**UNIVERSITY OF THE PHILIPPINES MANILA**

**COLLEGE OF PHARMACY**

**PHAR 125: Pharmaceutical Accounting**

**1st Semester AY 2020-2021**

**Capital Investment Analysis**

**Worksheet (Group)**

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| --- | --- |
| Group Number |  |
| Names of Group Members |  |

\*Show all necessary solutions.

**Problem 1**

Carnival Corp. has recently placed into service some of the largest cruise ships in the world. One of these ships, the Carnival Glory, can hold up to 3,000 passengers and cost $510 million to build. Assume the following additional information:

* The average occupancy rate for the new ship is estimated to be 80% of capacity.
* There will be 300 cruise days per year.
* The variable expenses per passenger are estimated to be $75 per cruise day.
* The revenue per passenger is expected to be $310 per cruise day.
* The fixed expenses for running the ship, other than depreciation, are estimated to be $78,000,000 per year.
* The ship has a service life of 10 years, with a salvage value of $85,000,000 at the end of 10 years.

1. Determine the annual net cash flow from operating the cruise ship.

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1. Determine the net present value of this investment, assuming a 12% minimum rate of return.

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1. Assume that Carnival Corp. decided to increase its price so that the revenue increased to $320 per passenger per cruise day. Would this allow Carnival Corp. to earn a 15% rate of return on the cruise ship investment, assuming no change in any of the other assumptions? Would you recommend this to Carnival Corp.? Explain.

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**Problem 2**

The capital investment committee of Eastern Trucking Inc. is considering two investment projects. The estimated income from operations and net cash flows from each investment are as follows:

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|  | **Warehouse** | | **Parcel Tracking Technology** | |
| **Year** | **Income from Operations** | **Net Cash Flow** | **Income from Operations** | **Net Cash Flow** |
| 1 | $44,000 | $154,000 | $ 25,000 | $135,000 |
| 2 | 44,000 | 154,000 | 35,000 | 145,000 |
| 3 | 44,000 | 154,000 | 45,000 | 155,000 |
| 4 | 44,000 | 154,000 | 55,000 | 165,000 |
| 5 | 44,000 | 154,000 | 60,000 | 170,000 |
| Total | $220,000 | $770,000 | $220,000 | $770,000 |

Each project requires an investment of $550,000. No residual value is expected. The committee has selected a rate of 12% for purposes of the net present value analysis.

1. Compute the following:
2. The average rate of return for each investment.

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1. The net present value for each investment.

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1. Prepare a brief recommendation for the capital investment committee, advising it on the relative merits of the two projects and which project to invest on.

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