

**INDIRA TECHNICAL INSTITUTE EDUCATION SOCIETY  
NASHIK  
DIPLOMA CIVIL ENGINEERING SERVICES  
( DCES )**

<b>THEORY PAPER I :</b>	Theory syllabus for this Diploma Paper I is same as CIVIL DRAUGHTSMAN (CD – I) Refer this syllabus booklet Page No. _____	100 Marks
<b>THEORY PAPER II :</b>	Drawing Paper syllabus for this Diploma Paper II is same as CIVIL DRAUGHTSMAN (CD – II) Refer this syllabus booklet Page No. _____	100 Marks
<b>SESSIONAL MARKS :</b>	( Internal )	50 Marks
<b>THEORY PAPER III :</b>	Theory syllabus for this Diploma Paper III is same as ARCHITECTURE DRAUGHTSMAN (AD – III) Refer this syllabus booklet Page No. _____	100 Marks
<b>THEORY PAPER IV :</b>	Syllabus for this paper is printed below Refer this syllabus booklet Page No. _____	100 Marks
		<b>Total : (450 marks)</b>



**DIPLOMA CIVIL ENGINEERING SERVICES  
( DCES – IV )**

**EXAM SCHEME:      THEORY PAPER 100 MARKS – 3 HRS.**

**THEORY SYLLABUS**

**1. ESTIMATING & COSTING**

- a) Introduction.
- b) Different methods of taking out quantities – center line, out – put & in-in problems on square, Rectangular & Circular Sections.
- c) Units of measurement & unit of payment of different items of works.
- d) Calculation of quantities of materials for,
  - i) Plain cement concrete of different proportions.
  - ii) Brick & Stone Masonry in cement & lime mortar.
  - iii) Plastering & Painting with Cement Mortar in foundation & Super structure.
  - iv) Woodwork for fully paneled doors & windows.
  - v) R.C.C. slab – Calculating Reinforcement & concrete.
  - vi) Painting work for brick work & stone work.
- e) Analysis of rates of the following items of work – includes labour, material rates etc.
  - i) Earthwork in Excavation & filling.
  - ii) Cement concrete in foundation.

- iii) R.C.C. & R.B. in roof slabs.
- iv) I Class burnt brick masonry in C.M.
- v) Coarse rubble stone masonry in C.M.
- vi) Cement Plaster.
- vii) Cement pointing – flash & deep pointing.
- viii) White washing on new surface
- ix) Painting on new woodwork.
- x) Cement concrete floor.
- xi) Paneled & glazed door.

- f) Preparation of detailed estimate; complete with detailed reports, specification etc. preparation of complete estimate of proposed bungalow.
- g) To prepare abstract sheet from given drawing.
- h) Types of Contracts, Tender Notice, Documents required in Tendering conditions of contracts, adding % as contractors profit.
- i) Taking out quantity for septic tank.

## **2. CONSTRUCTION MANAGEMENT**

### **a) Introduction :**

Classification of construction into light, heavy & industrial. Importance of construction industry, Agencies Associated with construction works.

### **b) Construction Planning :**

Necessity & Importance, Planning at different stages, methods of planning, scheduling, tender & contract planning by contractor, types of schedules.

### **c) Construction Labour :**

Introduction, Labour welfare, payment of wages act, minimum wages act. Workmen compensation act, contract labour act, labour insurance act.

### **d) Inspection & Quality Control :**

Introduction, stages of Inspection, Major items of control, Technical services required for inspection.

### **e) Safety in Civil Engineering :**

Importance, terms used, Accident, Accident cost, safety – programme.

## **3. ACCOUNT**

### **a) Introduction :**

Necessity of maintaining accounts, List of reference books, in accounts.

### **b) Stores & material Management :**

Introduction, Material management, Stores, Necessity & Safety of stores, monthly balance return of stock, surpluses & shortages of stock, Action for rectification of stock register, Losses of stock, Recording the loss, estimates of loss of stock & writing off.

### **c) Different types of contract :**

% rate contract as per C.S.R. Labour rate (% above or below) for various items for covered area construction through rate basis, item rate contract. Types of Contract.

### **d) Allotment of Works :**

Concept of quotation, tender, contract agreement – brief reference, work order, rules & different types of forms, Deposit works.

**GUIDELINE FOR PAPER SETTER :**

- 1) To set 8 questions, Q. 1 Compulsory – Objective 20 Marks.
- 2) From Q.2 to Q.8 Solve any Six questions 80 Marks. ( or modify as per requirement )

