2. The president of a large oil company must decide how to invest the company's $ 10 million of excess profits. He could invest the entire sum in solar energy research, or he could use the money to research better ways of processing coal so that it will burn more cleanly. His only other option is to put half of this R & D money into solar research and half into coal research. The president estimates 1500 % return on investment if the solar research is successful and 800 % return on investment if the coal research is successful.

a. Construct a payoff table for the president's R & D investment problem.

b. What decision should the president make based on :

1. Maximin criterion .
2. Maximax criterion .
3. Laplace criterion .
4. Minimax regret criterion .

c. If the president estimates that the probability of the solar research being successful is 0.4 and the probability of successful research on coal is 0.7 , and if the president is an EMV er , what is his optimal strategy ?

d. Calculate (EVPI) using :

1. EPC and EMV .
2. EOL .