



EASTERN UNIVERSITY SRI LANKA

FACULTY OF COMMERCE AND MANAGEMENT

PART III EXAMINATION IN BACHELOR OF BUSINESS ADMINISTRATION

2007/2008 (May/June 2011)(Proper/Repeat)

EXB 405 PROJECT MANAGEMENT

Answer all Questions

Time: 3 hours

1.

### Case Study: Sellam Theatre

#### BACKGROUND

The Sellam is a privately owned theatre on the outskirts of a capital city. The seating capacity of the theatre is 600 people: 300 downstairs in the stalls and 300 upstairs in the circle. A typical production opens on a Tuesday and runs until the following Saturday week. i.e., for eleven working days (The theatre is not open on Sundays).

All artistic decisions are based on the recommendations of Sellam's fulltime Artistic Director, in consultation with the owner and a small committee which includes representatives from local councils, sponsors etc. Sellam employs a small group of actors, usually on short-term contracts, stage hands, scenery builders etc, and a number of administrative staff for the box office, finance, catering etc.

#### PRODUCTIONS

The theatre puts on two types of show-in-house productions by its own company and those by (other) touring companies. The in-house productions are of two types – lower cost “**standard**” shows and higher cost shows with guest “stars”. Putting on shows with stars is more expensive but attracts larger audiences, eg. “Star shows” normally generate twice as much revenue as standard shows.

In the two-year plan it has been decided that there will be a maximum of 40 in-house productions, for which the budget (to meet variable cost) is Rs 2 million. Typical variable costs conditions of grants, sponsors and benefactors, there must be minimum of ten standard of set-building (scenery) time available; on average, “standard shows” require 14 person-days and “star shows” require 28 person-days of this time.

## AUDIENCES

It is believed that the audiences for weekdays (Monday to Tuesday inclusive) are different from those on Friday and Saturday (weekends). Apart from subjective assessment by the staff, there is little objective information about customers. To overcome this deficiency, Sellam has begun searching its audiences by leaving questionnaires on the seats in the auditorium prior to performances, with two free tickets to a future production as a prize for one lucky respondent.

## BANK ACCOUNTS

**Present scheme:** The operation manager controls one current account from which Rs. 5,000 per month has to be drawn at a fairly even rate. Monthly charges are incurred if the balance falls below Rs. 500 at any time. The cost of holding money in this account is 8% a year, the amount it could earn elsewhere. Typical bank charges are Rs. 40 per month and the average balance is Rs. 2,000.

**New option:** The operations manager controls one current account whenever the balance was about to fall below Rs. 500. Thus, charges would be avoided, but there would be a fixed fee of Rs. 10 every time a transfer took place. The amount transferred would have to be specified by the operations manager.

## THE CAR PARK

Sellam owns a large car park, adjacent to the theatre, which is used by shoppers and visitors during the day until 6.00 p.m. (at 60 cents per car) and by the theatre-goers after 6.00 p.m. (for free).

The management plans to increase the revenue from the car part. The daytime charge has recently been raised from 50 cents to 60 cents and, as a result, daytime demand has fallen from a constant 300 to 280 cars. The costs per day of operating the car park are Rs. 20, plus 20 cents per car whenever it is parked. Plans are now being made to introduce car park charges for theatre-goers (parkers) who's current average is 200 cars each evening. Market research and experience of other sites suggests that the evening demand for this car park would be  $D = 250 - 1000X$ , where  $D$  denotes the number of cars parked and  $X$  is price. (There are no daytime parkers after 6.00 p.m.)

## NEW STUDIO THEATRE

Sellam has acquired a nearby building and it is planned to turn it into a small studio theatre, with about 60 seats, to encourage experimental plays, young performers, talented amateurs, fringe productions etc. The table below shows a list of the required activities, with their immediate predecessors costs and durations:

| Activity | Predecessor | Duration (weeks) |
|----------|-------------|------------------|
| A        | -           | 4                |
| B        | A           | 2                |
| C        | A           | 3                |
| D        | C           | 2                |
| E        | A           | 5                |
| F        | C           | 1                |
| G        | B, D        | 1                |
| H        | E           | 2                |
| I        | F, G        | 3                |
| J        | H, I        | 1                |

It is planned to open next December, in 30 weeks from now.

## SELLAM'S EXPANSION PLAN

One of Sellam's problems is that, while about 60% of seats are sold during the week, there is frequently excess demand on Fridays, with the result that a lot of potential revenue is lost. Management is considering three options – no change, reorganize the seating, and a major building expansion. The cash flows (Rs '000) for total costs and total revenue, assuming a five-year plan, have been estimated as follows,

|                |         | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  |
|----------------|---------|-------|-------|-------|-------|-------|-------|
| No change      | Cost    | 1,500 | 1,600 | 1,700 | 1,800 | 1,900 | 2,000 |
|                | Revenue | 1,600 | 1,650 | 1,700 | 1,750 | 1,800 | 1,800 |
| Reorganization | Cost    | 2,000 | 1,900 | 2,000 | 2,000 | 2,100 | 2,200 |
|                | Revenue | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 |
| Expansion      | Cost    | 3,000 | 2,000 | 2,000 | 2,500 | 2,500 | 2,500 |
|                | Revenue | zero  | 2,500 | 3,000 | 3,500 | 3,500 | 3,500 |

The cost of shipping (in rupees) each of these items between stores is shown below.

|   | 1   | 2  | 3  | 4  | 5   | 6   | 7  | 8  |
|---|-----|----|----|----|-----|-----|----|----|
| 1 |     | 24 | 32 | 26 | 34  | 48  | 70 | 36 |
| 2 | 54  |    | 68 | 72 | 58  | 104 | 92 | 60 |
| 3 | 94  | 30 |    | 52 | 64  | 134 | 24 | 34 |
| 4 | 52  | 36 | 68 |    | 124 | 34  | 52 | 66 |
| 5 | 144 | 32 | 64 | 28 |     | 52  | 24 | 26 |
| 6 | 36  | 28 | 74 | 52 | 62  |     | 50 | 64 |
| 7 | 82  | 14 | 30 | 28 | 44  | 24  |    | 28 |
| 8 | 44  | 32 | 40 | 28 | 34  | 40  | 62 |    |

All items are shipped directly from one store to another if necessary.

The company's objective is to redistribute its inventory at the lowest total transportation cost.

You are required to,

a) Develop the transportation plan, which will minimize transportation cost for the company and state whether it is unique.

(14 Marks)

b) State the cost of this minimum transportation plan.

(4 Marks)

(Total 18 Marks)

Q3

a) Explain clearly the major approaches for project identification with appropriate examples.

(4 Marks)

b) "when a risk event is identified and assessed, a decision must be made concerning which response is appropriate for the specific event".

Based on this statement explain the risk management response (strategies) available for a project.

(8 Marks)

c) *“Multi project environment is common for most of the organizations”*

Explain, what is likely to happen when a specific resource on a project is concurrently allocated to more and more projects.

(4 Marks)

(Total 16 Marks)

Q4

The External Degree Unit of the Eastern University Sri Lanka has acquired the old administration block and it is planned to turn it into an Information and Printing Unit. The table below shows a list of the required activities, with their immediate predecessors, estimated time and the required human resources.

| Activity | Pre- Activity | Duration | Human resource |
|----------|---------------|----------|----------------|
| A        | -             | 3        | 4              |
| B        | A             | 4        | 2              |
| C        | A             | 8        | 5              |
| D        | A             | 3        | 2              |
| E        | B             | 2        | 6              |
| F        | D             | 3        | 2              |
| G        | C,E,F         | 6        | 3              |
| H        | G             | 2        | 2              |
| I        | G             | 5        | 4              |
| J        | H             | 4        | 7              |
| K        | H             | 2        | 3              |
| L        | K,I           | 3        | 2              |

a). Draw the network diagram and identify the critical path.

(08 Marks)

b). Estimate the human resource required to complete the project.

(04 Marks)

c). If the availability of human resource is 11 (eleven) men per day, how would you reschedule the activities to complete the project within the estimated time?

(08 Marks)

(Total 20 Marks)

Q5

*“Project Evaluation is an important stage in the Project Life-Cycle. There are number of Techniques used to evaluate projects, and each Evaluation techniques are judge by some factors.”*

- a) Based on the above statements identify and briefly explain the techniques, and the factors that are used to evaluate Projects.

(10 Marks)

- b) *“The project evaluation seeks to answer many purposes, but in general it seeks to answer the main purposes.”*

Based on the above statement explain clearly the main purposes of project evaluation with appropriate examples.

(08 Marks)

(Total 18 Marks)