

**B.Sc. FITNESS AND LIFESTYLE MODIFICATION**  
(New Syllabus 2017-2018)

**FIRST YEAR**

**PAPER II – EXERCISE PHYSIOLOGY AND FITNESS ASSESSMENT**

*Q.P. Code: 802802*

**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Define glycolysis. Explain anaerobic and aerobic glycolysis.
2. Describe the Conduction System of Heart.
3. Describe various processes in active and passive transport.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Draw a diagram of mitochondria and tabulate its parts with its function in cellular respiration.
2. Explain fat breakdown.
3. What are the types of membrane protein and its function?
4. Define blood pressure and list the factors affecting blood pressure.
5. What are the types of skeletal muscle contractions?
6. Define range of motion in a joint and factors affecting joint range.
7. Define muscle strength and add note on muscular endurance.
8. Explain overload principle, specificity and progression in training.

**III. Short answers on:**

**(10 x 3 = 30)**

1. What Controls the Heart Rate?
2. Define Lactate Threshold.
3. What are the types of muscle fibres?
4. What are the types of glycogen stores in body?
5. Mention health related fitness components.
6. Define Body Mass Index.
7. Define tidal volume, residual volume and dead space.
8. What is basal metabolic rate?
9. Name any three conditions due to extreme heat.
10. Define anthropometric measurement.

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**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain about energy metabolism.
2. Explain about principles of training.
3. What are the various factors that affect performance?

**II. Write notes on:**

**(8 x 5 = 40)**

1. Explain Lactate threshold.
2. What are the various types of muscle contraction?
3. Explain Krebs's cycle.
4. What are the various lung capacities?
5. Explain Basal Metabolic Rate.
6. What is oxygen deficit?
7. Define Range of Motion and factors affecting the joint range.
8. Explain Sliding filament theory.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Define Muscle Spindle.
2. What is Hypertrophy?
3. Body Composition.
4. Define Fatigue.
5. What is Cardiac Output?
6. Explain ATP-PC system.
7. What is Growth hormone?
8. Define Electrolytes.
9. Define Cramps.
10. Mention Skill related fitness components.

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