



Republic of the Philippines  
Department of Education  
CARAGA REGION

TABLE OF SPECIFICATION  
Diagnostic Test in General Biology 1

LEARNING COMPETENCY	No. of days based on LC Codes	%	No. of Items	Lower-order Thinking Skills		Moderate-order Thinking Skills		Higher-order Thinking Skills	
				Rem	Und	App	Ana	Eval	Cre
				Item Placement					
Explain the postulates of the cell theory ( <b>STEM_BIO11/12-Ia-c-1</b> )	4	6.25 %	3	1**					
Describe the structure and function of major and Subcellular organelles ( <b>stem_bio11/12-ia-c-2</b> )							2** 3***		
Distinguish prokaryotic and eukaryotic cells according to their distinguishing features ( <b>stem_bio11/12-ia-c-3</b> )	4	6.25 %	4	4**					
Classify different cell types (plant/animal tissues) and specify the function(s) of each ( <b>stem_bio11/12-ia-c-4</b> )					5**				
Describe some cell modifications that lead to adaptation to carry out specialized functions (e.g., microvilli, root hair) ( <b>stem_bio11/12-ia-c-5</b> )						6,*** 7***			
Characterize the phases of the cell cycle and their control points. ( <b>STEM_bio11/12-id-f-6</b> )	5	7.8%	4				8***	9***	
Describe the stages of mitosis/meiosis given $2n=6$ ( <b>STEM_BIO11/12-Id-f-7</b> )								10,** 11***	
Explain the significance or applications of mitosis/meiosis ( <b>STEM_BIO11/12-Id-f-9</b> )				12**	13**				



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Identify disorders and diseases that result from the malfunction of the cell during the cell cycle ( <b>STEM_BIO11/12-Id-f-10</b> )	5	7.8%	4	14**	15**					
Describe the structural components of the cell membrane ( <b>STEM_BIO11/12-Ig-h-11</b> )	10	7.8%	4		16**	17***				
Relate the structure and composition of the cell membrane to its function ( <b>STEM_BIO11/12-Ig-h-12</b> )								18, 19		
Explain transport mechanisms in cells (diffusion osmosis, facilitated transport, active transport) ( <b>stem_bio11/12-ig-h-13</b> )		7.8%	4	20**	21**					
Differentiate exocytosis and endocytosis ( <b>STEM_BIO11/12-Ig-h-14</b> )						22**, 23***				
Describe the components of an enzyme ( <b>STEM_BIO11/12-Ii-j-17</b> )	4	6.25 %	2				24***			
Determine how factors such as ph, temperature, and substrate affect enzyme activity ( <b>STEM_BIO11/12-Ii-j-19</b> )							25***			
SECOND QUARTER										
Explain coupled reaction processes and describe the role of ATP in energy coupling and transfer (STEM_BIO11/12-IIa-j-1)	8	12.5 %	7	26**						
Explain the importance of chlorophyll and other pigments (STEM_BIO11/12-IIa-j-3)				27**	28**					
Describe the patterns of electron flow through light reaction events. (STEM_BIO11/12-IIa-j-4)						29***	30***			
Describe the significant events of the Calvin cycle. (STEM_BIO11/12-IIa-j-5)									31***, 32***	
Differentiate aerobic from anaerobic respiration. (STEM_BIO11/12-IIa-j-6)	8	12.5 %	3	33**	34**	35**				
Explain the major features and sequence the chemical events of cellular respiration. (STEM_BIO11/12-IIa-j-7)			3				36**, 37***	38**		
Distinguish major features of glycolysis, Krebs cycle, electron transport system, and chemiosmosis. (STEM_BIO11/12-IIa-j-8)	8	12.5 %	3	39**	40**	41***				



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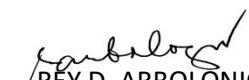


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Describe reactions that produce and consume ATP (STEM_BIO11/12-IIa-j-9)			3				42*, 43*	44**	
Describe the role of oxygen in respiration and describe pathways of electron flow in the absence of oxygen. (STEM_BIO11/12-IIa-j-10)	8	12.5 %	3	45**	46**	47***			
Explain the advantages and disadvantages of fermentation and aerobic respiration. (STEM_BIO11/12-IIa-j-12)			3		48**	49**		50**	
	64			10	10	10	10	10	

Note: The total number of items per cognitive process dimension must be equal or should have a variance of 1 only from the other CPD.

Prepared by:

  
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