

Solu (4)

According to given question

$$\text{dimensions} = 8$$

each dimension having distinct value = 5

Let's say a data cube have  $n$  dimensions  
and each dimension having  $p$  distinct value.

$$n = 8, p = 5$$

(a) Maximum Number of cells ~~being~~ possible in  
base cuboid

$$\Rightarrow p^n$$

$$\Rightarrow 5^8$$

$$\Rightarrow 390625. \text{ Ans}$$

(b) Minimum number of cells possible in base cuboid

$$= p$$

$$= 5 \text{ Ans}$$

(c) Min<sup>m</sup> number of cells possible in data cube D?

$$= (2^n - 1) \times p + 1$$

$$= (2^8 - 1) \times 5 + 1$$

$$= 255 \times 5 + 1 = 1275 + 1$$

$$= 1276 \text{ Ans}$$

(d) Max<sup>m</sup> cells possible in datacube D.

$$= (p+1)^n$$

$$= (5+1)^8 = 6^8$$

$$= 1679616 \text{ Ans}$$