

नेपाल इन्जिनियरिङ्ग सेवा, मेटेरियोलोजी समुहको राजपत्रांकित प्रथम श्रेणी (खुला प्रतियोगिता र आन्तरिक प्रतियोगिता) को लिखित परीक्षाको पाठ्यक्रम

द्वितीय पत्र - समुह सम्बन्धी

1. Weather Observations
 - a. Variability of atmospheric parameters
 - b. Surface synoptic station
 - c. Upper-air synoptic station
 - d. Special weather observation for agriculture , aviation
 - e. Meteorological satellites
 - f. World Weather Watch (WWW)
 - g. The Global Observing System (GOS)
2. Weather Systems
 - a. Subtropical cyclones and anticyclones
 - b. Tropical cyclones
 - c. Role of topography on weather system in generation as well in the modification
 - d. Severe local weather system and its relationship to large scale weather system
3. Practical aspects of synoptic weather analysis
 - a. Analysis of composite surface charts
 - b. Analysis of upper-air charts
 - c. Air mass and frontal system
 - d. Streamline and Isotach analysis
4. Dynamic Meteorology
 - a. Airflow near the Earth's surface
 - b. Geostrophic wind, gradient wind
 - c. Thickness chart and thermal wind
 - d. Role of surface friction
 - e. Barotropic and Baroclinic instability, thermodynamic of the atmosphere
 - f. Numerical weather prediction
5. Tropical Meteorology and General Circulation
 - a. Circulation in the Troposphere
 - b. Temperature and Rainfall Characteristics
 - c. Diurnal and local effects
 - d. Synoptic disturbances
 - e. Tropical cyclones
 - f. Jet-stream and the general circulation
 - g. General circulation models
 - h. Atmosphere-ocean interaction
6. Aviation Meteorology
 - a. Aviation instruments and methods of observation
 - b. Meteorological information for air navigation
 - c. Upper wind system and jet stream
 - d. Wind shear and turbulence
7. Climate Change
 - a. Atmospheric composition and its change
 - b. Greenhouse effects and anthropogenic influences
 - c. National policy on climate change
 - d. Variation of climate in Nepal

8. Global scale features
 - a. Southern oscillation and El Nino
 - b. Global climatic features
 - c. Quasi biennial oscillation
 - d. Madden-Julian Oscillation
9. Air Pollution
 - a. Temperature inversion
 - b. Pollutants and its role and human health
 - c. Air pollution monitoring
 - d. Guidelines and policies in relation to Air Pollution

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