

These are monthly mean patterns, calculated using long term climatological data. However, on a typical day, PWC values can either increase or decrease, depending upon the prevailing synoptic conditions. For example, low pressure weather systems transport more moisture and PWC values can increase sharply in a day or two. To see the variation of moisture content in the atmospheric column, it is better to monitor the PWC changes in addition to low-level humidity. PWC can be easily calculated using radiosonde profiles of moisture.

2.4. Mean Air Temperatures

Seasonal (October-December) mean minimum, maximum and mean temperatures over South Peninsula are shown in Fig. 2.11 a, b and c respectively. This analysis was made using the IMD's 1×1 degree gridded daily temperature data (Srivastava et al., 2009). Seasonal mean minimum temperatures are the highest along the coasts and they decrease towards the interior parts. Over the east coast, seasonal mean minimum temperatures are of the order of $22-23^{\circ}\text{C}$. Over the eastern parts of the south peninsula, the isotherms run parallel to the coast. Over the interior parts, minimum temperatures are below 20°C . Seasonal maximum temperature over the south peninsula varies between $28^{\circ} - 31^{\circ}\text{C}$, except over the interior parts of Karnataka where maximum temperatures are below 28°C . Mean temperatures (Fig. 2.11 c) over the coastal Andhra Pradesh are more than 26°C , while over the extreme south peninsula (Tamil Nadu and Kerala), the mean temperatures exceed 27°C .

2.5. Sea Surface Temperatures (SST)

During the NE monsoon season, synoptic systems like tropical cyclones, lows and depressions and easterly waves, the presence of east-west trough contribute to rainfall over the South Peninsula. As these weather systems form over the Bay of Bengal and the Arabian Sea, oceanic conditions like Sea Surface Temperature (SST) play an important role. However, higher SSTs lead to more convection only if atmospheric