

(10)

Sec B₂

Surface is specified by eqn having two independent variables like curve surface are specified by equation

in Parametric & Non Parametric form

$$\left. \begin{aligned} x &= f(s, t) \\ y &= f(s, t) \\ z &= f(s, t) \end{aligned} \right\}$$

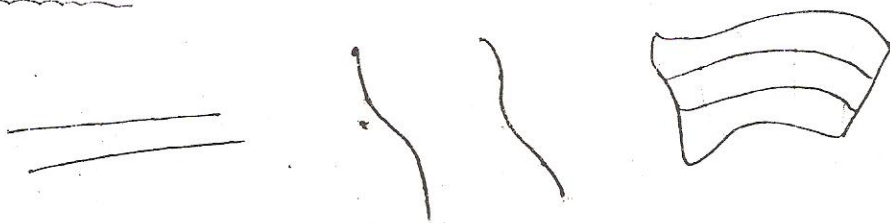
$$\begin{array}{l} \text{explicit} \quad \text{implicit} \\ \downarrow \\ z = f(x, y) \end{array}$$

then

$$\begin{aligned} a \leq s \leq b \\ c \leq t \leq d \end{aligned}$$

- A surface formed by transitioning b/w two or more curve by using linear blending b/w each section of surface is called

blended surface



Polygon Surfaces

- It comprises of a set of surface polygons that enclose the object interior

for 3-D graphics objects, it is most commonly used boundary representation technique. Boundary representation technique is also called B-rep technique describe a 3-D object as a set of surfaces that separate the object interior from its environment.

Polygon surfaces are defined using linear equations.

This simplify ~~the~~ the display of objects.

- Polygon surfaces when used in 3-D CAD packages efficiently define objects with plane surfaces compared to the objects with curved surfaces.