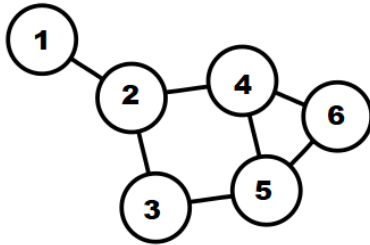


Q. 1

**Graph Data Structure**

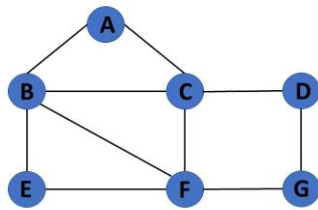
Starting vertex: 4

DFS:- 4,2,1,3,4,6

BFS:

Queue	Marked	Current	BFS
{}	{}		
{4}	{4}	4	4
{2,5,6}	{4,2,5,6}	2	4,2
{5,6,1,3}	{4,2,5,6,1,3}	5	4,2,5
{6,1,3}	{4,2,5,6,1,3}	6	4,2,5,6
{1,3}	{4,2,5,6,1,3}	1	4,2,5,6,1
{3}	{4,2,5,6,1,3}	3	4,2,5,6,1,3
Empty	Algorithm terminates		BFS: 4,2,5,6,1,3

Q. 2



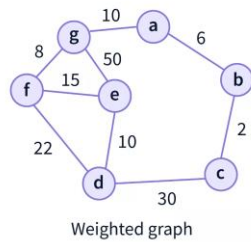
Starting vertex: C

DFS:- C,D,G,F,E,B,A

BFS:

Queue	Marked	Current	BFS
{ }	{ }		
{C}	{C}	C	C
{A,D,B,F}	{C,A,D,B,F}	A	C,A
{D,B,F,G}	{C,A,D,B,F,G}	D	C,A,D
{B,F,G,E}	{C,A,D,B,F,G,E}	B	C,A,D,B
{F,G,E}	{C,A,D,B,F,G,E}	F	C,A,D,B,F
{G,E}	{C,A,D,B,F,G,E}	G	C,A,D,B,F,G
{E}	{C,A,D,B,F,G,E}	E	C,A,D,B,F,G,E
Empty	Algorithm terminates		BFS: C,A,D,B,F,G,E

Q. 3



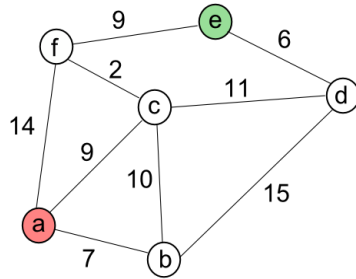
SCALER
Topics

Starting vertex: b

DFS:- b,c,d,e,g,a,f

Queue	Marked	Current	BFS
{}	{}		
{b}	{b}	b	b
{c,a}	{b,c,a}	c	b,c
{a,d}	{b,c,a,d}	a	b,c,a
{d,g}	{b,c,a,d,g}	d	b,c,a,d
{g,f,e}	{b,c,a,d,g,f,e}	g	b,c,a,d,g
{f,e}	{b,c,a,d,g,f,e}	f	b,c,a,d,g,f
{e}	{b,c,a,d,g,f,e}	e	b,c,a,d,g,f,e
Empty	Algorithm terminates		BFS: b,c,a,d,g,f,e

Q. 4

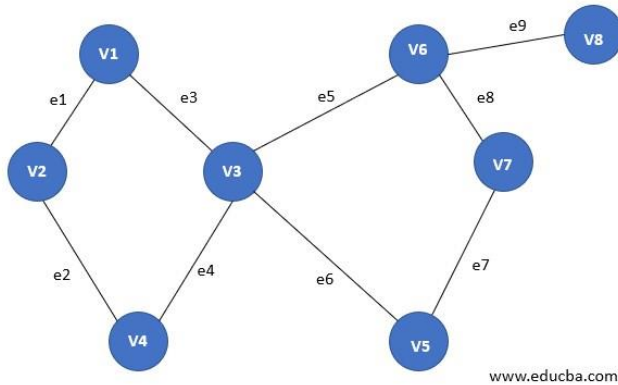


Starting vertex: d

DFS:- d,e,f,c,a,b

Queue	Marked	Current	BFS
{}	{}		
{d}	{d}	d	d
{b,c,e}	{d,b,c,e}	b	d,b
{c,e,a}	{d,b,c,e,a,f}	c	d,b,c
{e,a,f}	{d,b,c,e,a,f}	e	d,b,c,e
{a,f}	{d,b,c,e,a,f}	a	d,b,c,e,a
{f}	{d,b,c,e,a,f}	f	d,b,c,e,a
Empty	Algorithm terminates		BFS: d,b,c,e,a,f

Q. 5



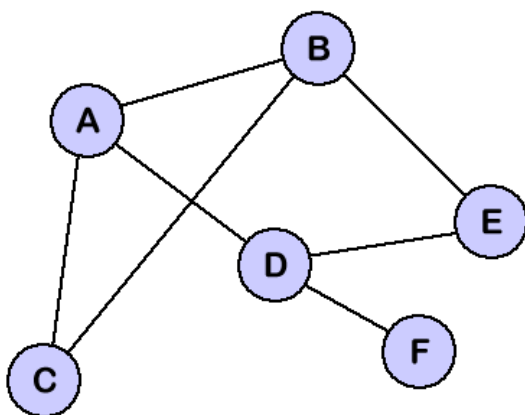
Starting vertex: v7

BFS:

V7,V5,V6,V3,V8,V1,V2,V4

DFS: v(7,6,8,3,5,4,2,1)

Q. 6

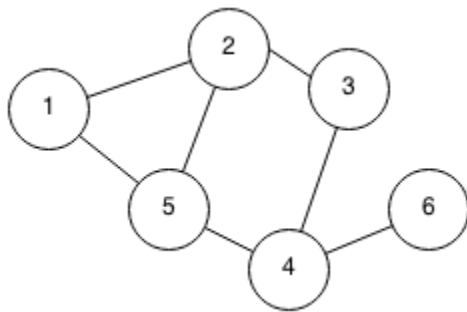


Starting vertex: D

BFS: D,A,E,F,B,C

DFS: d,f,e,b,a,c

Q. 7

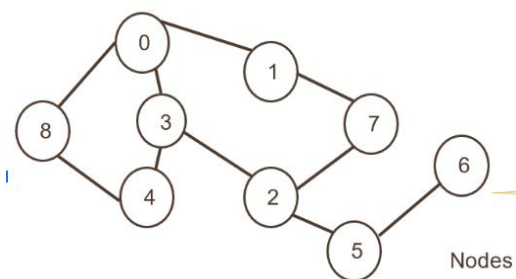


Starting vertex: 3

BFS: 3,4,2,5,6,1

DFS:3,4,6,5,1,2

Q. 8



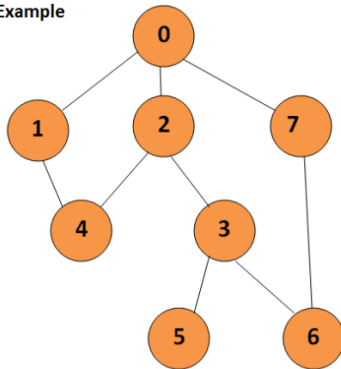
Starting vertex: 5

BFS:5,2,6,7,3,1,0,4,8

DFS:5,6,2,7,1,0,3,4,8

Q. 9

Graph Example

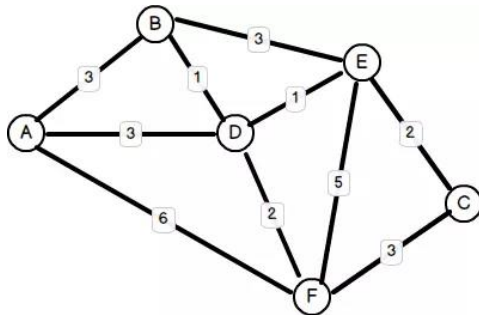


Starting vertex: 2

BFS: 2,4,0,3,1,7,5,6

DFS:2,4,1,0,7,6,3,5

Q. 10

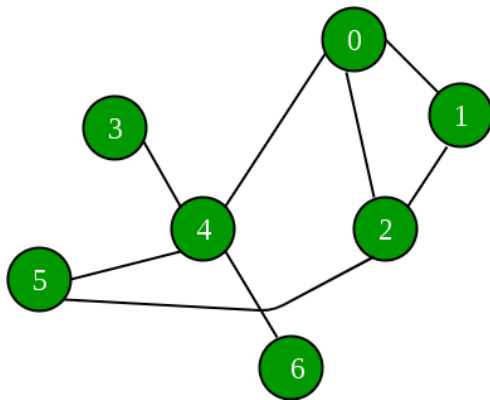


Starting vertex: E

BFS: E,B,C,F,D,A,C

DFS:e,c,f,d,b,a

Q. 11

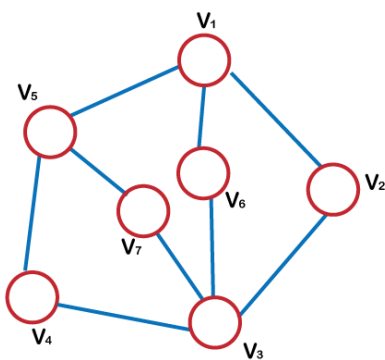


Starting vertex: 4

BFS:4,0,5,3,6,1,2

DFS:4,3,5,2,,0,1,6

Q. 12

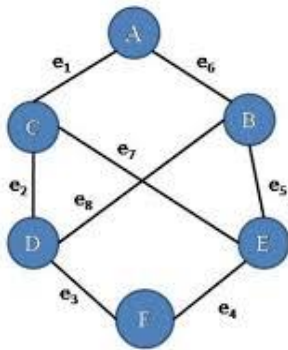


Starting vertex: V3

BFS: v3,v4,v2,v7,v6,v5,v1

DFS:v(3,7,5,4,1,2,6

Q. 13

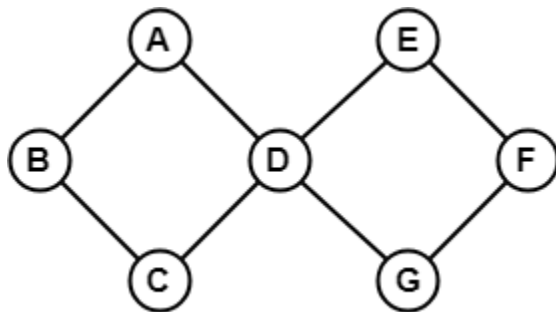


Starting vertex: B

BFS: B, A, E, D, C, F

DFS: b, a, c, e, f, d

Q. 14

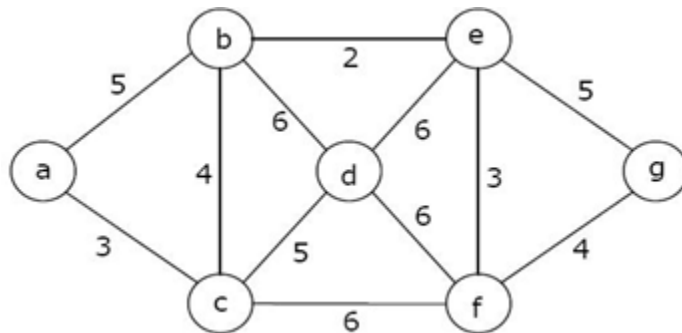


Starting vertex: E

BFS: E, F, G, D, A, C, B

DFS: e, f, g, d, a, b, c

Q. 15

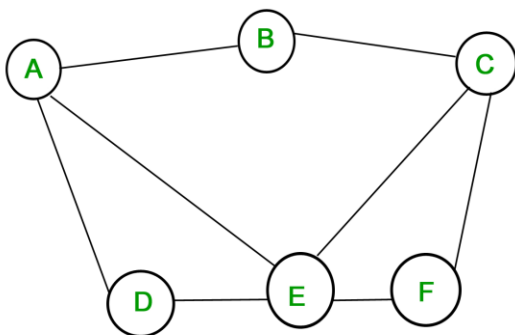


Starting vertex: g

BFS: g,f,e,d,c,b,a

DFS:g,f,e,d,c,a,b

Q. 16

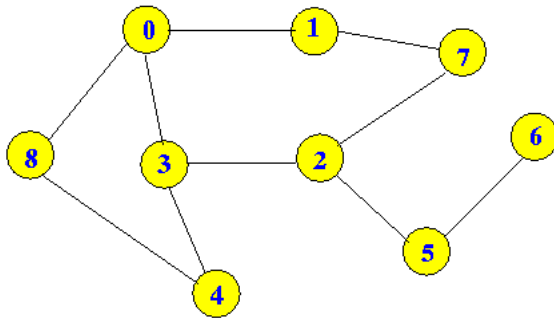


Starting vertex: E

BFS: E,F,D,A,C,B

DFS:e,f,c,b,a,d

Q. 17

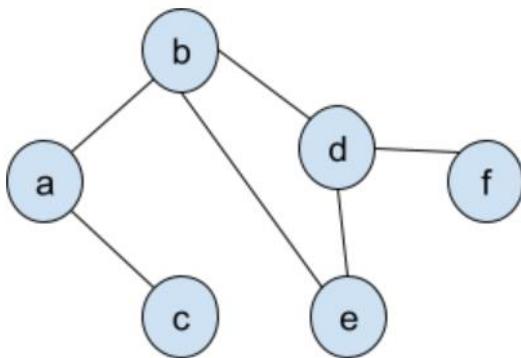


Starting vertex: 7

BFS:7,2,1,5,4,0,6,4,8

DFS:7,2,5,6,3,4,8,0,1

Q. 18



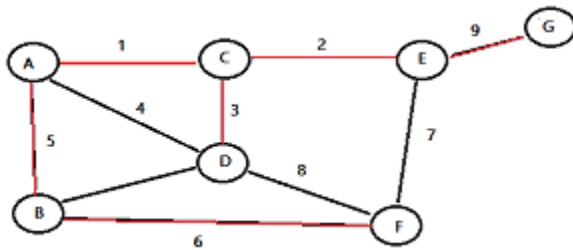
Graph

Starting vertex: d

BFS:d,f,b,e,a,c

DFS:d,f,e,b,a,c

Q. 19

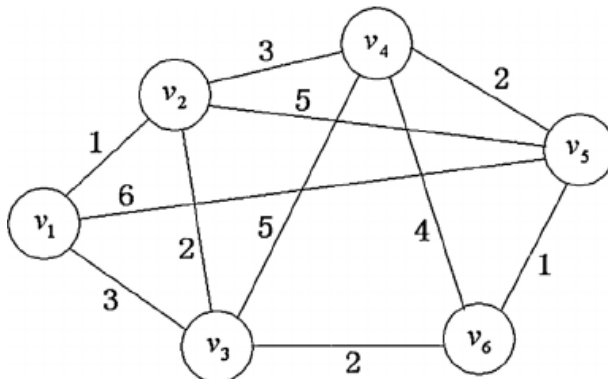


Starting vertex: C

BFS: c,a,e,d,b,g,f

DFS:- a,b,d,f,e,g

Q. 20



Starting vertex: V4

BFS:v4,v2,v5,v3,v6,v1

DFS- v(4,3,6,5,2,1)