## FIELD ASSISTANT SYLLABUS

PORT DEPARTMENT (HYDROGRAPHIC SURVEY BRANCH)(CATEGORY NO.464/2009)

- 1.BASIC SURVEY:Definition of survey,principle of survey,different types of survey,object of survey,scale of survey
- 2.COMPASS/CHAIN/PLANE TABLE SURVEY:Different types of chains,Ranging,chain surveying,reconnaisance,compass surveying,different types of compass,bearing,reduced bearing,whole circle bearing,fore and back bearing,plane table surveying,methods of plane tabling
- 3.THEODOLITE SURVEYING:Parts of a Theodolite, leveling of Theodolite, measurement of angles, open and closed traverse.
- 4.LEVELLING:Different types of levelling instruments, bench mark, back sight, fore sight and intermediate sight, leveling staff, adjustments of level, contouring
- 5.TIDE:Formation of tide,tidal forces,kinds of tides,tide pole,tide measurement,tidal graph
- 6.HYDROGRAPHIC SURVEY:Definition of Hydrographic Survey,duties of Hydrographic Surveyor,sounding,datum,datum transfer,Instruments used for Hydrographic Survey,horizontal and vertical controls,use of sextant in Hydrographic Survey,Methods of locating soundings,plotting of soundings,coast lining

## 7. COMPUTATION OF VOLUME:

Dredging, quantity of dredged material or quantity to be dredged, formula for volume calculation

- 8.DRAFTSMANSHIP:Plotting of sounding,preparation of rough and fair charts,style of lettering in charts,inking of soundings
- 9.GEODESY:Figure of earth, Latitude, longitude, spheroid, nautical mile, projections, grid

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10.MODERN SURVEY INSTRUMENTS:Total station,GPS,DGPS,use of GPS and DGPS in Hydrographic Surveying.