

SYLLABUS FOR ENGINEERING DRAWING

OF

VESSEL NAVIGATOR

(SEMESTER PATTERN)

UNDER

CRAFTSMEN TRAINING SCHEME

Re-Designed in

2015

By

Government of India

Ministry of Skill Development & Entrepreneurship

Directorate General of Training

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

Block - EN - 81 SECTOR - V, SALT LAKE CITY, KOLKATA - 700 091

SYLLABUS OF ENGINEERING DRAWING/CHART WORK FOR 3rd SEMESTER:
DURATION - 63 HOURS

| Sl. No. | ENGINEERING DRAWING/CHART WORK |
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| 1 | <ul style="list-style-type: none">• Introduction of a navigational chart.• Various type of navigational chart.• Parallel Ruler and instruments used.• Measurement of distance, sea miles, International nautical mile, geographical mile.• Great circle, parallels of latitude and Longitudes.• Important features of Mercator chart.• Simple plotting of position and measurement of distance.• Variation, Deviation, Conversion of compass course to true course.• Conversion of true course to compass course.• Calculation involving deviation, variation, and compass error.• A few terms associated with chart work, symbols and Abbreviations.• True bearing, compass bearing, abeam bearing.• Current, wind and its effects.• Allowing current and leeway.• To counteract current and wind.• Find actual current experienced.• Method of fixing the ship position by bearing and depth, bearing and distance by vertical sextant angle, horizontal angle or Radar• Given: course steered engines speed direction and rate of current wind and leeway to find course and speed made good.• Give: Initial position / final position to find set and rate of drift• Transfer position line and simple running fix. |

SYLLABUS OF ENGINEERING DRAWING/CHART WORK FOR 4th SEMESTER:
DURATION- 63 HOURS

| Sl. No. | Engineering Drawing/Advanced Chart Work |
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| 1 | <ul style="list-style-type: none">• Transfer of position line and running fix with current.• Running fix with current and leeway.• Transfer to position line while makes more than one course to given running fix.• To find course to steer to counteract the current and leeway.• To find course to steer and speed to steer in order to maintain the required ETA in prevailing current.• Three bearing method to find course made good.• To find CMG direction by three bearing of same object from different position.[only set is given rate is not known]• To find CMG direction by three bearing of same object from different position[both set and rate is given]• Dipping and rising bearing of lights[dipping range or rising range]• To find true set and drift [actual set and rate of current experienced]• To arrive with a given point right ahead at extreme range.• Nautical publications.• Tide problems |