Solution practice-1

1.

First six month	500000 * 60% *6/12	150000
Next four month	500000 * 70% * 4/12	116667
Last two month	500000 * 90% * 2/12	75000
Production units		341667

2. Production units @ 80% = 43200/96 * 80 = 36000

80% level	80% level (36000)		96% level (43200)	
	Total	Per unit	Total	Per Unit
F (?)	153000		153000	
V per unit 1800/450	144000	4	172800	4
Total	297000		325800	

3 At 112 % total expenses = 6378750

Direct labour per unit (3.6 * 5.625) 20.25

Units @ 112% = 6378750/20.25 = 315000
So @ 96% 270000 units, @ 110% 309375 units

4 Production units
75 % 9000
60% ? = 7200 units
90% ? = 10800 units

Per unit Wages
@75% 0.20,
@90% 0.20
So, @**75% 0.20**

Dep.
@ 60% = 7200 * 0.45 = 3240
@ 90% = 10800 * 0.30 = 3240
So, @ 75% also 3240
Per unit Dep. = 3240/9000 = **0.36**

Admi. Exp
@ 60% (0.50 * 7200) = 3600
@ 75% (0.40 * 9000) = 3600
So, @ 90% also 3600
Per Unit = 3600/10800 = 0.30

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5000	38000
3000	30000
2000 (difference)	8000
So, Per unit Variable exp=	8000/2000 = 4

@ 5000 units	38000
- Variable exp (5000 * 4)	20000
Fixed exp.	18000

@ 80%%
Production units @ 100% = 5000
So, @ 80% = 4000 units
Fixed exp = 18000
V (4000 * 4) = 16000
Total = **34000**

6 @ 100 % units 5000
So, @ 60% ? = 3000 units
@ 70% ? = 3500 units

Statement @ 70%

	Rs.	Rs.
Power and Fuel		
F	3750	
V (5 * 3500)	17500	21250
Admini. Exp.		
F	20000	
V (3500 * 10)	35000	55000
Sales exp.		
F	15000	
V (3500*5)	17500	32500

Power and Fuel

5000	28750
3000	18750
2000 (difference)	10000
So, Per unit Variable exp=	10000/2000 = 5
@ 5000 units	28750
- Variable exp (5000 * 5)	25000
Fixed exp.	3750

Sales Exp

5000	40000
3000	30000
2000 (difference)	10000
So, Per unit Variable exp=	10000/2000 = 5
@ 5000 units	40000
- Variable exp (5000 * 5)	25000
Fixed exp.	15000

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Particulars	60% (9000 units)		80% (12000 units)		100% (15000 units)	
	Total Rs.	Per unit (rs.)	Total Rs.	Per unit (rs.)	Total Rs.	Per unit (rs.)
Materials	720000	80	936000	78	1140000	76
Labour	360000	40	480000	40	570000	38
Direct expenses	108000	12	144000	12	180000	12
Fac. overhead Variable	225000	25	300000	25	375000	25
Fac. Overhead Fixed	270000	30	270000	22.5	270000	18
Admi. Exp. Fixed	90000	10	90000	7.5	90000	6
Sales Exp Variable	153000	17	204000	17	255000	17
Sales Exp Fixed	27000	3	29700	2.48	29700	1.98
Distribution exp Variable	105300	11.7	140400	11.7	175500	11.7
Distribution exp Fixed	11700	1.3	11700	0.975	11700	0.78
Total cost	2070000	230	2605800	217.15	3096900	206.46
Profit	180000	20	334200	27.85	503100	33.54
Sales	2250000	250	2940000	245	3600000	240

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Flexible Budget

Particulars	70% (3500 units)		80% (4000 units)		90% (4500 units)	
	Total Rs.	Per unit (rs.)	Total Rs.	Per unit (rs.)	Total Rs.	Per unit (rs.)
Variable Cost						
Material	420000	120	504000	126	594000	132
Labour	210000	60	252000	63	297000	66
Other	70000	20	80000	20	90000	20
Commission	175000	50	205000	51.25	236250	52.5
Semi variable exp						
Factory overheads						
V	280000	80	320000	80	360000	80
F	400000	114.29	400000	100	400000	88.89
Sales overhead						
V	168000	48	192000	48	216000	48
F	320000	91.43	320000	80	320000	71.11
Fixed Overhead						
Depri.	480000	137.14	504000	126	528000	117.33
Office overhead	60000	17.14	63000	15.75	66000	14.67
Total Cost	25830000	738	2840000	710	3107250	690.5
Profit	917000	262	1260000	315	1617750	359.5
Sales	**3500000**	**1000**	**4100000**	**1025**	**4725000**	**1050**

Semi variable expenses:
70%   3500 units
40%   ?   = 2000 units

60% ? = 3000 units

Factory overhead

2000	560000
3000	640000
1000 (difference)	80000
So, Per unit Variable exp=	80000/1000 = 80
@ 2000 units fac. Overheads	560000
- Variable exp (2000 * 80)	160000
Fixed exp.	400000

Sales overhead

Factory overhead

2000	416000
3000	464000
1000 (difference)	48000
So, Per unit Variable exp=	48000/1000 = 48
@ 2000 units fac. Overheads	416000
- Variable exp (2000 * 48)	96000
Fixed exp.	320000

9 **Flexible Budget Of Dhruvi**

	Capacity 100% (4000)		Capacity 80% (3200)		Capacity 60% (2400)	
Particulars	Per unit (Rs)	Amount(Rs)	Per unit (Rs)	Amount(Rs)	Per unit (Rs)	Amount(Rs)
Direct materials	10	40000	10	32000	10	24000
Direct Labour	4	16000	4	12800	4	9600
Repairs:-						
Variables	7.5	30000	7.5	24000	7.5	18000
Fixed	7.25	29000		29000		29000
Power:-						
Variable	25	100000	25	80000	25	60000
Fixed	27.5	110000		110000		110000
Labour of branch	25	100000	25	80000	25	60000
Store (variable)	50	200000	50	160000	50	120000
Salary (fixed)	25	100000		100000		100000
Depree (fixed)	35	140000		140000		140000
Inspection:-						
Variable	5	20000	5	16000	5	12000
fixed	1.5	6000		6000		6000
TOTAL		**891000**		**789800**		**688600**

Working Note:-

1 hour → 10 units

* Wages

1 hour → Rs 40

1 units = Rs 40/10 units = Rs 4 per unit

100 % → 4000 units

90 % → 3600 units

80 % → 3200 units

70 % → 2800 units

60 % → 2400 units

* Repairs

Total cost = Variable + Fixed

	70 % →	50000	70 % 50000 = 21000 + 29000
	90 % →	56000	90 % 56000 = 27000 + 29000
(variable) Diff	20 %	6000	

(variable) 100 % → (6000/20%) = Rs 30000 → 70 %, 90 %

* Power (Semi variable) — Total cost = V.C + F.C

70 % → 180000 — 70 % 180000 = 70000 + 110000

90 % → 200000 — 90 % 200000 = 90000 + 110000

(variable) Diff 20 % — 20000

(variable) 100 % → (20000/20%) = 100000 → 70 % = 70000; 90 % = 90000

*Inspection (Semi – variable) — V.C + F.C

70 % → 20000 = 14000 + 6000

90 % → 24000 = 18000 + 6000

(variable) Diff 20 % — 4000

100 % → (4000/20%) = 20000 → 70 % = 14000; 90 % = 18000

10 **Flexible Budget of Avichal**

Particulars	50%	60%	75%
Direct Materials	80000	96000	120000
Direct wages	100000	120000	150000
Direct exp.	40000	48000	60000
Factory overheads			
Fixed (24000*100/120)	20000	20000	20000
Variable	30000	36000	45000
Office overheads			
Fixed (72000 *100/120)	60000	60000	60000
Variable	20000	24000	30000
Selling overheads			
Fixed (18000 *100/120)	15000	15000	15000
Variable	10000	12000	15000
Total Cost	375000	431000	515000
Profit (?)	125000	139000	197500
Sales	500000	570000	712500