

Question 5}

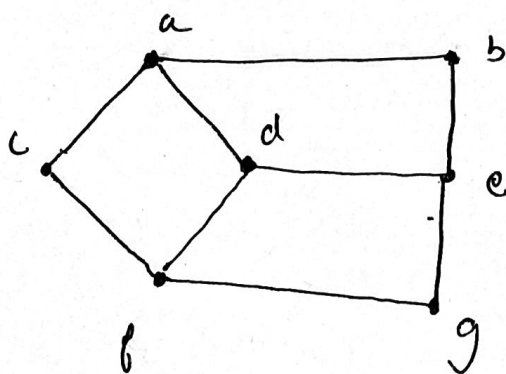
Answer 4

**Eccentricity** :- It is defined as maximum distance of one ~~or~~ vertex to other vertex.

**Diameter** :- The maximum distance between the pair of vertices.

**Radius** :- The minimum among all the maximum distance between a vertex to all other vertices.

**Center point** :- It consists of all vertices whose eccentricity is minimum.



eccentricity (a) = 3

eccentricity (b) = 3

eccentricity (c) = 3

eccentricity (d) = 2

eccentricity (e) = 3

eccentricity (f) = 3

eccentricity (g) = 3

Diameter = 3

Radius = 2

center point = {a, b, c, d, e, f, g}

Answer B)

$$f_1(n) = 2^n$$

$$f_2(n) = n^{3/2}$$

$$f_3(n) = n \log_2 n$$

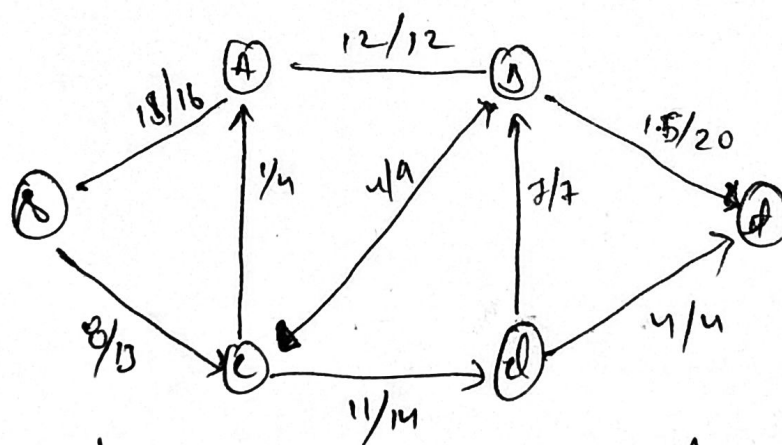
$$f_4(n) = n^{\log_2 n}$$

for very high value of  $n$   $f_3(n)$  will be smallest then  $f_2(n)$  then  $f_4(n)$  and  $f_1(n) = 2^n$

Exponent function grow fastest

$$f_3(n) < f_2(n) < f_4(n) < f_1(n)$$

Answer C)



if path  $A \rightarrow C \rightarrow D \rightarrow A$  is taken

$$8 + 11 + 4 = 23$$

Maximum flow is 23