

**FURTHER DETAILS REGARDING MAIN TOPICS OF
PROGRAMME No. 11/2019 (Item No.14&15)**

TRAINING INSTRUCTOR (SURVEYOR)

SCHEDULED CASTES DEVELOPMENT DEPARTMENT

(Category No.574/2017,575/2017)

Module I Basic Drawings - Instruments, uses, type and layout of drawing sheet, lines - lettering - dimensioning, scales, geometrical construction, orthographic projection

Autocad Drawings - function keys, various commands, short cut keys etc.

Module 2 Surveying

(a) Chain Surveying - Instruments, uses, error due to incorrect chain, chaining on sloping ground, principles, survey stations/lines, field book, cross staff, obstacles in chaining, symbols

(b) Plane table surveying-Accessories, methods- radiation, intersection, resection, 3 & 2 problems

(c) Compass surveying - Prismatic & surveyor's compass, bearings-types, conversion local attraction, declination, dip, isogonic & agonic lines, meridian

(d) Theodolite surveying - Parts of theodolite, definitions & terms, fundamental lines

(e) Levelling - Definitions, instrument parts, leveling staff-types, methods of leveling, hand signals, booking methods, curvature & refraction, sensitiveness of bubble

(f) Tacheometric surveying-instrument, systems, constants, equation, anallatic lens

(g) Contours - contour interval, horizontal equivalent, characteristics of contours, methods of locating, interpolation, contour gradient

(h) Traverse computations - checks in traverse, plotting, latitude & departure, transit rule, compass rule

Module 3 Road Engineering - Types of road, parts, camber, super elevation, gradients, types of curve, technical terms with simple curve, methods of laying simple curve.

Module 4 Irrigation - Types, technical terms, duty, delta, base period, kharif-rabi crop

Module 5 Parts of Building - foundation, basement, walls, doors, windows, arch, lintel, roof, stair, English & Flemish bonds, stone masonry

Estimating - Types, units of measurements, deductions

Rate analysis - Heads, lead, lift, quantities/m³ of different items

Module 6 Building materials - Bricks-types, cement-ingredients %, tests, steel bars-weight stone-classifications, timber

Module 7 Advanced Survey Instruments

Total station-Definition, parameters measures by TS, Parts of TS, EDM GPS-Technical terms, cartographic projection-types, Field astronomy-technical terms

Module 8 Volume & Area calculations-Simpson's rule, Trapezoidal rule, Units-Metric and non-metric, conversion

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper