22CNP317AN

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch – **CLINICAL NUTRITION AND DIETETICS**

MAJOR ELECTIVE COURSE – I FITNESS AND SPORTS NUTRITION

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Question No.	Question	K Level	CO
1	Which domain of fitness deals with emotional stability and stress management? a) Physical b) Mental c) Social d) Spiritual	K1	CO1
2	Which component refers to the ability to move a joint through its full range of motion? a) Flexibility b) Power c) Coordination d) Balance	K2	CO1
3	Which type of exercise involves continuous, rhythmic movements that improve cardiovascular endurance? a) Strength training b) Aerobic exercise c) Flexibility exercise d) Anaerobic exercise	K1	CO2
4	During rest, the body relies primarily on: a) Carbohydrates b) Proteins c) Fats d) Vitamins	K2	CO2
5	Which nutrient is most emphasized in a pre-game meal? a) Protein b) Fat c) Carbohydrate d) Vitamin C	K1	CO3
6	Which of the following is considered an ergogenic aid? a) Vitamin C b) Creatine c) Fiber d) Calcium	K2	CO3
7	Which nutrient is most critical during adolescence for bone growth? a) Vitamin C b) Iron c) Calcium d) Sodium	K1	CO4
8	Low energy availability is directly associated with: a) Reduced fat storage only b) Female athlete triad (FAT) c) Increased protein absorption d) Enhanced athletic performance	K2	CO4
9	Cooling down after exercise helps to: a) Build muscle strength b) Maintain elevated heart rate c) Reduce muscle soreness and restore circulation d) Improve flexibility only	K1	CO5
10	Which principle of sports nutrition emphasizes replenishing glycogen stores after training? a) Pre-game meal b) Recovery nutrition c) Protein synthesis d) Hydration protocol	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Explain the difference between health-oriented and skill-oriented components of physical fitness.	K4	CO2
	(OR)		
11.b.	Examine the role of social fitness in overall well-being.		
12.a.	Explore how exercise improve respiratory efficiency?	K4	CO3
	(OR)		
12.b.	Investigate why mobilization of fat stores important during prolonged endurance activity?		
13.a.	Interpret how carbohydrate loading improve endurance performance?	K5	CO4
	(OR)		
13.b.	Justify how nutritional deficiencies can contribute to fatigue in athletes?		
14.a.	Evaluate the role of iron in adolescent and female athletes.	K5	CO3
	(OR)		
14.b.	Evaluate the consequences of poor bone mineral density in young female athletes.		
15.a.	Predict the importance of warming up and cooling down in sports performance.	K6	CO5
	(OR)		
15.b.	Evaluate the role of protein in recovery after intense sports activities.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Question No.	Question	K Level	CO
16	Evaluate different motivational strategies (intrinsic and extrinsic) and design a fitness plan that incorporates these strategies to promote lifelong physical activity.	K5	CO1
17	Explain the aerobic and anaerobic energy systems in detail, and critically evaluate their contribution during different types of physical activity.	K4	CO2
18	Analyse the role of dietary antioxidants and stress management techniques in preventing exercise-induced damage and maintaining long-term athlete health.	K4	CO3
19	Explain the concept of energy availability, how it is measured, and critically analyze its association with FAT and athletic performance.	K5	CO4
20	Categorize the differences in workout (aerobic and anaerobic) demands for various sports like athletics, football, gymnastics, and swimming.	K6	CO5

Z-Z-Z END