Scheme of evaluation of EVS (CH-10003)

1 a) Albedo explanation with factors affecting it. | 0.5 + 0.5

b) Primary pollutants and secondary pollutants with examples | 0.5 + 0.5

c) chlorofluoro carbon. Freon | 0.5 + 0.5

d) Threshold limit value explanation with example | 0.5 + 0.5

e) Explanation of lapse rate and ~~variation of~~ explanation of lapse rate of stratosphere w.r.t ozone density variation | 0.5 + 0.5

2). Regions of almosphere

Troposhere
Stratosphere
Mesosphere
Thermosphes

} Altitude + temperature + chemical species present in each layer | 2 + 1 + 1 + 1

3) a) Acid rain description, formation from NO_x and adverse effects | 2.5

b) Explanation of green house effect global warming and consequences | 2.5

4a) Explanation of radiation balance model of Earth including albedo
calculation of temp of Earth using this model

$$T = \left[\frac{S(1-\alpha)}{4\sigma}\right]^{1/4}$$

$$\left[\frac{1372(1-0.3)}{4 \times 5.67 \times 10^{-8}}\right]^{1/4}$$

$= \cancel{22}$ 255 k

2.5

b) $E = A\sigma T^4 \times t$

$4\pi R^2 \times \sigma T^4 \times t$

$= 1.051 \times 10^{31}$ J

2.5

5a) Photochemical smog explanation and formation ~~of~~ of peroxy acyl nitrate from reactive hydrocarbon (mechanism)

2.5

b) Explanation of ozone layer depletion w.r.t pollutants causing it ~~and~~ (mechanism) harmful effects

2.5