

नेपाल इन्जिनियरिङ्ग सेवा, मेटेरियोलोजी समूहको राजपत्रांकित प्रथम श्रेणी (खूला प्रतियोगिता र आन्तरिक प्रतियोगिता) को लिखित परीक्षाको पाठ्यक्रम  
द्वितीय पत्र - समूह 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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