



UNIVERSITY OF PERADENIYA, SRI LANKA

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பேராதனைப் பல்கலைக்கழகம், இலங்கை

First Year (100 Level) Examination in Bachelor of Arts
(External –New Syllabus) April 2017

SUPE 012 – Project Formulation and Evaluation

Instructions: Answer **Four Questions Only**. Calculators are allowed
Time allowed: **3 Hours**

1. A private firm decided to introduce a new product line. The new product will have investment costs, operational costs, and income cash flows over five years. This project will have an immediate ($t=0$) cash outflow of Rs. 200,000 (which might include machinery, and employee training costs). Other cash outflows for years 1-5 are expected to be Rs. 2,000 per year. Cash inflows are expected to be Rs. 50,000 each for years 1-5. All cash flows are after-tax, and there are no cash flows expected after year 5. The required rate of return is 10%.
 - a. Calculate the Present Value (PV) for each year separately, and the Net Present Value (NPV) for the above project. (10 Marks)
 - b. Determine the Internal Rate of Return (IRR) for this project (04 Marks)
 - c. Explain the differences between Net Present Value (NPV), Internal Rate of Return (IRR) and Benefits Costs Ratio (BCR) as investment project criteria. (06 Marks)

2. River water pollution close by Peradeniya City is identified as a serious environmental issue by the Central Environmental Authority, Sri Lanka. The authority has decided to design a project to avoid the river water pollution because it generates serious negative impacts on river water users of downstream and other people who use river water for a variety of needs. Suppose if you are selected as a project designer to complete this task;
 - a. Construct a problem tree for the above proposed project. (08 Marks)
 - b. Derive the objective tree by analyzing the above problem tree to solve the focal problem and its effects. (06 Marks)
 - c. Explain the various categories of feasibility studies in the process of project formulation and appraisal. (06 Marks)

3. a. "Logical Framework Approach (LFA) is a specific strategic, methodology adopted /used in the formulation of investment project". Describe this statement stating the functions and analytical procedure/steps of LFA. (10 Marks)
- b. Differentiate the Logical Framework Analysis (LFA) from Logical Framework Matrix (02 Marks)
- c. Explain briefly the followings which are incorporated in the Logframe Matrix.
- i. Wider or Development Objective
 - ii. Project Purpose (immediate objective)
 - iii. Output
 - iv. Objectively verifiable indicators
- (02 Mark for each)
4. a. Why a distributional analysis is necessary to include in project appraisal? (05 Marks)
- b. What is the importance of sensitivity analysis in the project planning and appraisal? (05 Marks)
- c. What do you mean by sensitivity indicators and switching values? (04 Marks)
- d. Explain the sensitivity indicators (with equations) for both towards the NPV and the IRR. (06 Marks)
5. a. Illustrate the essential analytical categories of impacts in Social Impact Assessment and necessary activities required for an Environmental Impact Assessment. (08 Marks)
- b. Explain the importance of Shadow Prices in project appraisal using suitable examples. (07 Marks)
- c. What is Contingent Valuation Method (CVM)? (05 Marks)

6. a. Considering the Discounting Factor for Single Payment and Discounted Annual Payment Factor, explain the importance of discounting all future benefits and all future costs of an investment project. (08 Marks)
- b. Explain the difference between rate of discount and rate of inflation (07 Marks)
- c. How can you measure the value of loss of something forever? (05 Marks)
7. a. Explain the analytical procedures of an impact evaluation of development project/program. (10 Marks)
- b. State and Explain at least three advantages of impact evaluation (06 Marks)
- c. List and explain briefly the indicative format for comprehensive evaluation report (04 Marks)