

**University of Mumbai**  
**Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)**  
**S.Y.B.A. Geography, Semester- IV**  
**Paper-II: Introduction to Oceanography**  
**COURSE CODE: UAGEO 402 (2017-18), Credit - 3**

<b>Unit-I: Nature of Oceanography</b>		<b>09 (lectures)</b>
1.1	Origin and Development of Oceanography	
1.2	Oceanography : meaning, definition, nature and scope	
1.3	Branches of oceanography: physical chemical and biological	
1.4	Major Oceans and its characteristic features	
<b>Unit-II: Bottom Relief and Ocean Water</b>		<b>09 (lectures)</b>
2.1	Ocean floor and its characteristics	
2.2	Composition of ocean water	
2.3	Factors affecting ocean water temperature	
2.4	Vertical and horizontal distribution of ocean temperature	
2.5	Factors affecting salinity of ocean water	
2.6	Vertical and horizontal distribution of oceanic salinity	
<b>Unit-III: Movements of Ocean Water</b>		<b>09 (lectures)</b>
3.1	Waves- Formation and types	
3.2	Tsunami and their effects on coast	
3.3	Concept and types of Tides	
3.4	Equilibrium theory of Tides	
3.5	Ocean Currents – types and their effects	
<b>Unit-IV: Man and Ocean</b>		<b>09 (lectures)</b>
4.1	El- Niño and La-Niña phenomenon	
4.2	Coral reefs and their importance	
4.3	Marine Ecosystem	
4.4	Marine pollution	
4.5	Oceans and global climate change	
<b>Unit-V: Practical Component</b>		<b>09 (lectures)</b>
5.1	Map filling : Related to Oceanography	
5.2	Reading and Interpretation of navigation charts and bathymetric maps	

## Reference books:-

1. Bhatt, J.J. (1978): Exploring the Planet Ocean, D.Von Nostrand Co. New York.
2. Birla Economic Research Foundation, economic Research Division (1992): The Oceans, Allied Publishers Ltd. New Delhi.
3. Chandra, S. and Others (eds). (1993): The Indian Ocean and its islands: Strategic Scientific and Historical perspectives, sage Publications, New Delhi.
4. Chawan S.V. (ed) (2015): Physical Geography, Paper I, Published by Director (I/C), Institute of Distance and Open Learning, University of Mumbai.
5. Fairbridge, R.W. (ed) Encyclopaedia of Oceanography, Reinholt, New York.
6. Sharma, R.C. (ed) (1985): The Oceans: realities and Prospects, Rajesh Publications, New Delhi.
7. Sengupta, R. and Desa E. (eds) (2001): The Indian Ocean: A Perspective Vol., I and II Oxford and IBH Publishing Company Private Limited, New Delhi.
8. Paul, P.R. (1998): Invitation to Oceanography, Jones and Bartlett Publishing, Sudbury, Massachusetts.
9. Rajgopalan, R (ed) (1996): Voices for Oceans, A Report to the Independent World Commission on the Oceans, International Ocean Institute, Operational centre, Madras, India.
10. Qasim, S.Z. (1998): Glimpses of Indian Ocean, Universities Press (India) Limited, Hyderabad.

## University of Mumbai

### Question Paper Pattern

**Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSCS)**

**S.Y.B.A. Geography, Semester- IV**

**Paper-II- (Introduction to Oceanography)**

Duration: 3 hours		Marks: 100	
<b>N.B.</b> 1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils and simple Calculator is allowed. 3. Attach appendix along with answer paper.			
Q.1	<b>Practical Unit V:</b> 5.1		10 Marks
	5.2		10 Marks
Q. 2	Unit-I		20 Marks
<b>OR</b>			
Q.2	Unit-I		20 Marks
Q. 3	Unit-II		20 Marks
<b>OR</b>			

Q. 3	Unit-II		20 Marks
Q. 4	Unit-III		20 Marks
<b>OR</b>			
Q. 4	Unit-III		20 Marks
Q. 5	Unit-IV		20 Marks
<b>OR</b>			
Q. 5	Unit-IV		20 Marks

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