Capital Budgeting

1. Max Pharmaceuticals is evaluating a project whose expected cash flows are as follows:

Year	*Cash flow*
0	-350,000
1	90,000
2	150,000
3	170,000
4	200,000

The cost of capital for Max Pharmaceuticals is 10 percent.

(i) What is the Pay-Back period of the project?
(ii) What is the NPV of the project?
(iii) What is the BCR of the project?

2. ABC Limited is evaluating a project whose expected cash flows are as follows:

Year	*Cash flow*
0	-300,000
1	50,000
2	100,000
3	150,000
4	170,000

The cost of capital is 10 percent

(i) What is Pay-Back period and Discounted Pay-Back period?
(ii) What is the NPV of the project if?
(iii) What is the IRR of the project?
(iv) What is the BCR?

3. Your company is considering two projects, *M* and *N*. Each of which requires an initial outlay of Rs.140 million. The expected cash inflows from these projects are:

Year	*Project M*	*Project N*
1	35	90
2	60	130
3	70	70
4	90	50

The cost of capital is 10 percent?

a) What is the Payback and discounted payback period for each of the projects?

b) What is NPV of both the projects?
c) If both the projects are independent, which one should be selected?
d) If both the projects are mutually exclusive, which one should be selected?

4. The cash flow streams for four alternative investments, *A*, *B*, *C* and *D*, are :

Year	*A*	*B*	*C*	*D*
0	(3, 00,000)	(250,000)	(3, 10,000)	(2,20,000)
1	50,000	50,000	90,000	150,000
2	50,000	50,000	60,000	30,000
3	50,000	60,000	90,000	-
4	50,000	60,000	60,000	-
5	50,000	60,000	90,000	-
6	50,000	30,000	60,000	-
7	50,000	30,000	50,000	-
8	50,000	10,000	50,000	-
9	50,000	10,000	50,000	180,000
10	50,000	10,000	50,000	20,000

Discount rate is 12 percent.

Calculate the 1) Net present value, 2) Internal rate of return, 3) Benefit cost ratio, 4) Pay-Back period and 5) Discounted Pay-back period for the four alternatives and choose the best among them.