NATIONAL AVIATION UNIVERSITY
Management of Foreign Economic Activity of Enterprises Department

HOME TASK
«Investment and innovative management»

Group:_____
Student:_____
Lector: _____
Estimate:_____

Kyiv – 201_

THEORETICAL PART

Variant 1
The economic nature and classification of investments.
The concept of innovation. Classification of innovation.

Variant 2
Model of investment behavior of an enterprise in a market environment.
Classification of sources of innovation.

Variant 3
Essence, goals and objectives of investment management.
Goals, objectives and content of innovation management.

Variant 4
Functions and mechanism of investment management.
The concept of the innovation process.

Variant 5
Organizational support of investment management.
The main phases of the innovation process and their content.

Variant 6
Information support of investment management.
The main components of promoting innovation to the market.

Variant 7
Systems and methods of investment analysis.
The relationship between the life cycles of innovation, product and service.

Variant 8
Systems and methods of investment planning.
Organizational forms of innovation.

Variant 9
Systems and methods of internal investment control.
Organization of innovation in the enterprise.

Variant 10
Concepts for estimating the value of money over time.
Characteristics of an innovative organization.

Variant 11
The concept and methodological tools for assessing inflation.
Innovative system. Basic concepts.

Variant 12
The concept and methodological tools for risk factor assessment.
National Innovation System.

Variant 13
The concept of investment strategy and its role in the development of the enterprise.

Regional innovation system.

Variant 14
Principles and sequence of development of investment strategy of the enterprise.
Corporate innovation system.

Variant 15
Justification of strategic directions and forms of investment activity.
The infrastructure of the innovation sphere.

Variant 16
Features and forms of investment for the enterprise.
Choosing an innovative business model.

Variant 17
Investment management policy.
Financing options for innovation.

Variant 18
Types of investment projects and requirements for their development.
Formation of an innovative team, participants of an innovative project.

Variant 19
Evaluation of the effectiveness of investment projects.
Innovation implementation problems

Variant 20
Risk assessment of investment projects.
The concept of innovative strategies and their classification.

PRACTICAL PART

TASK 1
On “Investment and innovative management”
Theme 1. "Decision-making on the choice of alternative projects"

Task.
The investor considers 4 variants of investments into projects.
The first variant is the purchase of a truck in the forwarding company.
The second variant is the purchase of passenger buses for tourist trips.
The third variant is an investment in the purchase of a plant for the production of biofuels.
The fourth variant is the purchase of own warehouse for the purpose of renting it to other companies.

Project characteristics.

1. In the freight forwarding company, due to increase of demand for services, there is a need to purchase vehicles in the amount of **3+N** units and the cost of each **30,000+ 1000*N** $. The possible income from each unit is 3000 $/ per month. It is necessary to calculate the profit for the year from the purchase of the entire car park. And also calculate the profitability of the project for 3 scenarios: pessimistic (20%), realistic (30%) and optimistic (50%).
The task.
1. Determine the payback period for the 1st variant.
2. Determine the profit from the project under different variants of the forecast scenario.
3. Describe the project as an indicator of the risk of its implementation.

2. In the tourist company, due to the increase of demand for services, it becomes necessary to purchase vehicles in the amount of **3+N** units and the cost of each 35 000+1000*N $. The possible income from each unit is 4000 $/ per month. It is necessary to calculate the profit for the year from the purchase of the entire car park. And also calculate the profitability of the project in 3 scenarios: pessimistic (10%), realistic (20%) and optimistic (70%).
The task.
1. Determine the payback period for the 2nd variant.
2. Determine the profit from the project under different variants of the forecast scenario.
3. Describe the project as an indicator of the risk of its implementation.

3. In response to growing demand for biofuels in Europe, it is possible to buy a plant for its production. The production capacity of the plant will be 80+10*N tons / month. The cost of launching such a project and setting up a production line will be 45,000+1000*N $. The cost of 1 ton of products on average equals 600 US dollars, of which 80% are on the cost price. It is necessary to calculate the profit for the year from the purchase of the plant with the full sale of all products every month. And also calculate the profitability of the project in 3 scenarios: pessimistic (20%), realistic (35%) and optimistic (45%).
1. Determine the payback period for the 3 variant.
2. Determine the profit from the project under different variants of the forecast scenario.
3. Describe the project as an indicator of the risk of its implementation.

4. In connection with the opening of the online store there is an opportunity to purchase your own warehouse with an area of 1800 m2. The cost of the warehouse with the necessary equipment and shelving is 100 000+10 000*N $. The number of sells is 2500+1000*N, each of them will be sold to customers at a cost of $ 2 per month. It is necessary to calculate the profit ***for two years*** from the purchase of the warehouse with full filling of all the places. And also calculate the profitability of the project in 3 scenarios: pessimistic (10%), realistic (30%) and optimistic (60%).
The task.

1. Determine the payback period for the 4th variant.
2. Determine the profit from the project under different variants of the forecast scenario.
3. Describe the project as an indicator of the risk of its implementation.

N - Student number in the journal

TASK 2
"Assessment of the level of enterprise management"

Based on the results of such an assessment, it is necessary to build a diagram that shows the "development profile" of the enterprise. According to the diagram, it is necessary to identify insufficiently and over-developed business processes and provide the necessary direction of introduction of management technologies. Evaluate the quality of each business process management.

Purchases of products - level–0-4. **Choose any value**
Sale of products - level– 0-4.
Marketing - level– 0-4.

IT support and communication - level – 0-4.
Administrative management - level– 0-4.
Personnel Management - level– 0-4.
Logistics processes - level– 0-4.

		K1		K2		K3		K4		K5
		T_{act}	T_{est}	N_{tot}	N_{cor}	F_{reg}	F_{tot}	F_{over}	F_{tot}	
Purchases of products	F1	905	787	3	2	3	10	4	10	0,57
	F2	1042	742	7	0	10	10	2	10	0,53
	F3	691	591	7	0	7	16	8	16	0,61
	F4	1048	938	7	1	3	15	8	15	0,70
Sale of products	F1									
	F2									
	F3									
	F4									
Marketing	F1									
	F2									
	F3									
	F4									
IT support and communication	F1									
	F2									
	F3									
	F4									
Administrative management	F1									
	F2									
	F3									
	F4									

Personnel Management	F1									
	F2									
	F3									
	F4									
Logistics processes	F1									
	F2									
	F3									
	F4									

Insert any value in the table

TASK 3
Project cost estimation

1. The management of Fine Electronics Company is considering to purchase a CRM (customer relationship management) to help manage many of the following business processes: customer data, customer interaction, access business information, automate sales, track leads, contracts, marketing, customer support, clients and contacts, support vendor, partner relationships, employees, knowledge and training, assets or resources. Input date is given in the table 1.

Table 1. Input data for calculation the project

Costs CRM, $	4700+100*N
Cost 2nd year, $	800+10*N
Cost Next year (more than previous in $)	30
Income, $	11000
Benefits, % from income	20
Annual Growth, % (from previous year)	5
Life of the project, years	6

Task

1. Calculate the NPV of the project at a discount rate of 10%, 20%, 30%, 40%, 50%, 60%, 70% and 80%.
2. Calculate the IRR of the project.
3. Calculate the BCR of the project at a discount rate of 10%, 20%, 30%, 40%, 50%, 60%, 70% and 80%.
4. Calculate the Payback period of the project.
5. Create the diagram of the dependence of NPV on the discount rate

2. The management of Fine Electronics Company is considering to purchase a WMS (warehouse management system) to support and optimize warehouse or distribution center management.. Input date is given in the table 1.

Table 1. Input data for calculation the project

Costs WMS, $	1600+1000*N
Cost 2nd year, $	800+100*N
Cost Next year (more than previous in $)	50
Income, $	25000
Benefits, % from income	20
Annual Growth, % (from previous year)	10
Life of the project, years	6

Task

1. Calculate the NPV of the project at a discount rate of 10%, 20%, 30%, 40%, 50%, 60%, 70% and 80%.
2. Calculate the IRR of the project.
3. Calculate the BCR of the project at a discount rate of 10%, 20%, 30%, 40%, 50%, 60%, 70% and 80%.
4. Calculate the Payback period of the project.
5. Create the diagram of the dependence of NPV on the discount rate

3. Compare these two projects and propose the best one for the top-management of Fine Electronics Company. Explain your answer.

TASK 4

Schedule Network Analysis

Build a network schedule and find the main time indicators

Code of work	Previous work	Period, days
1	-	1+N
2	-	1
3	-	3
4	1	2
5	1	3
6	2	2+N
7	4, 5	5
8	3	1+N
9	6	2
10	6, 8	3
11	8	4
12	7	3
13	9	2+N
14	11	5
15	7, 12	8
16	12	7
17	13	6
18	14	3
19	8, 11	2
20	14, 19	1+N
21	18, 20	5
22	17, 10	4
23	15	3
24	15	2
25	16	1+N
26	18, 21, 22	8
27	13, 16, 22, 25	7
28	19	6
29	20, 28	4+N
30	21, 26	3
31	23, 24	4
32	24, 25	3+N
33	31, 32	7
34	25	10
35	22, 26, 27	11
36	29, 30	12
37	30, 36	3+N
38	33, 34	8
39	27, 34, 35, 37	7
40	36	6
41	36	5

42	31, 33	4
43	42	1+N
44	34	7
45	37	10
46	40, 41	9
47	38, 43, 44	11
48	45, 46	2
49	39, 47, 48	3
50	49	6

N - Student number in the journal