3.2

$m_1 : RESP = "Manager" \wedge DUR < 20$
$m_2 : RESP = "Manager" \wedge DUR \geq 20$
$m_3 : RESP = "Analyst" \wedge DUR < 20$
$m_4 : RESP = "Analyst" \wedge DUR \geq 20$
$m_5 : RESP = "Consultant" \wedge DUR < 20$
$m_6 : RESP = "Consultant" \wedge DUR \geq 20$
$m_7 : RESP = "Engineer" \wedge DUR < 20$
$m_8 : RESP = "Engineer" \wedge DUR \geq 20$
$m_9 : RESP = "Programmer" \wedge DUR < 20$
$m_{10} : RESP = "Programmer" \wedge DUR \geq 20$

3.3

ENO	$ENAME$	$TITLE$	SAL
$E1$	$J.Doe$	$Elect.Eng,$	40000
$E2$	$M.Smith$	$Syst.Anal.$	34000
$E3$	$A.Lee$	$Mech.Eng.$	27000
$E4$	$J.Miller$	$Programmer$	24000
$E5$	$B.Casey$	$Syst.Anal.$	34000
$E6$	$L.Chu$	$Elect.Eng.$	40000
$E7$	$R.Davis$	$Mech.Eng.$	27000
$E8$	$J.Jones$	$Syst.Anal.$	34000

Definitly, this is partitioned
$EMP_1 = \sigma_{TITLE="Elect.Eng."\wedge SAL\geq 30000}$
$EMP_2 = \sigma_{TITLE="Syst.Anal."\wedge SAL\geq 30000}$
$EMP_3 = \sigma_{TITLE="Programmer"\wedge SAL< 30000}$
$EMP_4 = \sigma_{TITLE="Mech.Eng."\wedge SAL< 30000}$

$RESULT_1 = EMP_1 \ltimes PAY_1$
$RESULT_2 = EMP_2 \ltimes PAY_1$
$RESULT_3 = EMP_3 \ltimes PAY_2$
$RESULT_4 = EMP_4 \ltimes PAY_2$