A FIELD REPORT ON THE WEATHER STATION AT RAJSHAHI

Introduction
Meteorology: Meteorology is a science that deals with the atmosphere and its phenomena, especially with weather and weather forecasting. The atmospheric phenomena and weather of a region is also known as meteorology of that region. In other words, Meteorology is the interdisciplinary scientific study of the atmosphere (Wikipedia, 2016).

Weather station: A weather station is a facility, either on land or sea, with instruments and equipment for measuring atmospheric conditions to provide information for weather forecasts and to study the weather and climate (Wikipedia, 2016).

Rajshahi weather station: It is located in Shyampur under Rajshahi Metropolitan City. It belongs to the Bangladesh Weather Directorate, under the Ministry of Defense, Government of the People's Republic of Bangladesh. It is a first class weather observatory in the country. The weather station is a two-storied building amidst mango orchard and many other types of vegetation (Photo). It is located at an elevation of 230, with latitude of +24383 and longitude of +088600 (Bangladesh Weather Stations, 2016).

Rajshahi represents a **synoptic weather station** where instruments collect meteorological information at synoptic time 00h00, 06h00, 12h00, 18h00 (UTC) and also at intermediate synoptic hours 03h00, 09h00, 15h00, 21h00 (UTC). The common instruments of measure are anemometer, wind vane, pressure sensor, air temperature, humidity, and rain-gauge. The weather measures are formatted in special format and transmit to the national meteorological office at Dhaka to help the weather forecast model.

Relationship between weather and animals: There is a close relationship between vegetation, animal life and climate. Vegetation of a region depends upon the climate. Vegetation not only provides food but is also a habitat for different animals. Animals are mobile and move from place to place but each species can tolerate only a limited range of climatic conditions. Changes in environment bring out suitable adoption by animals or they migrate to other suitable areas or else there is large scale mortality, leading to extinction of species like dinosaurs and wooly mammoths.

Animals living in cold regions (e.g., tundra) have thick fur or skin to protect them from the intense cold or else they go into hibernation to avoid the bitter cold winter (e.g., reindeer, wolf, fox and bear). Grasslands are more open and permit rapid movement of animals. Animals here have long legs and hard hooves for swift movement (e.g., zebra, deer and giraffe). Carnivores like lion, tiger are common. Animals living in deserts are light colored with padded feet and double eyelids (e.g., camel). In the tropical rainforests, animals adapt themselves to live among trees. For example, monkeys have opposable thumbs to help them swing from tree to tree. Elephants can move through the thick forests by making their path in the jungle. Variety of animals decreases as we move towards the poles. Overgrazing, deforestation, improper planning of human activities such as agriculture, forestry and animal grazing, have disturbed the ecological balance. Hence, an understanding of the

different species of plants and animals is essential for maintaining the ecological balance (Preserve articles.com, 2016).

Observations
Instruments used in the weather station: Typical weather stations have the following instruments (Labelled diagrams are to be added):
Anemometer for measuring wind speed.
Barometer for measuring atmospheric pressure.
Dew balance for measuring the amount of dew deposited during a period of time.
Evaporation tank for measuring steam or water vapour.
Hair hygrograph for recording relative humidity (RH).
Hygrometer for measuring relative humidity (RH).
Maximum-minimum thermometer (Stevenson box) for recording the maximum and minimum temperatures of a day.
Pyranograph for recording solar radiation (sun light duration).
Pyranometer for measuring solar radiation.
Rain gauge for measuring rainfall (liquid precipitation) over a set period of time.
Soil thermometer for measuring soil temperature at different depths.
Submersible thermometer for measuring water temperature.
Sun shine recorder for measuring intensity of the sun light.
Thermograph for recording temperature fluctuations.
Thermometer for measuring air and sea surface temperature.
Wind vane for measuring wind speed.
In addition, at certain automated airport weather stations, additional instruments may be employed. These include:
Precipitation Identification Sensor for identifying falling precipitation.
Disdrometer for measuring drop size distribution.
Transmissometer for measuring visibility.
Ceilometer for measuring cloud ceiling.

More sophisticated stations may also measure the ultraviolet index, leaf wetness, soil moisture, soil temperature, water temperature in ponds, lakes, creeks, or rivers, and occasionally other data.

Usefulness of the weather station
Weather station data can be used to gauge current weather conditions and to predict the future weather forecast, like temperature (high or low), cloud cover and probability of precipitation. Weather stations are used by meteorologists, weather buffs, gardeners, farmers, outdoor enthusiasts, students, and pilots, who enjoy weather data or rely on the weather to make decisions (Acurite.com, 2016).

References
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