
SEMESTER II

I. MAJOR COURSE- MJ 2:

(Credits: Theory-04, Practicals-02)

Marks: 15 (5 Attd. + 10 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75

Pass Marks: Th (SIE + ESE) = 30

Instruction to Question Setter for

Semester Internal Examination (SIE 10+5=15 marks):

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

End Semester Examination (ESE 60 marks):

There will be **two** group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to answer.

Note: There may be subdivisions in each question asked in Theory Examinations.

CLIMATOLOGY AND OCEANOGRAPHY

Theory: 60 Lectures

Course Learning Outcomes:

After the completion of course, the students will have ability to:

1. Understand the elements of weather and climate and its impacts at different scales.
2. Comprehend the climatic aspects and its bearing on planet earth.
3. Understand the oceanic process and availability of resources.

Course Content:

1. Meaning, Nature & Scope of Climatology & Oceanography, Elements of Weather and Climate
2. Atmospheric Composition and Structure, Insolation and Temperature: Factors and Distribution, Heat Budget, Temperature Inversion.
3. Atmospheric Pressure and Winds: Planetary Winds, Forces affecting Winds, General Circulation of Air, Jet Streams; Atmospheric Moisture: Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability; Climatic Regions; Climatic classification of Koeppen
4. Air mass and Fronts; Cyclones: Tropical Cyclones, Temperate Cyclones; Monsoon - Origin and Mechanism, El- Nino.
5. Ocean Floor Topography and Oceanic water Movements: Waves, Currents and Tides.
6. Ocean Salinity and Temperature: Distribution and Determinants; Coral Reefs and Marine Deposits and Ocean Resources.