

# KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

## ELECTRICAL ENGINEERING DEPARTMENT

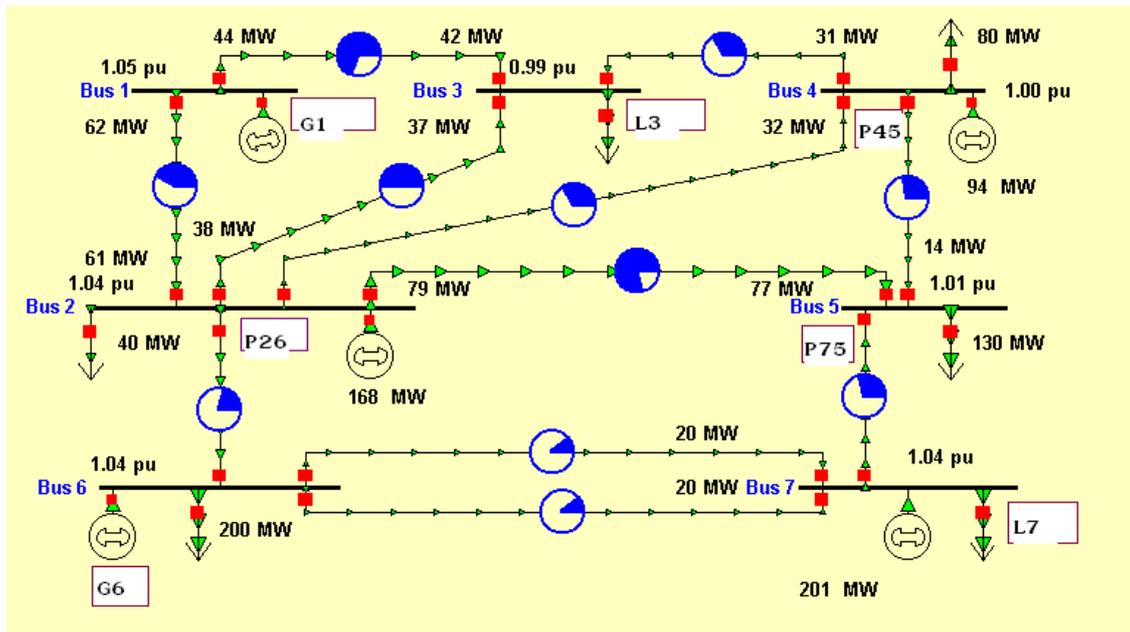
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EE-463

### Key Solution

Quiz 2      ser#:      I.D.:      Name:

The power flow of a 7-bus system is shown below



Assuming the following line losses :

Line	Real Power Loss (MW)
2-4	0
2-6	0
3-4	0
5-7	1
6-7	0
6-7	0

Find the real power in MW at the locations indicated with the empty rectangular boxes

**Solution:**

$G_1 = 106 \text{ MW}$

$G_6 = 200 \text{ MW}$

$L_3 = 110 \text{ MW}$

$L_7 = 201 \text{ MW}$

$P_{26} = 40 \text{ MW}$

$P_{45} = 15 \text{ MW}$

$P_{75} = 39 \text{ MW}$