

Subjects Taught:

- Elementary Meteorological Theory
- Indian Climatology
- Meteorological Instruments and Methods of Observation
- Computer Operations

SYLLABUS FOR BASIC / MODULAR TRAINING COURSE IN GENERAL METEOROLOGY

Introduction:

Introduction, Importance of Meteorology, Atmosphere and its composition.

Meteorological elements

- Pressure – definition, units of measurement.
- Temperature – scales and conversion of one to the other
- Humidity - Relative humidity, dew point and wet bulb temperature – definitions, units.
- Wind - Definition of wind unit, Wind vane, Anemometer, Squall, Beaufort scale, Buys Ballot's law, Autographic record.
- Clouds - Classification, types, description, amount, height of base and direction of movement.
- Visibility - Definition, visibility land marks, night visibility
- Weather - Rain, drizzle, hail, haze, thunderstorm, fog mist, smog, dust storm).
- Present weather – description, definition of various weather phenomena, symbolic representation and past weather.

Indian climatology

Four seasons in India, (in brief) and outlines of weather associated with each season.

Met. Instruments, (Methods of observation & maintenance)

- Thermometer – dry bulb, wet bulb, maximum, minimum – description, methods of working, reading, resetting, stevenson screen, exposure, care of instrument.
- Barometer – Fortin, Kew Pattern, description, reading, correction, reducing the value to mean sea level, QFF, QFE, QNH.
- Anemometer – description, working, exposure, recording of observation.
- Rain gauge – working, measurement of rainfall
- Psychrometer – Assman & Whirling
- Autographic instruments – working of Barograph, thermograph, hygrograph, self-recording rain gauge, sunshine recorder etc.

Practicals

- Surface observations - Recording, coding, decoding, Maintenance of monthly, Met. registers, surface observation communication, Calculation of relative humidity and dew point temperature.
- Charting - Basic ideas of charting (surface, pilot) Plotting of data on surface and pilot chart.
- Aviation - Coding and decoding of METAR & SPECI
- PB - Safety of gas cylinders, balloon filling procedures, Instruments and accessories used in pilot balloon work, P.B. Ascent (day/night) - balloon following, taking readings, computation of upper winds, telegram preparation in codes.

Computer Operations

- Basic Hardware, Introduction to software & Operating System
- MS Word, MS Excel & its application
- Internet, Use of METNET
- Communication of observation through e-mail and other conventional methods
- Use of HHDL
- कम्प्यूटर पर युनिकोड सक्रिय करना
- कम्प्यूटर पर त्रिभाषीय सुविधा सक्रिय करना
- फॉण्ट व टाइपिंग संबंधि समस्याएँ एवम उनका निवारण

Others

- Office rules/ procedures- Introductory
- Visit of field offices
- Preventive maintenance of AWS/ ARG & Optical Theodolite
