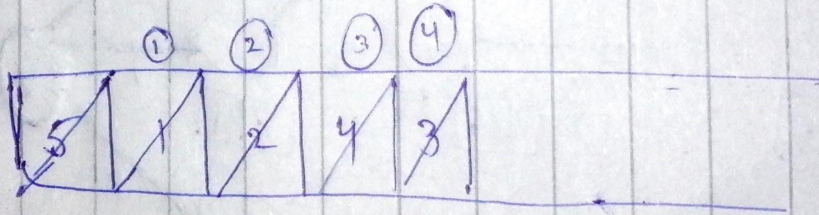
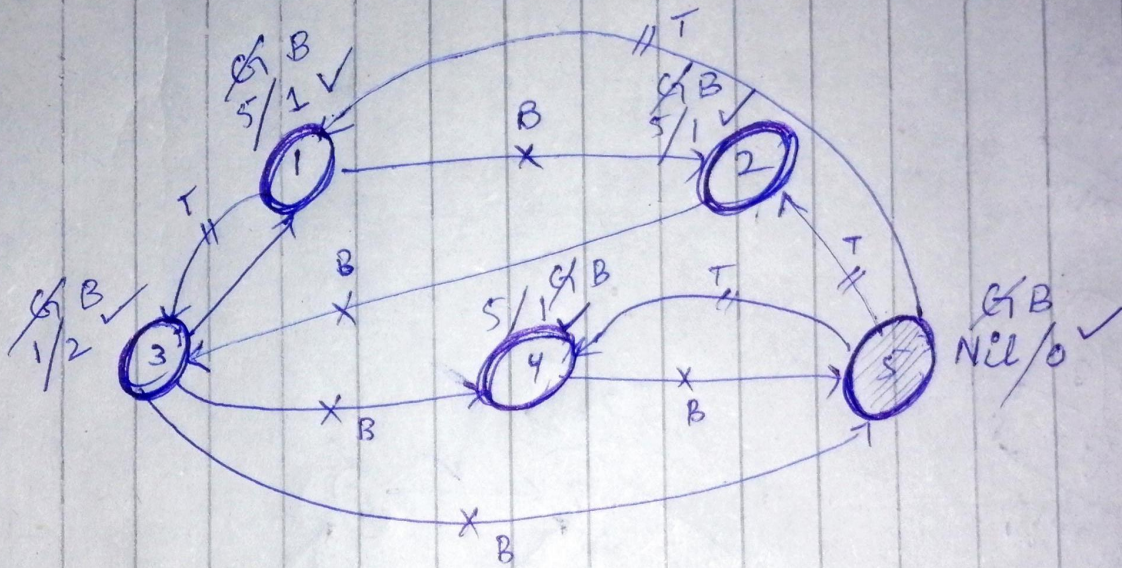


BFS

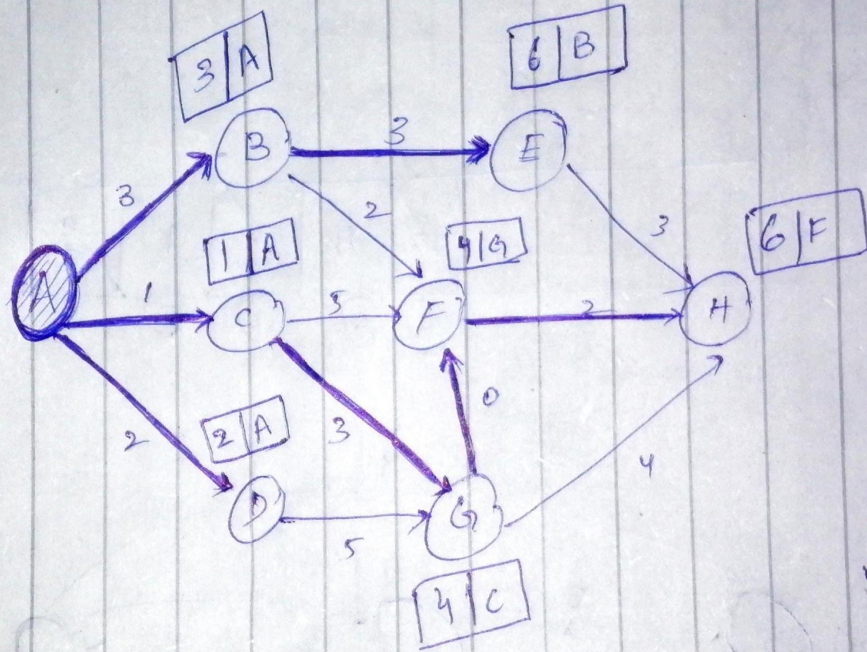
Q.2



(b)
17 executed
for the 4th time

	color	1	5
2	5	1	5
4	5	1	5
3	5	2	1

Q.3

DIJKSTRA

(b)
Line 10 executed for 6th time

	A	B	C	D
Q/N		3/A	1/A	2/A

(a) when F is changed for 3rd time

$u \rightarrow G$	$v \rightarrow F$
$u.d \rightarrow 4$	$v.d \rightarrow 4$
$u.p \rightarrow C$	$v.p \rightarrow G$

	A	B	C	D	E	F	G	H
	∞/N	∞/N	∞/N	∞/N	∞/N	∞/N	∞/N	∞/N
A	$0/N$	x	$3/A$	$1/A$	$2/A$			
C	$1/A$					$6/C$	$4/C$	
D	$2/A$							
B	$3/A$	x	x	x	$6/B$	$5/B$		
G	$4/C$	x	x	x		$4/G$	x	$8/G$
F	$4/G$	x	x	x	$6/B$	x	x	$6/F$
E	$6/B$	x	x	x	x	x	x	
H	$6/F$	x	x	x	x	x	x	x

Q. 4
INSERTION SORT

1	2	3	4	5	6
5	4	2	6	1	3

i j key = 4

l6(1)

5	5	2	6	1	3
---	---	---	---	---	---

l8(1)

4	5	2	6	1	3
---	---	---	---	---	---

i j key = 2

l6(2)

4	5	5	6	1	3
---	---	---	---	---	---

i j

l6(3)

4	4	5	6	1	3
---	---	---	---	---	---

l8(2)

2	4	5	6	1	3
---	---	---	---	---	---

(a)
when l8 is reached

key = 2

4	4	5	6	1	3
---	---	---	---	---	---

2	4	5	6	1	3
---	---	---	---	---	---

i j key = 6

2	4	5	6	1	3
---	---	---	---	---	---

i j key = 1

l6(4)

2	4	5	6	6	3
---	---	---	---	---	---

l6(5)

2	4	5	5	6	3
---	---	---	---	---	---

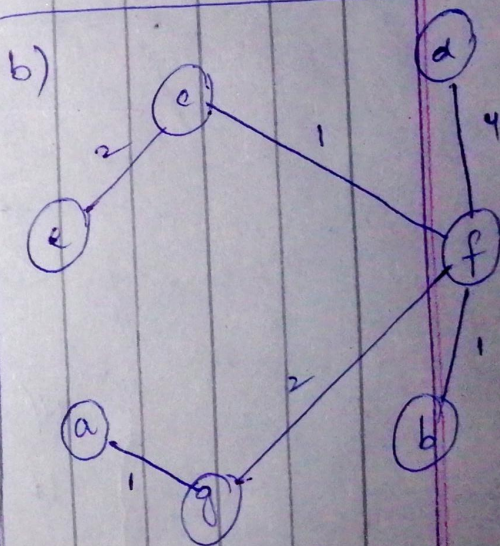
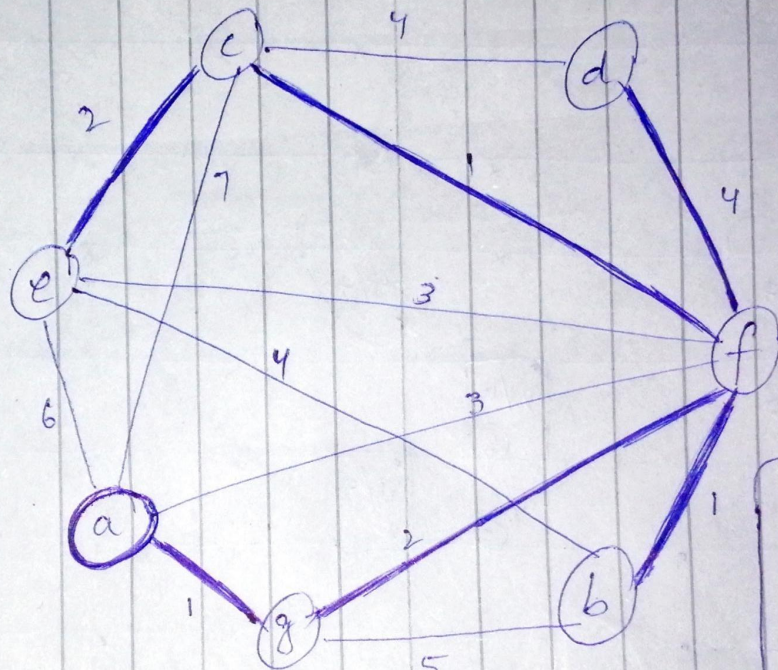
l6(6)

2	4	4	5	6	3
---	---	---	---	---	---

Key = 1 A[i] = 4

(b)
when l6 is executed for 6th time

Q.5
PRIMS



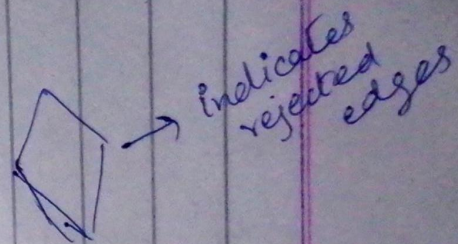
a)

$$\text{weight} = 1 + 2 + 1 + 4 + 1 + 2 = 11$$

d)

	a	b	f	g
a		1	2	
b				
f				
g				

	a	b	c	d	e	f	g
	0/N	∞/N	∞/N	∞/N	∞/N	∞/N	∞/N
a	0/N	x	$7/a$		$6/a$	$3/a$	$1/a$
g	$1/a$	x	$5/g$			$2/g$	x
f	$2/g$	x	$1/f$	$4/f$	$3/f$	x	x
b	$1/f$	x	x			x	x
c	$1/f$	x	x		$2/c$	x	x
e	$2/c$	x	x		x	x	x
d	$4/f$	x	x	x	x	x	x



(c)

g—b
a—c
a—e
f—e
a—f