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EIGHTH SEMESTER

B.Tech. [E P]

MID SEMESTER EXAMINATION

(March- 2019)

EP414 Space and Atmospheric Science-II

Time: 1:30 Hours

Max. Marks: 25

Note: Answer all the questions  
Assume suitable missing data, if any.

1. Describe about atmospheric composition. Write in detail about constant and variable gases. (5)
2. Discuss in detail about the formation and effects of tropospheric Ozone. Describe its adverse effects along with controlling mechanism. (5)
3. (a). Derive the expression for the virtual temperature. Should the virtual temperature be higher or lower than the actual temperature. (2.5)  
(b). Calculate the virtual temperature correction of moist air at 30°C having a mixing ratio of 20 g/Kg. (2.5)
4. (a). If the scale height of the atmosphere may be taken as 8 km, then calculate the geopotential height of 1000 hpa pressure surface when the pressure at sea level is 1014 hpa. (2.5)  
(b). Derive the fundamental equation of thickness in atmospheric science. (2.5)
5. (a). Define geopotential. State whether it is a point function or state function. (2.5)  
(b). Give the expression of geopotential thickness between two pressure  $p_1$  and  $p_2$  level with detailed steps (2.5)

END