

II. CORE COURSE [CCGEO202]:

(Credits: Theory-04, Tutorial-01)

Marks: 30 (MSE: 20Th. 1Hr + 5Attd. + 5Assign.) + 70 (ESE: 3Hrs)=100**Pass Marks (MSE:17 + ESE:28)=45****Instruction to Question Setter:****Mid Semester Examination (MSE):**

There will be **two** groups of questions in written examinations of 20 marks. **Group A is compulsory** and will contain five questions of **very short answer type** consisting of 1 mark each. **Group B will contain descriptive type five** questions of five marks each, out of which any three are to be answered.

End Semester Examination (ESE):

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

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

The Mid Semester Examination shall have three components. (a) Two Semester Internal Assessment Test (SIA) of 20 Marks each, (b) Class Attendance Score (CAS) of 5 marks and (c) Class Performance Score (CPS) of 5 marks. "**Better of Two**" shall be applicable for computation of marks for SIA.

(Attendance Upto 75%, 1 mark; 75 < Attd. < 80, 2 marks; 80 < Attd. < 85, 3 marks; 85 < Attd. < 90, 4 marks; 90 < Attd., 5 marks).

OCEANOGRAPHY**Theory: 60 Hours; Tutorial: 15 Hours****Unit 1:**

Nature and scope of Oceanography, Configuration of Ocean Floor - Continental Shelf, Slope, Ocean Plains and Ocean Deep, Physical and Chemical properties of ocean water: Composition, Temperature and Salinity

Unit 2:

Surface currents, Waves and tides, Marine biological environment, Biozones, Types of organism, Plankton, Nekton and Benthos, Food and mineral resources of the sea.

Unit 3: Major marine environment: Coastal, Estuaries, Deltas, Coastal Ecology-Coastal Dunes and Mangroves.

Unit 4:

Ocean Deposits: Types and Distribution, Coral Reefs: Origin, Types and Theories of Origin of Coral Reefs (Darwin, Dally and Murray). Impact of Humans on the Marine Environment. Recent Trends in Oceanography.

References:

- Lal. D.S. (2003) Oceanography, Sharada Pustak Bhavan, Allahabad 02.
- King Cuchalaine A.M. (2000) Oceanography for geographers, Edward Arnold publications, London.
- Savindra Singh (2004): physical geography, Prayog Pustak Bhavan, Allahabad -02
- Siddharth (2005) Oceanography: A brief introduction, Rawat Publishers. New Delhi.
- Sharma RC (2000) Oceanography for Geographers, Chaitanya Publishers, Allahabad -02
- Vattal and Sharma (2003), Oceanography for Geographers, Chaitanya Publishers, Allahabad -02
- Yadav A.S. (2002): Geography of Minerals of Oceans, concept Publishers, New Delhi,
- Basu S.K. (2003): Hand book of oceanography, Global vision, Delhi.
- Garisson Tom (1999): Oceanography, Cole, Wadsworth, New York.
- Sharma and Vattal (1962) Oceanography for Geographers, Chaitanya Publication House, Allahabad.
- Turman Harold (1985); Introductory Oceanography, Bell & Howell Co. London.
- Tiwari, Ram Kumar (2016) Bhautik Bhugol, Rajsthan Hindi Granth Academy, Jaipur.
- Gautam, Alka (2005): Jalwayu Evam Samudra Vigyan, Rastogi Publication, Meeruth.
- Kulshrestha, K.P. (2004): Samudra Vigyan, Kitab Ghar, Kanpur.