

200

1000 / 60

$\frac{50}{3}$
14.33

~~2000~~

IND 160 101
 $\frac{100}{3}$

60 km/h

1000
60

~~2000~~
~~1000~~
40

A → B
1080

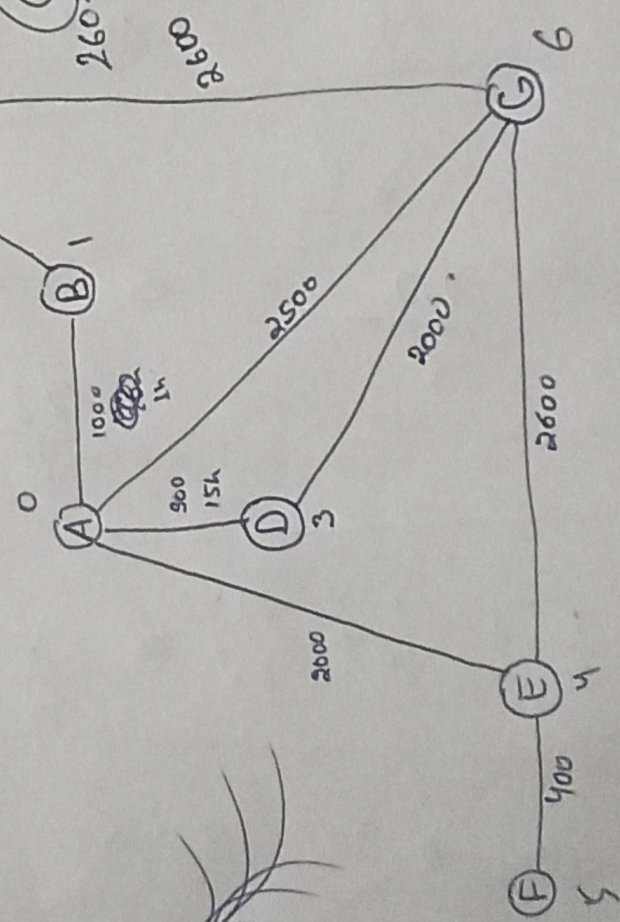
10 E

60 min

250 min
E-F

A → B 108 km/h
17h 20m

260 + 60 + 250
570



$\frac{1000}{60}$
 $\frac{900}{60}$
15

A → B
1080 min

1000
600
400

250 min

160 + 90

$\frac{1000}{60}$
 $\frac{900}{60}$
 $\frac{5}{3}$

800 →

Q

4

1600

10 chakka

A-B
1.4 min

A-B
A-B
A-B
A-B
A-B

600 min
400 min
400 min

200 min
100 min
100 min
100 min
100 min
100 min

A-B 2 10
B-A 2 9

17

C

4.20

A

100

B

2

4.20

3.6

1080 min

18x60

2000

1.1

500 3

600

1000

4.20

3.6

1080 min

18x60

2000

1.1

500 3

600

4.20

3.6

1080 min

18x60

2000

1.1

500 3

600

4.20

3.6

1080 min

18x60

2000

1.1

500 3

600

4.20

3.6

1080 min

18x60

2000

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500 3

600

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1080 min

18x60

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500 3

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1080 min

18x60

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1080 min

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1080 min

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1080 min

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1080 min

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1080 min

18x60

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1080 min

18x60

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1080 min

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1080 min

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1080 min

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1080 min

18x60

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1080 min

18x60

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1080 min

18x60

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1.1

500 3

600

4.20

3.6

1080 min

18x60

2000

1.1

500 3

600

4.20

3.6

1080 min

18x60

A → B 2000 → 10 flights
 B → A 8000 → 4 flights

~~Speed = 1000 km/hr~~
 Time = 100 min

1000 min
~~1600~~
 1800
 A → B 2000

A 200 B 100 min

B → A 200
~~600~~
~~400~~
 200

260
 260

FL No.	From	To	t _i	t _f
	A	B	0	100
	B	A	160	260
	A	B	320	420
	B	A	640 540	720 640
	A	B	700	800
	B	A	860	960 — Cutoff.

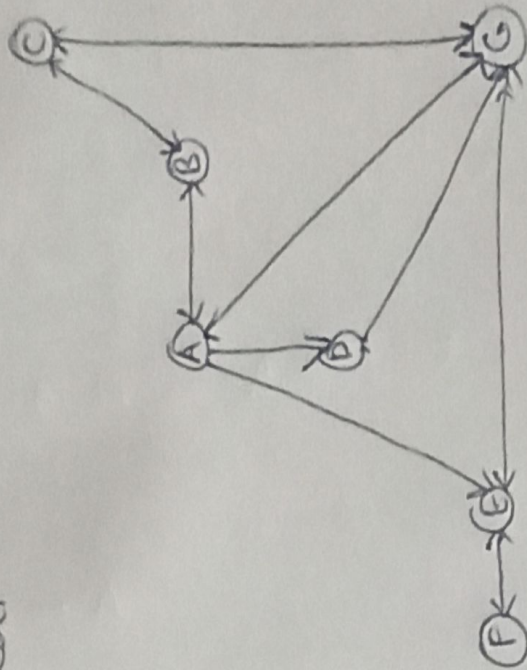
1 plane.
 3 trips for A → B
 3 from B → A

Cyclic path
Sakta hai
bhi ho

A → D 1000 pas
D → G 2000 pas
G → A 2500 pas

A	D	0	90
D	G	150	350
G	A	40	660
A	D	780	870
D	G	X	

A → G ~~52500~~ t = 250



$$A \rightarrow B \quad t = 100 \text{ s}$$

3 flights

A	t_o	t_f	pass
	0	100	600 200×3
300		400	600 100×3
320		420	
640		740	600 200×3
960		1060	200

1000m



2

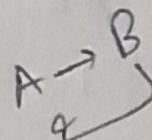
No. of planes = 3

$$t = 960 \text{ px } 2 \text{ free} / \text{more to AD}$$

A → D

$$t = 90 \text{ min} = 1000$$

t_o	t_f	pass
0	90	200 $\times 1/2$
300	390	200



600	690	200
900	990	200

→ 960 1050 200×2 (AB)

No. of planes req. = 2 = 1

$$t = \cancel{900} \text{ px } \cancel{1 \text{ free}} \quad \begin{matrix} 300 \\ 300 \end{matrix} \text{ px } 1 \text{ free.}$$

$$A \rightarrow E \quad t = 200 \text{ min} \quad p = 1200$$

t_o	t_f	p
0	200	200×3
520	720	200×3

No. of planes req = 3

No free.

$$A \rightarrow G \quad t = 250 \text{ min} \quad p = 1000$$

t_0	t_1	p
0	250	200×3
620	870	200×2

$$R_{eq} = 3$$

1 free at $t = 620$

B For A total req: 10

$$B \rightarrow A$$

t_i	t_{out}	
100	160	$(200 \times 3) \downarrow 600 \uparrow$
420	480	$(200 \times 3) \downarrow 200 \uparrow$
740	800	$(200 \times 3) \downarrow$

No. of planes $R_{eq} = 0$

$$B \rightarrow C \quad t = 120 \text{ min} \quad 1400 = p$$

t_i	t_1		t_1	t_1
0	120	$200 \times 2 \rightarrow$	0	120×2
300-360	480	200×2	60	180×1
660-720	840	200×2		

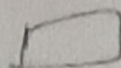
900	1020	200
1020		

$$R_{eq} = 3$$

~~$t = 800$~~ $t = 360$ p 1 free

C → B

(2)

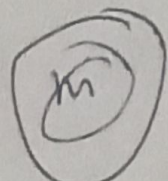
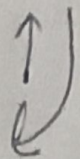
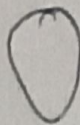


t_i t_f
 120_B 180_B $(200 \times 2) \downarrow \uparrow - 180_B \rightarrow 240_B$ (200×1)
 480_B 540_B $(200 \times 2) \downarrow$
 840_B 900_B $(200 \times 2) \downarrow$

t_o

$\delta = 60$

D



C - G

$t = 260 \text{ min}$

$p = 800$

~~300~~

t_i

t_f

0

260

(200×2)

580 - 640

900

(200×2)

No. of planes required = 2

~~250~~

G - A

$t = 250$

t_i

t_f

250 - 310

(3)

(2)

