing any one name of layer (0.5)	Wrong answer (0)		
		Writing correct	Partially correct response	Any relevant	Wrong answer (0)			

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		description of 1 <sup>st</sup> layer (troposphere) (1.5)	(1)	information (0.5)				
		Writing correct description of 2 <sup>nd</sup> layer (stratosphere) (1.5)	Partially correct response (1)	Any relevant information (0.5)	Wrong answer (0)			
5 (a)	Writing macroscopic characteristics of reversible chemical reaction	Writing three correct Macroscopic characteristic of forward and reverse reaction (6)	Writing two correct and one partially correct macroscopic characteristics of forward and reverse reaction (5)	Writing two correct macroscopic characteristics of forward and reverse reaction (4)	Writing one correct and one partially correct macroscopic characteristic of forward and reverse reaction (3)	Writing any one correct macroscopic characteristic of forward and reverse reaction (2)	Writing any one partially correct characteristic of forward and reverse reaction (1)	Wrong answer (0)
5 (b)	Writing summary of importance of Vitamins in fighting against diseases	Summary based on mentioning of any four vitamins against their allied diseases (4)	Summary based on mentioning of any three vitamins against their allied diseases (3)	Summary based on mentioning of any two vitamins against their allied diseases (2)	Summary based on mentioning of any one vitamin against their allied diseases (1)	Any relevant information (0.5)	Wrong answer (0)	

**Note: All the markers must know the solutions of all the question items of the question paper before starting marking.**