

DIPLOMA IN AMIN SURVEY

Duration: 12 Months (1 Years)

COURSE STRUCTURE OF DIPLOMA IN AMIN SURVEY SEMESTER 1st													
Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
Theory Group													
2TDAS 101		Historical Background of Survey	100	50	17	20	07	30	15	2	1	0	3
2TDAS 102		Surveying -1	100	50	17	20	07	30	15	2	1	0	3
2TDAS 103		Fundamentals of Computers & IT Literacy	100	50	17	20	07	30	15	2	1	0	3
2TDAS 104		Occupational Safety and Health	100	50	17	20	07	30	15	2	1	0	3
2TDAS 105		Workshop Calculation and Science	100	50	17	20	07	30	15	2	1	0	3
Practical Group				Term End Practical Exam				Sessional					
2TDAS 102		Surveying -1	100	50	24	-	-	50	24	-	-	2	2
2TDAS 103		Fundamentals of Computers & IT Literacy	100	50	24	-	-	50	24	-	-	2	2
2TDAS 106		Project Work	100	50	24	-	-	50	24	-	-	2	2
Grand total			800							10	5	6	21

Minimum Passing Marks are equivalent to Grade D

L- Lectures T- Tutorials P- Practical

Major- Term End Theory / Practical Exam

Minor- Pre-University Test

Sessional weightage – Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

DIPLOMA IN AMIN SURVEY

Duration: 12 Months (1 Years)

COURSE STRUCTURE OF DIPLOMA IN AMIN SURVEY SEMESTER 2nd													
Course Details				External Assessment		Internal Assessment				Credit Distribution			Allotted Credits
Course Code	Course Type	Course Title	Total Marks	Major		Minor		Sessional ***		L	T	P	Subject wise Distribution
				Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks				
Theory Group													
2TDAS 201	Prismatic Compass Survey		100	50	17	20	07	30	15	2	1	0	3
2TDAS 202	Surveying -2		100	50	17	20	07	30	15	2	1	0	3
2TDAS 203	Fundamentals of AutoCAD		100	50	17	20	07	30	15	2	1	0	3
2TDAS 204	Topography Survey		100	50	17	20	07	30	15	2	1	0	3
2TDAS 205	Employability skill		100	50	17	20	07	30	15	2	1	0	3
Practical Group				Term End Practical Exam				Sessional					
2TDAS 202	Surveying -2		100	50	24	-	-	50	24	-	-	2	2
2TDAS 203	Fundamentals of AutoCAD		100	50	24	-	-	50	24	-	-	2	2
2TDAS 206	Project Work		100	50	24	-	-	50	24	-	-	2	2
Grand total			800							10	5	6	21

Minimum Passing Marks are equivalent to Grade D

Major- Term End Theory / Practical Exam

Minor- Pre-University Test

L- Lectures T- Tutorials P- Practical

Sessional weightage – Attendance 50%, Three Class Tests/ Lab Performance Assignment 50%

SYLLABUS OF AMIN SURVEY

SPECIFIC LEARNING OUTCOMES

1. Perform Basic workshop operation of Amanat survey. Draw conventional signs & symbols used in surveying.
2. Plan & carryout site survey using chain/ tape & prepare a site plan.
3. Identify and select Farzi map.
4. Study and verify about land revenue & record field book.
5. Carryout site survey using prismatic compass.
6. Perform different types of levelling activities at site.

Sub. Code : 2TDAS101

HISTORICAL BACKGROUND OF SURVEY

History of survey

Land revenue-zamindari system, ryotwari system, mahalwari system, zamindari evolution act, responsibility of land revenue system.

Land selling- tips and tricks for selling plots of land, known your audience, contract builder or sellers

Field Book Use of field book, function of field book, survey and plan record, status of plan, base plans- water, drainage & sewerage

SURVEYING 1

Rules of survey: situation analysis report, category report, standard report, boundary momentum, reference and boundary line, survey of property. Principle of survey, objective of survey, Preliminary Survey, reconnaissance Survey, detailed Survey of Lands.

Batwara : rules of batwara, property partition kaanoon, civil law for partition, Zaminbatwara, house batwara, jewelry batwara, sarkari batwara, batwara cast. Batwaranama format, joint property batwara, bibhajan property batwara, vashiayat

Drafting of plan: Introduction of Scale & its types, Projection, R.F, Plan, Drawing to Scale. Projection of point, straight line, lettering, symbols & signs of various features

Introduction & Basic concepts:- Definition of chain survey, Classification of chain, Principle of chain surveying, Scale-Representation of scale. Study & Use of instrument:- Measurement of chain, tape, Ranging Rod, arrows, pegs, cross staff, optical square, line Ranger.

Errors in chain:- Concept of Errors in measurement, Types of Errors- Gross errors, systematic errors, random errors, applying Correction for chain & Tape (Numerical problems), Errors due to use of wrong scale. Planning & carrying out chain survey:- Reconnaissance, selection of stations running survey lines, recoding field notes, plotting a chain survey selection of scale, plotting of frame work, plotting of offsets, Title, scale, legends, inking in, coloring.

Obstacles in chaining:- Definition of obstacles, classification of obstacles, possibility of chain obstacles. Linear measurement:- different method, direct measurement, instrument for chaining – chain or tape, arrows, pegs, ranging rods, plumb bob, plasters laths & whites, chaining-follower & leader, folding & unfolding of chain, chaining on uneven or sloping ground by direct method & indirect method, first order measurement -base line measurement. Chain triangulation:- Definition, survey stations, survey lines, check line, tie lines, arrangement of survey lines, locating ground features offsets, limiting length of offset, field book, field work, basic problem in chaining.

History – Outline Map of India, topographic map, scale of maps, choosing a correct scale as like small scale map, large scale map, reduction scale map. use of protector and sacle. Detection of fault in map and comparison with original map, tabling map data details with different methods- open traverse, closed traverse, radiating method, triangulation method.

Identification of land map of individual, plot longitudinal profile, continuous line draw through point of known elevation Registration of land, verbal contract, preparation of contract, pay stamp duty, execute and register sale deed Property mutation of land, registration fees, online registration of land, offline registration of land.

Map index, survey field book register data time period, series in date. Types of field book- single and double line field book. Use of symbol on a field book, General sketch of layout of a field book, details of survey line, page index of survey line, location sketch of survey station.

FUNDAMENTAL COMPUTER AND IT LITERACY

Basics of Computer Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.

Computer Operating System

Basics of Operating System, WINDOWS, the user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc., Use of Common applications.

Word Processing and Worksheet

Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables. Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets.

Computer Networking and Internet

Basic of computer Networks (using real life examples), Definitions of Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT - ACT, types of cybercrimes.

OCCUPATIONAL SAFETY AND HEALTH

Safety & Health

Introduction to Occupational Safety and Health, importance of safety and health at workplace.

Occupational Hazards

Basic Hazards, Chemical Hazards, Vibro-acoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention.

Accident & Safety

Basic principles for protective equipment. Accident Prevention techniques - control of accidents and safety measures.

First Aid

Care of injured & sick at the workplaces, First-Aid and Transportation of sick person.

Basic Provisions

Idea of basic provision legislation of India. Safety, health, welfare under legislative of India.

Ecosystem

Introduction to Environment. Relationship between Society and Environment, Ecosystem and Factors causing imbalance.

Pollution

Pollution and pollutants including liquid, gaseous, solid and hazardous waste.

Energy Conservation

Conservation of Energy, re-use and recycle.

Global Warming

Global warming, climate change and Ozone layer depletion.

Ground Water

Hydrological cycle, ground and surface water, Conservation and Harvesting of water.

Environment

Right attitude towards environment, Maintenance of in-house environment.

Labor Welfare Legislation

Welfare Acts Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, Workmen' Compensation Act.

WORKSHOP CALCULATION AND SCIENCE

Unit: Systems of unit- FPS, CGS, MKS/SI unit, unit of length, Mass and time, Conversion of units

Material Science: properties - Physical & Mechanical, Types – Ferrous & Non-Ferrous, difference between Ferrous and Non-Ferrous metals, introduction of Iron, Cast Iron, Wrought Iron, Steel, difference between Iron and Steel, Alloy steel, carbon steel, stainless steel, Non-Ferrous metals, Non- Ferrous Alloys.

Fractions: Fractions, Decimal fraction, L.C.M., H.C.F., Multiplication and Division of Fractions and Decimals, conversion of Fraction to Decimal and vice versa. Simple problems using Scientific Calculator.

Mass, Weight and Density:

Mass, Unit of Mass, Weight, difference between mass and weight, Density, unit of density, specific gravity of metals.

Square Root:

Square and Square Root, method of finding out square roots, Simple problem using calculator.

Speed and Velocity:

Rest and motion, speed, velocity, difference between speed and velocity, acceleration, retardation, equations of motions, simple related problems.

Ratio & Proportion:

Simple calculation on related problems.

Work, Power and Energy:

Work, unit of work, power, unit of power, Horse power of engines, mechanical efficiency, energy, use of energy, potential and kinetic energy, examples of potential energy and kinetic energy.

Percentage

Introduction, Simple calculation. Changing percentage to decimal and fraction and vice-versa.

Algebra: Addition, Subtraction, Multiplication, Division, Algebraic formula, Linear equations (with two variables).

Heat & Temperature:

Heat and temperature, their units, difference between heat and temperature, boiling point, melting point, scale of temperature, relation between different scale of temperature, Thermometer, pyrometer, transmission of heat, conduction, convection, radiation.

Mensuration:

Area and perimeter of square, rectangle, parallelogram, triangle, circle, semi-circle, Volume of solids – cube, cuboid, cylinder and Sphere. Surface area of solids – cube, cuboid, cylinder and Sphere.

Basic Electricity:

Introduction, use of electricity, how electricity is produced, Types of current - AC, DC, their comparison, voltage, resistance, their units. Conductor, insulator, Types of connections – series, parallel, electric power, Horse power, energy, unit of electrical energy.

Trigonometry:

Trigonometrically ratios, measurement of angles. Trigonometric tables Levers

Simple Machines: levers and its types. Simple Machines, Effort and Load, Mechanical Advantage, Velocity Ratio, Efficiency of machine, Relationship between Efficiency, velocity ratio and Mechanical Advantage

PRISMATIC COMPASS SURVEY

Basic terms used in compass survey

Instrument and its setting up

Bearing of lines—Meridian—True, Magnetic, and Arbitrary. Bearing— fore bearing, Back bearing, Whole circle bearing, Quadrantal bearing system and Reduced bearing, Conversion of bearings, finding included angles from bearings.

Prismatic Compass—Component, construction and use.

Local attraction, Causes, precautions to be taken to avoid and correction of bearings affected due to local attraction, calculation of included angles.

SURVEYING 2

Unit 1 : Plane table survey ,principle , merits and demerits

Instrument used in plane table survey setting up the plane table (centering levelling orientation)

Methods of plane table survey (radiation ,intersection resection traversing)

Error in plane table survey .

Unit 2 : introduction to levelling

Types of levelling instruments technical terms use in levelling

Temporary and permanent adjustment

Different types of levelling entry of level book

Curvature and refraction effect sensitivity of bubble tube.

Common error and their elimination

Degree of accuracy

Unit 3:

Introduction of theodolite

Types of theodolite parts of theodolite survey

Temporary adjustment of theodolite , angle measurement process , reading of angles, field book entry of measured angles.

Permanent adjustment of theodolite

Unit 4: introduction of GIS and GPS .

Elements of GIS and GPS . observation principles

Sources of error and handling of error in GPS .

Various type of GPS application . concept and use of survey software

Sub. Code : 2TDAS203

FUNDAMENTAL OF AUTOCAD

Introduction of CAD

Computer aided drafting and designs

Graphical user interface (GUI)

Practice on auto CAD

CAD basics

Basic commands - I

Basic command - II

Other CAD commands

Text and dimensions

Printing and plotting

Layers

Properties and blocks Isoplane

TOPOGRAPHY SURVEY

Unit 1

Contouring contour interval , selection of contour interval characteristics of contour , uses of contour , contouring by various methods

Interpolation of contour by various methods ,computation of volume establishment of gradient by abney level

Unit 2

Familiarisation with cadastral map

term used in cadastral survey ,

preliminary knowledge for prepare a site plan.

Calculation of area by digital planimeter

Unit3:

Importanceof cartographic projection

Uses of various types of cartographic projection for mapping.

Unit 4 :

Introduction of hydrographic survey

Practice various methods of water depth measurement process , flow velocity measurement and determination of cross-sectional area of a river.

EMPLOYABILITY SKILLS

1. English Literacy

Pronunciation Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)

Functional Grammar Transformation of sentences, voice change, change of tense, Spellings

Reading Reading and understanding simple sentences about self, work and environment

Writing Construction of simple sentences Writing simple English

Speaking/ Spoken English Speaking with preparation on self, on family, on friends/ classmates, on known people, picture reading, gain confidence through role-playing and discussions on current happenings, job description, asking about someone's job, habitual actions. Cardinal (fundamental) numbers ordinal numbers. Taking messages, passing on messages and filling in message forms, Greeting and introductions, office hospitality, Resumes or curriculum vitae essential parts, letters of application reference to previous communication

Communication Skills

Introduction to Communication Skills Communication and its importance Principles of effective communication Types of communication - verbal, non-verbal, written, email, talking on phone. Non-verbal communication-characteristics, components-Para-language Body language Barriers to communication and dealing with barriers. Handling nervousness/ discomfort.

Listening Skills

Listening-hearing and listening, effective listening, barriers to effective listening, guidelines for effective listening. Triple- A Listening - Attitude, Attention & Adjustment. Active listening skills.

Motivational Training

Characteristics essential to achieving success. The power of positive attitude. Self-awareness Importance of commitment Ethics and values Ways to motivate oneself Personal Goal setting and Employability Planning.

Facing Interviews

Manners, Etiquettes, Dress code for an interview Do's & Don'ts for an interview.

Behavioral Skills

Problem Solving Confidence Building Attitude