

DDE

**Tamil Nadu Physical Education and Sports University
Chennai-6**

Department of Physical Education

P.G. DIPLOMA IN

OBESITY AND WEIGHT MANAGEMENT

Int / Ext
25 / 75

Paper Title		Marks
Paper - I	Body Composition and Health Appraisal	100
Paper-II	Obesity Assessment and Treatment	100
Paper-III	Nutrition and Weight Management	100
Paper-IV	Exercise Prescription for Obesity	100
Total		400

Educational Qualification	Any degree recognized by the syndicate of the TNPESU
Stream	Distance Education
Duration	One year

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PAPER I
BODY COMPOSITION AND HEALTH APPRIASAL
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UNIT – I

Basics of Body composition: Definition, Meaning and Need. Methods of measurements- skin fold measurements – Circumference measurements – Body composition Assessment and Report.

UNIT – II

Skin fold measurement techniques: Sites of measurement – Abdomen – Biceps –Calf – Chest – Midaxilla – Sub scapular – Suprailliae – Thigh – Triceps. Calculation of Body percent Fat.

UNIT – III

Measuring circumstanes: Sites – Waist – Hips – Height – Weight – Age – Calculation of Body percent Fat – Assessing and reporting the Results – SUPER Principle – Sensitivity – Understanding – Practically – Accompaniment – Rein forcemeat – establish Desirable body weight. Best way to loose weight – unhealthy approaches to loose weight.

UNIT – IV

Health Appraisal: Evaluating Health Status – Health Status question are ^{major} – Fitness testing – Component of Fitness testing – Minimum battery (Rest, Subamariamal, Minimal) – Additional variables.

UNIT V

Fitness program Decisions: - Conditions for Physical Activity Decisions – Medical referral – Supervised and unsupervised program – Fitness Education – Change of Health and / Fitness status.

REFERENCE

- Rick Frey (Ed) Practical Body Composition Guide, Human Kinetics, Canada,1995.
Edward T. Howley B. Don Franks _ Health Fitness Instructors Hand book, Human Kinetics, Canda 2003.

PAPER II

OBESITY ASSESSMENT AND TREATMENT

UNIT – I

Obesity – Introduction – Definition – Epidemiology – Prevalence – Incidence – sex variance- Etiology of obesity – Psychological correlation – Genesis influence.

UNIT – II

Types of Obesity – Android Obesity: Characteristics & Complications. Gynoid obesity: Characteristics & Complications. Pathophysiology of obesity- Complications of obesity in Child and Women.

UNIT – III

Assessment of obesity – Health related Quality of life assessment -Body composition Assessment – Laboratory methods, fields method - Clinical evaluation of obesity.

UNIT – IV

Dietary Intake – Recording & analyzing. Assessment of Physical Activity and Energy expenditure.

UNIT – V

Obesity Treatment & prevention - Medical Management- Medical Nutrition therapy- Physical Activity Treatment- Physical Activity Promotion -Surgical Management - Future trends in obesity management.

REFERENCE

Rick Frey (Ed) Practical Body Composition Guide, Human Kinetics, Canada,1995.

Werner W.K. Hoeger and Sharon A. Hoeger (1990) Fitness and Wellness, Morton Publishing Company, Canada.

Allsen, P.E. J.M.Harrison and B.Vance. Fitness for life: An individualized Approach. Dubuque,IA:Wm.C.Brown,1989.

Hawley. E.T. and Franks B.D. (1977) Health Fitness Instructor's handbook. Third Edition. Human Kinetics, Champaign Illinois.

PAPER III

NUTRITION AND WEIGHT MANAGEMENT

UNIT – I

Energy systems – Phosphor Creative System, Lactic acid system, Effect of exercise on energy systems, factors affecting energy systems. Fatigue – role of diet to delay fatigue. Carbohydrate: importance in performance, quantity to be consumed before, during, after exercise, recovery, Carbo loading, Pre event, post event meal.

UNIT – II

Protein: Role in performance- role of BCAA - protein requirement in strength, endurance, athletes on weight loss, bulking up, and effect of exercise on protein requirement, fate of excess protein- supplements.

UNIT – III

Fat – methods to assess fat – Bio-impedance analysis, skin fold measurements, DEXA, under water weighing, Desirable fat percentage, Dangers of low fat.

UNIT – IV

Fluids - osmolality – Hypotonic, hyper tonic, isotonic fluids, dehydration, dangers of dehydration, Sports drinks – composition (glucose, glucose polymer) , intake before, during and after exercise, importance of fluids, Alcohol.

UNIT – V

Weight management – Guidelines to lose weight, calculating energy requirement, Energy expenditure, Lifestyle changes, Gaining weight Female athlete triad, Disordered eating – anorexia nervosa, bulimia nervosa

UNIT – VI

Diets in Diabetes, Hypertension, Hyperlipidemia, Peptic ulcer, Inflammatory bowel disease, constipation, Anemia, underweight, Overweight.

REFERENCE

Judy A Driskell (2005) Sports Nutrition, CRC Press: Oxon

Fink (2004) Practical Application in Sports and Nutrition Jones and Partlett :
Canada

Kauffman (2006) Nutrition in promoting the public health Jones and Partlett :
Canada

PAPER IV

EXERCISE PRESCRIPTION FOR OBESITY

UNIT – I

Exercise Testing – Definition – Need for Exercise Testing. Clinical Assessment of exercise Tokens – Factors affecting exercise Tolerance – Diagnostic use of exercise testing, Indication of exercise testing – clinical values of exercise testing.

UNIT – II

Exercise testing for obesity: Cardiovascular – laboratory amendment – Tread mill, Bicycle & Arm ergo metrics. Body composition – Laboratory amendment – Hydrostatic weighting, bioelectrical impedance..

UNIT – III

Cardiovascular – Field base assessment – Rhythmic bicycle test, 1.5/2 mile run, Body composition – field based assessment – Physical Activity Index, Ceridian Aerobic fitness test, skin folders circumference, and Height & weight body mass index

UNIT IV

Exercise prescription – Need and Importance – Individual approach – Aerobic session – Frequency, time, mode of exercise – rate of progression – musculoskeletal conditioning - Static stretching – Strengthening muscles – Endurance training

UNIT V

Exercise prescription for Obesity: Design of Exercise program – Intensity, frequency, mode rate of programme for obesity – prevention of exercise complications in obesity – resistance training, Circuit Training, Aerobic training. Diet and prescription.

Reference

Skinner J.S.(2000) – Exercise Testing & Exercise prescription W.S. Saunders Company: Canada

Jones N.L (2004)– Clinical testing – W.S. Saunders company, New Delhi

Edward T.Arweley(1999) – Health fitness instructor handbook, CRC Press: Oxon