Semester –V

<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	Cı	red	it	Theory Practical				Practical	
DCE15011	Sanitation	L	Т	Р	External	Internal	Total (100)	External	Internal	Total
DCE15011	Engineering	3	1	-	(70)	(30)	Min: 40 (D Grade)	(Nil)	(Nil)	(Nil)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks: 30	Best of Two Mid Semester Test -	Assignment/Quiz/Attendance -
	Max Marks: 15	Max. Marks: 15
Practical Internal Max Marks: Nil	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: Nil	Marks: Nil

Pre-Requisite	Public Health Engineering				
	1. Student should able to know to building sanitation-water pipe.				
Course Outcome 2. Student should able to know manholes and drop Manhole-component parts.					
	3. Student should able to know environmental sanitation necessity and importance.				

Unit	Contents (Theory)	Marks Weightage
I	Building Sanitation : Importance and necessity of sanitation,- Sewage, Sullage, Types of sewage, Definitions of the terms related to building sanitation-Water pipe, Rain water pipe, Soil pipe, Sullage pipe, Vent pipe, Building sanitary fittings- water closet – Indian and European type, Flushing cistern, Wash basin, Sinks, Urinals, Traps- types, Systems of plumbing – One pipe, Two pipe, Single stack, layout plan for building sanitary fittings (drainage plan), Inspection and junction chambers, Their necessity, location.	14
Π	Systems Of Sewerage: Types of sewers, Systems of sewerage, Principle of design of sewers, Self cleansing velocity and non scouring velocity laying, Testing and maintenance of sewers, Sewer appurtenances, Manholes and drop Manhole-component parts, location, Spacing, Sewer inlets, Street inlets, Elushing tank.	14
III	Analysis Of Sewage: Characteristics of sewage, BOD & COD and significance, Aerobic and anaerobic process, Pollution Control board norms for the discharge of treated sewage.	14
IV	Treatment Of Sewage : Objects of sewage treatment, General layout and flow diagram, Screening, Grit removal, Skimming, Sedimentation of sewage, Sludge digestion, Trickling filters, Activated sludge process, Disposal of sewage, Septic tank, Oxidation pond, Oxidation ditch, Common complaints in the operation of septic tank and remedies and Soak pit.	14
V	Rural Sanitation: Environmental sanitation necessity and importance, Rural sanitation- Types of Privies Aqua privy and bore hole latrine construction and working composting (Nadep or Vermiculture).	14

Text Book/References Books/ Websites

1. G.S. and Bridie, J.S Birdie ;Water supply and Sanitary Engg ; Dhanpat Rai & Sons, Delhi.

- 2. Gurucharan Singh ; Water Supply & Sanitary Engg ; Standard Publishers.
- **3.** Santosh Garg ; Enironmental Engg. (Volume I & II) ; Khanna Publishers.
- 4. S.C. Rangwala ; Water Supply & Sanitary Engg ; Charottas Publishing House.

<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	Credit			Theory			Practical		
DCE15012	Material	L	Т	Р	External	Internal	Total (100)	External	Internal	Total
DCE15012	Technology	3	1	-	(70)	(30)	Min: 40 (D Grade)	(Nil)	(Nil)	(Nil)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 15	Assignment/Quiz/Attendance - Max. Marks: 15
Practical Internal Max Marks: Nil	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: Nil	Max. Marks: Nil
	•	

Pre-Requisite	Nil
	1. Student should able to know strength of bricks, proportions of burnt.
Course Outcome	2. Student should able to know physical properties of cement.
	3. Student should able to know concrete, necessity of supervision for concreting.

Unit	Contents (Theory)	Marks Weightage
Ι	 Introduction : Importance of material technology for civil engineer, Name of common engineering materials used in construction. Masonry Materials: Building stones- classification of rocks, Requirement of good building stone &, Dressing of stones, Quarrying of stones, Artificial or cast stones, Bricks – properties of good building bricks, Conventional bricks , Standard bricks, Composition of clay brick, Method of preparation of bricks, Strength of bricks, Proportions of burnt clay bricks , Testing of bricks, Special bricks, Hollow blocks, Fly ash bricks sand lime brick and concrete brick. 	14
П	Binding Materials: Properties of Morrum and sand for road work and building construction, Lime - types and properties of lime: Fat lime, Hydraulic lime, Quick lime, Cement - Different ingredients used for manufacturing cement with their percentage, Physical properties of ordinary portland cement (OPC), Hydration of cement, Physical properties of cement, Different grades of OPC and their specification of physical properties as per relevant IS codes, Field test of cement, Storing cement at site, Types of cement and their functional uses.	14
III	Aggregates: Properties of fine aggregates - Concept of size, Shape, Surface texture, Strength, specific gravity, Bulk density, Water Absorption, Surface moisture, Soundness, Bulking impurities, Determination of fineness modulus & grading zone of sand by sieve analysis, Determination of silt content in sand, Bulking of sand, Phenomenon of bulking, Its effect on concrete mix proportion, Properties of coarse aggregates, Tests on aggregates used in road and building construction.	14
IV	Mortars: Classifications, Lime mortar, Cement mortar, Special mortars, Functions of mortar, Proportions, Properties of mortar and tests for mortar. Concrete: Introduction to concrete - Definition of concrete, Necessity of supervision for concreting operation, Different grades of concrete (as per provisions of IS 456- 2000), minimum and cube test of grade of concrete for R.C.C Water cement (w/c) ratio, Definition of workability, Factors affecting workability of concrete.	14
V	Timber, Paint, Varnish, Colors, Primers, Steel And Aluminum Sections: Classification, manufacturing and its uses, Advantage and disadvantage of different materials.	14

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Programme: **Diploma in Engineering**

Semester –V

Text Book/References Books / Websites :

- 1. Rangwala ; Engineering Materials ; Charotar public house.
- 2. S.K. Duggal ; Building Materials ; Dhanpat Rai Publication .
- 3. Surendra Singh ; Engineering Materials ; McGraw Hill Education.

Suggested List of Laboratory Experiments :- (Expandable): Nil wedthom heademic count

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Semester –V

<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	(Cred	it		Theory]		
DCE15012	Design of	L	Т	Р	External	Internal	Total (100)	External	Internal	Total
DCE15013	Hydraulic Structures	3	1	-	(70)	(30)	Min: 40 (D Grade)	(Nil)	(Nil)	(Nil)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 15	Assignment/Quiz/Attendance - Max. Marks: 15
Practical Internal Max Marks: Nil	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: Nil	Max. Marks: Nil

Pre-Requisite	Irrigation Engineering
	1. Student should able to know about dam, weirs and canals.
Course Outcome	2. Student should able to know understand different types of crops and their water requirements.
	3. Student should able to know understand how electricity generated by hydropower plants.

Unit	Contents (Theory)	Marks Weightage
Ι	Gravity Dams: Design criteria, Forces acting on gravity dams, Elementary profile, Low and high gravity dams, Stability analysis, Evaluation of profile by method of zoning, Practical profile, Foundation treatment, Construction joints, Galleries in gravity dams.	14
II	Earth Dams: Types, Causes of failure and design criteria, Soils suitable for earth dam construction, Construction methods, Foundation requirements, Typical earth dam sections, Estimation of seepage through and below the dam, Seepage control, Stability of slopes by slip circle method of analysis, Pore pressures, Sudden draw down, Steady seepage and construction pore pressure condition. Rock Fill Dams: Types, Merits and demerits, Conditions favorable for their adoption.	14
II	Spillways : Ogee spillway and its design, Details of siphon, Shaft, Chute and side channel spillways, Emergency spillways.	14
IV	Energy Dissipations and Gates: Principles of energy dissipation energy dissipators based on tail water rating curve and jump height curves spillway crest gates - vertical lift and radial gates, Their design principles and details, Design of canal regulating structures, Detailed design of sarda falls, Design of cross drainage works, Siphon aqueduct.	14
V	Hydropower Plants: Introduction of hydropower development, Assessment of power potential, Types of hydropower plants, General features of hydro-electric schemes, Selection of turbines, Draft tubes, Surge tanks, Penstocks, Power house dimensions, Development of microhydel stations, Tidal plants, Pumped storage plants and their details.	14

Text Book/References Books / Websites

- 1. Creager, Justin & Hinds ; Engineering for Dams (Volumes I, II & III) ; Shelley and Son Books
- 2. Creager Hydroelectric Hand Book; JOHN WILEY & SONS; 2nd edition (1950).
- 3. Varshney ; Hydraulic Structures ;Varshney Book Publiser.

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Programme: **Diploma in Engineering**

Subject Code	Subject Title	0	Credi	it		Theory]	Practical	
DCE1503	Building	L	Т	Р	External	Internal	Total (100)	External	Internal	Total
DCE1502	Construction Technology	3	1	-	(70)	(30)	Min: 40 (D Grade)	(Nil)	(Nil)	(Nil)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 15	Assignment/Quiz/Attendance - Max. Marks: 15
Practical Internal Max Marks: Nil	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: Nil	Max. Marks: Nil

Pre-Requisite	Irrigation Engineering
	1. Student should able to know building components and types of structure.
Course Outcome	2. Student should able to know job layout – necessity and procedures.
	3. Student should able to know brick laying , comparison between brick and stone masonry.

Unit	Contents (Theory)	Marks Weightage
I	Building Components and Materials: Building components and types of structure - building components & their function, Substructure – foundation, plinth, Superstructure – walls, Sill, lintel, Doors & windows, Floor, Roof etc. Types of structures – load bearing structures, Framed structures, Composite structures.	14
п	Construction of Sub Structure : Job layout – necessity and procedures, Site clearance, Preparing job layout, Layout for load bearing structure and framed structure by center line And face line method, Precautions while marking layout on ground, Earthwork - excavation for foundation, timbering and strutting, Earthwork for embankment, Material for plinth filling, Tools and plants used for excavation and earthwork, Foundation - importance and necessity, Types of foundation, Shallow and deep.	14
II	Construction of Super Structure: Stone masonry, Brick masonry: Common terms used in brick masonry, Requirements of good brickwork, and bonds in brick masonry, English, Flemish, stretcher and header bonds only. Brick laying, Comparison between brick and stone masonry, Doors and windows, Stair case, Elevators, Escalators etc. Scaffolding and shoring purpose, Merits and demerits of different types of scaffolding.	14
IV	Building Finishes : Floors and roofs - Process of laying and construction, Finishing and polishing of floors, Roofing materials – AC sheets, GI sheets, Plastic sheets, Fiber sheets, etc. Types of trusses. R.C.C. slab, Wall finishes: Plastering, Precaution to be taken while plastering, Defects in plaster, Pointing – necessity and procedure of pointing, Difference between plastering and pointing, Painting – necessity, Surface preparation, Method of application, Selecting suitable painting material, White wash and colour wash.	14
V	Building Maintenance: Cracks - causes and types of cracks, Identification and repair of cracks, Guniting and grouting, Settlement - causes and remedial measures plinth protection – necessity and materials used, Demolition - necessity, method of demolition.	14

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Programme: **Diploma in Engineering**

Text Book/References Books / Websites

- 1. S. P. Arora and Bindra; Building Construction; Dhanpat Rai Publication.
- 2. S. C. Rangawala; Building Construction ; Charotar Publication.
- 3. Sushil Kumar; Building Construction ; Standard Publication.
- 4. B. C. Punmia; Building Construction; Laxmi Publication.
- 5. S.K. Sharma; Building Construction ;Tata McGraw-Hill.

Koved thomas a count Suggested List of Laboratory Experiments :- (Expandable): Nil

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<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	C	red	lit		Theory			Practical	
DCE1503	Transportation	L	Т	Р	External	Internal	Total (100)	External	Internal	Total (50)
DCE1505	Engineering-II	3	1	1	(70)	(30)	Min: 40 (D Grade)	(35)	(15)	Min: 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks : 30	Best of Two Mid Semester Test Max -	Assignment/Quiz/Attendance -
	Marks: 15	Max. Marks: 15
Practical Internal Max Marks :15	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: 10	Max. Marks: 05

Pre-Requisite	Transportation Engineering - I
	Student should able to know classification of roads according to Nagpur plan.
Course Outcome	Student should able to know road accident and PIEV theory.
	Student should able to know methods of soil stabilization.

Unit	Contents (Theory)	Marks Weightage
Ι	Road Engineering: Importance of road in India, Classification of roads according to Nagpur plan (Location and function), and third road development plan, Traffic and tonnage, Classification of urban roads, Different road yojana, like Pradhan Mantri Gram Sadak Yojana, Mukhya Mantri Sadak Yojana.	14
II	Traffic Engineering: Traffic volume study, Traffic control devices-road signs, Marking, Signals, Traffic Island, Road intersections: intersections at grade and grade separator intersections. Road accident and PIEV Theory.	14
III	Construction Of Roads Pavements And Materials: Types of road materials Pavement – objective of pavement, Structure of pavement, Function of pavement components, types of pavement. Soil stabilized roads: Necessity, Methods of soil stabilization, Brief details of mechanical soil stabilization. Water bound macadam roads: Materials used, size and Grading of aggregates and Screening, Construction procedure including precautions in rolling. Construction of bituminous roads. Types of bituminous surface: Prime coat, Tack coat, Seal coat, Surface dressing: Procedure of Construction bituminous penetration macadam, and Bitumen/Tar carpets.	14
IV	 Hill Roads: Parts and functions of hill road components, Types of curves, Hill road formation. Landslides- causes and prevention. Structures- drainage structures. Drainage of Roads: Surface drainage – Side gutter, Catch water drains, Surface drainage. Subsurface drainage: Longitudinal drains and Cross drains. 	14
V	Maintenance And Repairs of Roads: Necessity of maintenance of roads, Classification of maintenance operation – ordinary, Routine and periodic maintenance. Maintenance of W.B.M., Bituminous and cement concrete roads. Arboriculture: Road side arboriculture, necessity, Planning of plantation of trees selection of types of threes and development of nursery considering the environment aspects.	14

Text Book/References Books/ Websites

- 1. N.L.Arora, S.P. Luthara ;Transportation ; I.P.H. New Delhi.
- 2. Biridi & Ahuja ; Road , Raqilway,Bridges ; S.B.H New Delhi.
- 3. Kamala ; Transportation Engineering ;T.M.H. New Delhi.

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Programme: **Diploma in Engineering**

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Suggested List of Laboratory Experiments :- (Expandable):

- 1. Aggregate crushing value test.
- 2. Determination of aggregate impact value.
- 3. Determination of Los angles abrasion value.
- 4. Determination of California bearing ratio values.
- 5. Determination of penetration value of bitumen.
- 6. Determination of shape tests on aggregate.
- 7. Determination of softening point of bituminous material.
- 8. Determination of bitumen content by centrifuge extractor.
- wedthom headernic court 9. Determination of flash point and fire point of bituminous material.
- 10. Determination of stripping value of road aggregate.

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<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	Credit			Theory			Practical		
DCE1504	Structural Design &	L	Т	Р	External	Internal	Total (100)	External	Internal	Total (50)
DCE1504	Drawing –II (Steel)	3	1	1	(70)	(30)	Min: 40 (D Grade)	(35)	(15)	Min: 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal Max Marks: 30	Best of Two Mid Semester Test Max -	Assignment/Quiz/Attendance -
	Marks: 15	Max. Marks: 15
Practical Internal Max Marks: 15	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: 10	Max. Marks: 05

Pre-Requisite	Nil
	1. Student should able to know grades of steel and strength characteristics.
Course Outcome	2. Student should able to know riveted and bolted connection.
	3. Student should able to know criteria of failure of short column and long column.

Unit	Contents (Theory)	Marks Weightage
Ι	Introduction : Types of sections used, Hollow square section rectangular section tubular section, Z-Section, Angle section- T, I, C, L-Section etc., Grades of steel and strength characteristics: Advantages and disadvantages of steel as construction material: Use of steel table and relevant I. S. code, Types of loads on steel structure and its I. S. code specification.	14
П	Connections : Riveted and bolted connection, Types of rivets and their use, Nominal diameter, Gross dia. unwin's formula, Pitch of rivets, Edge distance, Tacking rivets, Permissible stress in rivet riveted joint and its failure, Strength of riveted joint and efficiency of a riveted joint, Assumptions in theory of riveted joint, Design of riveted joint for axially loaded member, Eccentric riveted connection welded connection introduction, Permissible stress in weld, Strength of weld, Advantages and disadvantages of welded joint, Types of weld and their symbols, Design of fillet weld and butt weld subjected to axial load.	14
III	Tension Member : Types of sections used, Permissible stresses in axial tension, Gross and net cross sectional area of tension member, Analysis and design of tension member with welded and riveted connection.	14
IV	Compression Member : Criteria of failure of short column and long column, End conditions effective length of a column, Slenderness ratio and corresponding compressive stress : Angle struts types of sections used, Analysis and design of axially loaded angle struts with welded and riveted connection, Stanchion and columns, Types of sections used, Simple and built up sections, Analysis and design of axially loaded column, Design of compound column, Design of lacing angles and batten plates.	14
V	Column Bases : Types of column bases ,Design of slab base & concrete block, Cleat angles, Their use, Introduction to gusseted base (no numerical problems on gusseted base) roof truss: Types of steel roof truss & its selection criteria, Span and slope, Rise and pitch, Loads acting on the roof, Dead load; live load and wind load as per I.S. 875-1987. xt Book/References Books/ Websites	14

Text Book/References Books/ Websites

1. Ramanatham ; Steel structures ;Vazirani Publisher.

2. Dr. N.R. Chandak ;, Design of steel Structure ; S.K. Kataria and Sons .

3. Malhotra M.M, ; Steel Structures ;Malhotraand Bright Group Of Publication.

PEOPLE'S UNIVERSITY, BHOPAL (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

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- Sketching of different types of riveted joints and welded joints. Typical sketches of sections of tension 1. member, determination of net effective cross-sectional area of tension member for angle section.
- 2. Typical sketches of sections of compression member, lacing and battening.
- Graphical solution of frames to find out the stress in the member. Type of trusses for different spans. 3.
- wedthom headerning 4. Working drawing of steel truss with the details of joint.
- 5. Detailed drawing of slab base and gusseted base.

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<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	0	Cred	it		Theory		Practical		
DCE1505	Soil Mechanics	L	Т	Р	External	Internal	Total (100)	External	Internal	Total (50)
DCE1505	& Techniques - I	3	1	1	(70)	(30)	Min: 40 (D Grade)	(35)	(15)	Min: 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 15	Assignment/Quiz/Attendance - Max. Marks: 15
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment/Quiz/Attendance - Max. Marks: 05
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Pre-Requisite	Nil
	1. Student should able to know formation of soils, soil composition.
Course Outcome	2. Student should able to know soil water, permeability, flow nets.
	3. Student should able to know pressures on cohesion-less and cohesive soils.

T T •4		Marks
Unit	Contents (Theory)	Weightage
I	Basic Definitions & Index Properties : Definition and scope of soil mechanics, Historical development, Formation of soils, Soil composition, Minerals, Influence of clay minerals on engineering behavior, Soil structure, Three phase system, Index properties and their determination, Consistency limits, Classification systems based on particle size and consistency limits.	14
Π	Soil Water and Consolidation : Soil water, Permeability determination of permeability in laboratory and in field, Seepage and seepage pressure, Flow nets, Uses of a flow net, Effective, neutral and total stresses, Compressibility and consolidation, Relationship between pressure and void ratio, Porosity and degree of saturation and specific gravity.	14
III	Stress Distribution in Soils and Shear Strength of Soils : Stress distribution beneath loaded areas by Boussinesq and water gaurd's analysis. Newmark's influence chart, Contact pressure distribution, Mohr - Coulomb's theory of shear failure of soils, Mohr's stress circle, Measurement of shear strength, Shear box test, Triaxial compression test, Unconfined compression test, Value shear test, Measurement of pore pressure, Pore pressure parameters, Critical void ratio, Liquefaction.	14
IV	Stability Of Slopes: Infinite and finite slopes. Types of slope failures, Rotational slips. Stability number, Effect of ground water, Selection of shear strength parameters in slope stability analysis, Analytical and graphical methods of stability analysis, Stability of Earth dams.	14
V	Lateral Earth Pressure: Active, Passive and earth pressure at rest, Rankine, Coulomb, Terzaghi and Culmann's theories. Analytical and graphical methods of determination of earth pressures on cohesion-less and cohesive soils, Effect of surcharge, Water table and Wall friction, Arching in soils, Reinforced earth retaining walls and retaining and counterfort retaining wall. xt Book/References Books/ Websites	14

Text Book/References Books/ Websites

- 1. Dr. B. C. Punmia ; Soil Mechanics & Foundation Engineering ; Standard Book house, New Delhi
- 2. V.N.S. Murthi ; Soil Mechanics & Foundation Engineering ; Tata McGraw Hill , New Delhi
- 3. K.R. Arora; Soil Mechanics & Foundation Engineering; Tandard Publishers
- 4. Gulhati & Dutta ; Geo-technical Engineering ; Tata McGraw Hill, New Delhi.

Semester –V

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(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Suggested List of Laboratory Experiments :- (Expandable):

- Determination of Hygroscopic water content 1.
- 2. Particle - size analysis
- Determination of Specific gravity of soil particles 3.
- 4. Determination of plastic limit
- Determination of liquid limit 5.
- wedthom heademic count 6. Determination of shrinkage limit
- 7. Permeability tests
- 8.
- 9.

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<u>PEOPLE'S UNIVERSITY, BHOPAL</u> (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title		Cred	it		Theory		Practical		
DDE1504	Minor	L	Т	Р	External	Internal	Total	External	Internal	Total (50)
DPE1506	Project	-	-	1	(Nil)	(Nil)	(Nil)	(35)	(15)	Min: 20 (D Grade)

Duration of Theory (Externals): - Nil

Theory Internal- Max Marks: -Nil	Best of Two Mid Semester Test - Max Marks: - Nil	Assignment/Quiz/Attendance - Max. Marks: - Nil
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment / Quiz/ Attendance - Max. Marks: 05

Pre-Requisite	Student should have basic knowledge of engineering principles.
	The student will be able to-An ability to utilize technical resources:
	1. Identify, analyze & define the problem.
Course Outcome	2. Generate alternative solutions to the problem identified.
Course Outcome	3. Compare & select feasible solutions from alternatives generated.
	4. Compare machines/devices/apparatus for performance practices.
	5. Work effectively in a team.

Unit	Contents (Theory)	Marks Weightage
Ι	The student should prepare a working system or some design or understanding of a complex system (on minor level) that he has selected for his/her minor project work using system analysis tools and submit the same in the form of a write-up i.e. detail project report. The student should maintain proper documentation of different stages of project such as concept evaluation, requirement specification, objectives, work plan, analysis, design, implementation and test plan wherever applicable. Each student is required to prepare a project report based on the above points and present the same at the final examination with a demonstration of their project.	50

Text Book/References Books/Websites: Nil

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PEOPLE'S UNIVERSITY, BHOPAL (Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Diploma in Engineering**

Subject Code	Subject Title	C	redi	t		Theory			Practical	
	Industrial	L	Т	Р			Total			Total (100)
DCE1507	Training - II	-	-	2	External (Nil)	Internal (Nil)	(Nil)	External (70)	Internal (30)	Min: 40 (D Grade)

Duration of Theory (Externals): Nil

Theory Internal- Max Marks: Nil	Best of Two Mid Semester Test - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil
Practical Internal Max Marks: 30	Lab work & Sessional -	Assignment/Quiz/Attendance -
	Max Marks: 25	Max. Marks: 05

Pre-Requisite	Fundamental Engineering concepts.
Course Outcome	1. To develop general confidence, ability to communicate and attitude in addition to basic technological concepts through Industrial visits, expert lectures, seminars on technical topics and group discussion.
	2. Ability to learn actual working environment.

Unit	Contents (Theory)	Marks Weightage
Ι	As a part of the Diploma in Engineering curriculum, DCE1507, Industrial Training -II is a Practical course, which the students should undergo in reputed Private / Public Sector / Government organization / companies as industrial training of minimum two weeks to be undergone by the student in the semester break after IV semester theory examinations. Training period : Minimum of two weeks or 15 (Fifteen) Days. Companies / Areas covered : Any field related to concern branch / discipline of Diploma in Engineering. Grading : As per Scheme. Note: Presentation will take place the following week after you complete your training. The presentation is evaluated by your class in charge. Report must be submitted during power point presentation A Viva voce comprising comprehensive questions based on your training undergone. Etiquette: Dress properly, Behave well, Portray good image as a university student, Be punctual, Observe work ethics, Concern for safety, Be professional.	100

Text Book/References Books/ Websites: Nil