

**BHARATHIAR UNIVERSITY: COIMBATORE  
CENTRE FOR COLLABORATION OF INDUSTRIES AND INSTITUTIONS (CCII)**

**PG DIPLOMA IN DIABETES EDUCATION**

**(For the CCII candidates admitted from the academic year 2015-16 onwards)**

**SCHEME OF EXAMINATION**

Study Components	Instruction Hours/ Week	Examination			
		Duration	CIA	University Exam	Total
<b>1<sup>st</sup> Semester</b>					
Paper I:Basics in Diabetes, diagnosis, classifications and types of diabetes	5	3	25	75	100
Paper II:Treatment of diabetes	5	3	25	75	100
Practical I: Hard Skills	5	3	40	60	100
<b>2<sup>nd</sup> Semester</b>					
Paper III: Complications of DM and their management	5	3	25	75	100
Paper IV: Dialysis Concepts	5	3	25	75	100
Practical II: Soft skills	5	3	40	60	100
Project report & Viva Voce *	5	3	-	-	200
<b>Total</b>					<b>800</b>

**\*For Project Report 80% Marks & Viva-Voce 20 % Marks**

## **SEMESTER I**

### **PAPER 1**

#### **BASICS IN DIABETES, DIAGNOSIS, CLASSIFICATION AND TYPES OF DIABETES**

##### **UNIT I**

Introduction to diabetes Definition & Meaning- Types of diabetes- Statistics: International, National, State level, District level

##### **UNIT II**

History of Diabetes Anatomy & Physiology of pancreas Microscopic anatomy of pancreas- Genetics

Secretion of Insulin, Glucagon & Somatostatin- Functions & Utilization of insulin, glucagon & somatostatin Normal metabolism of carbohydrates, fats, proteins- Types of carbohydrates, fats, proteins, Biochemistry of carbohydrates, fats, proteins, Energy conversion, Storage in the body, End products

##### **UNIT III**

Pathological changes in pancreas, beta cells, alpha cells- Pathological changes in metabolism - Path physiology of diabetes

##### **UNIT IV**

Pathological Changes in Other System - Eye, CVS, Neuropathy, Nephropathy & Micro vascular

##### **UNIT V**

Diagnosis and routine investigation Timely reviews - Types & classification of DM

**PAPER 2**  
**TREATMENT OF DIABETES**

**UNIT I**

Management of Diabetes - Medical Nutrition Therapy

**UNIT II**

Exercise Management

**UNIT III**

OHA-Types,actions,storage techniques

**UNIT IV**

Insulin Therapy - Types of Insulin, Insulin Species Source, type, purity, physiologic, effects of insulin concentration indications for its uses administration storage techniques, Insulin regimens - prescribing of insulin

**UNIT V**

Educational Philosophies and Principles - Teaching Methods - Learning Methods

## **PRACTICAL I: HARD SKILLS**

### Health Education And Communication Skills

- Meaning and principles
- Methods of health educations
- Opportunity for health education in hospital and community
- Problem solving model
- Characteristics of adult learners

One to one counseling, Group counseling, Class at Large group gathering.

### Communication skills

- Meaning
- Concepts types of communications
- Methods of communications
- Art of listening & observing
- Importance of language
- Principles of reporting and recording
- Importance of reporting and recording

### Audio Visual AIDS

- Definition
- Need of A.V. Aids
- Types of A.V. Aids
- Advantage & disadvantage of A.V. Aids
- Preparation - Principles - A.V. Aids
- Uses - How to use - A.V. Aids

## **SEMESTER II**

### **PAPER 3**

#### **COMPLICATIONS OF DM AND THEIR MANAGEMENT**

##### **UNIT I**

Hypoglycemia: Definition and clinical manifestation - Treatment, prevention - Home remedies  
Ketoacidosis: Definition and causes - Clinical manifestation & clinical levels of Hyperglycemia, Investigations, prevention, hyperglycemia Unawareness

##### **UNIT II**

Micro vascular Complications  
Diabetic Kidney Diseases: Definition, Actology, Pathology, Clinical manifestations, Investigations, Treatment, Prevention  
Eye care: Problem of eye & vision, Types, Clinical manifestations, investigation, Routine

##### **UNIT III**

Macrovascular Complications: Definition, clinical manifestation, investigations, Prevention, Treatment  
Foot Care: Definition and Types of problem, Investigation, Prevention, Treatment, prevention

##### **UNIT IV**

Cardiac Problems: Ischemic changes, Routine investigations, Prevention  
Cerebral disorders: Ischemic changes, Prevention

##### **UNIT V**

Management of Co-morbid Condition - Hypertension - Dyslipidemia - Obesity - Metabolic disorders

#### **Paper 4: DIALYSIS CONCEPTS**

##### **Unit-1**

Introduction of patient of haemodialysis:  
Predialysis education of the patient – Initiation of haemodialysis timing, the start of haemodialysis – Cannulation

##### **Unit-2**

Complication during Dialysis:  
Complication during the first dialysis – Convulsions due to dialysis disequilibrium syndrome- Serum osmolality – Serum potassium – Metabolic acidosis – The digitalized patient – Establishment of the dialysis pattern.

### **Unit-3**

Monitoring the dialysis procedures:

Monitoring dialysate concentration – Monitoring dialysate flow – monitoring dialysate temperature – Negative pressure and drop chamber pressure monitoring – Blood leak detectors – Air bubble detector – Monitoring heparin infusion and blood flow – Monitoring patient variables.

### **Unit-4**

Medical problems in the chronic haemodialysis patients:

Hypertension – Congestive heart failure – secondary hyperparathyroid disease – Metastatic classification – Blood requirements – Peripheral neuropathy – Arthritis – Hepatitis – Uremic pericarditis.

### **Unit-5**

Staff Education:

Hepatitis - HIV - Cross infection - Risk associated with dialysis - Discipline & internal management - Protocol for various procedures in dialysis unit

## **PRACTICAL II: SOFT SKILLS**

### **Unit – I**

Communication Skills for effective Business Presentation, perfecting oral skills; aural skills; Reading Skills

### **Unit – II**

Non Verbal Communication: cultural codes for effective and business Presentations; Business Etiquettes.

### **Unit – III**

Informal and Informal conversations, Introducing, Opening and closing Speeches, Inviting, thanking, Apologizing, Expressing anger Resolving conflict, Giving and taking information.

### **Unit – IV**

Etiquettes for Public Speaking (extempore and lectures), Interviews and Group Discussions, Telephone conversations and Business Meetings

### **Unit – V**

Etiquettes for Business presentations – Team presentations and Individual presentation.

### **Recommended texts:**

Powell. In Company. MacMillan. Cotton, et al. Market Leader. Longman. Pease, Allan. 1998.  
Body Language: How to Read Others Thoughts by their Gestures. Suda Publications. New Delhi.  
Gardner, Howard. 1993.  
Multiple Intelligences: The Theory in Practice: A Reader Basic Book. New York. De Bono, Edward. 2000.  
Six Thinking Hats. 2nd Edition. Penguin Books. De Bono, Edward. 1993. Serious Creativity. Re print. Harper Business