

**University of Mumbai**  
**Revised Syllabus w.e.f. Academic Year, 2017-18 (CBSGS)**  
**S.Y.B.A. Geography, Semester- III**  
**Paper-II: An Introduction to Climatology**  
**COURSE CODE: UAGEO 301 (2017-18), Credit - 3**

<b>Unit-I: Introduction to Climatology</b>		<b>09 (lectures)</b>
1.1	Definition, nature, scope and branches of climatology	
1.2	Concept and elements of weather and climate	
1.3	Composition and structure of atmosphere	
1.4	Insolation: Vertical and horizontal distribution of temperature	
<b>Unit-II : Air Pressure and Atmospheric Circulation</b>		<b>09 (lectures)</b>
2.1	Air pressure: Influencing factors – Tricellular model	
2.2	Horizontal distribution of air pressure	
2.3	Wind: Types of winds – global, regional and local	
2.4	Upper air circulation – jet stream ( concept, origin and effects)	
<b>Unit-III: Humidity and Precipitation</b>		<b>09 (lectures)</b>
3.1	Humidity: Types - absolute, relative and specific	
3.2	Condensation and its forms	
3.3	Precipitation and its types	
3.4	Global distribution of rainfall	
<b>Unit-IV: Climate and Weather Phenomena</b>		<b>09 (lectures)</b>
4.1	Cyclones: tropical and temperate	
4.2	Anti-cyclones and tornados	
4.3	El Nino and Indian monsoon	
4.4	Global warming and climate change	
<b>Unit-V: Practical Component</b>		<b>09 (lectures)</b>
5.1	IMD: Weather signs and symbols, Interpretation of IMD weather maps	
5.2	Construction of :wind rose, climograph and hythergraph	

### Reference Books:-

1. Ahrens, C.D. (2012): Essentials of Meteorology: An Invitation to the Atmosphere; Cengage Learning, Boston
2. Ahrens, C.D., Jackson, P.L., Jackson, C.E.J. and Jackson, C.E.O. (2012): Meteorology Today: An Introduction to Weather, Climate and the Environment; Cengage Learning; Boston
3. Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
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. Critchfield, H.J., (1975): general Climatology, Prentice Hall, New Jersey.
6. Lal D.S. (1997): Climatology; Sharda Pustak Bhavan; Allahabad
7. Lydolph, P.E.( 1985): The Climate of the Earth, Rowman Nad Allanheld, Totowa, New Jersey.
8. Mather,J.R.(1974): Climatology: Fundamentals and Applications; Mc Craw Hill Book Co., U.S.A.
9. Matthews, W. H., Kellogg, W., Robinson, G.D. (1971): Man's Impact on Climate; M.I.T. Press Design Dept. U.S.A.
10. Oliver, J.E. (1993): Climatology: An Atmospheric Science, Pearson Education India, New Delhi
11. Rosenberg, N.J., Blad, B.L., Verma, S.B.(1983): Micro-climate Biological Environment; John Wiley & Sons, U.S.A.
12. Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
13. Shinde P. ; Pednekar H. et.al. (2010): Introduction to Geography, Sheth Publishers Pvt.Ltd., Mumbai.
14. Subrahmanyam, V.P. (ed) (1983): Contributions to Indian Geography a) Vol III- General Climatology, b) Volume IV- Applied Climatology. Heritage Publishers, New Delhi.
15. Trewartha, G.T. (1980): An Introduction to Climate; McGraw Hill, New York, 5<sup>th</sup> edition, (International Student Edition)

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### University of Mumbai

### Question Paper Pattern

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**Paper-II: An Introduction to Climatology**

**COURSE CODE: UAGEO 301 (2017-18)**

<b>Duration: 3 hours</b>	<b>Marks: 100</b>
<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.	

<b>Q. 1</b>	<b>Practical, Unit – V</b> A) Weather signs and symbols B) Interpretation / question answers on weather maps C) Construction of one diagram based on climatic data	<b>20 marks</b> (05 Marks) (05 Marks) (10 Marks )
<b>Q. 2</b>	<b>Unit-I</b>	<b>20 Marks</b>
<i>OR</i>		
<b>Q.2</b>	<b>Unit-I</b>	<b>20 Marks</b>
<b>Q. 3</b>	<b>Unit-II</b>	<b>20 Marks</b>
<i>OR</i>		
<b>Q. 3</b>	<b>Unit-II</b>	<b>20 Marks</b>
<b>Q. 4</b>	<b>Unit-III</b>	<b>20 Marks</b>
<i>OR</i>		
<b>Q. 4</b>	<b>Unit-III</b>	<b>20 Marks</b>
<b>Q. 5</b>	<b>Unit-IV</b>	<b>20 Marks</b>
<i>OR</i>		
<b>Q. 5</b>	<b>Unit-IV</b>	<b>20 Marks</b>

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