

※ 注意：請於試卷內之「非選擇題作答區」標明題號依序作答。

1. Please using the following Table to compare Type I and IIb of skeletal muscle (20 points).

	Type I	Type IIb
<b>Metabolic Characteristics</b>		
Speed of contraction (slow/fast)	_____	_____
Myosin ATPase activity (slow/fast)	_____	_____
Primary pathway for ATP synthesis (aerobic/anaerobic)	_____	_____
Myoglobin content (high/low)	_____	_____
Glycogen stores (high/low)	_____	_____
Recruitment order (first/second)	_____	_____
Rate of fatigue (fast/slow)	_____	_____
<b>Activities Best Suited For</b>	_____	_____
<b>Structural Characteristics</b>		
Fiber diameter (large/small)	_____	_____
Capillaries (many/small)	_____	_____

2. Please describe how electrolytes and water are absorbed in the large intestine (5 points), and explain how diarrhea may be produced (15 points).
3. Please use male sex hormone as an example to describe the regulatory feedback among hypothalamus, pituitary gland, and gonads (10 points).
4. Please explain the meaning of functional residual capacity (FRC) (5 points), and use transpulmonary pressure and transthoracic pressure to explain why an individual with emphysema (obstructive lung disease) has higher functional residual capacity (FRC) than normal people (15 points).
5. Please describe the structural and functional difference between two subtypes of Acetylcholine receptors (10 points).
6. Please define the term preload and afterload (10 points), and explain how these factors affect the cardiac output (10 points).