

THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF ENGINEERING TECHNOLOGY
MASTER OF TECHNOLOGY IN INDUSTRIAL ENGINEERING – LEVEL 7
FINAL EXAMINATION – 2010/2011
MEX 7120 – PROJECT MANAGEMENT
DATE : 27 March 2010
TIME : 1400 hrs – 1700 hrs
DURATION: Three (03) hours



Answer any five (05) questions. All questions carry equal marks.

1.
 - a. Why controlling the cost is more difficult than monitoring? Justify the answer with your work experience.
 - b. Use the data given below to calculate the value of Budget Cost Work Schedule (BCWS) at five-weekly intervals throughout the project. Assume that the rate of expenditure on each activity is constant throughout its duration.

| Activity | Description | Budgeted Cost (\$000) | Start time | Duration (weeks) |
|----------|-------------|--------------------------|---------------|---------------------|
| A | work P | 20 | 0 | 20 |
| B | work Q | 40 | 20 | 20 |
| C | work R | 10 | 20 | 10 |
| D | work S | 4 | 40 | 05 |
| E | work T | 30 | 0 | 30 |
| F | work U | 26 | 30 | 05 |
| G | work V | 05 | 30 | 05 |
| H | work W | 15 | 50 | 10 |

- c. Plot the graph of BCWS against time. Why can slope of the BCWS never be negative?
2.
 - a. Two teams are working in parallel to build an automated machine. One team is engaged with building the hardware of the machine whilst other is on the software. The project WBS, estimated staff and time taken are as given below:
 Design hardware (3,32wks), build hardware (4,32wks) Procure hardware test facility (3, 16 wks), Test hardware (3, 8 wks), design software (2, 48 wks), code software (4, 32 wks), design software test (2,8wks). When both the hardware and software tests are completed the automated machine can be tested (3,16wks). If the total staff is limited to seven members, deduce a resource limited schedule for the project.
 - b. Calculate the percentage waste of staff-week.

3. Describe how WBS supports to accomplish a project and the organizations' strategy? Corroborate your answer with your own experience.
4. In many projects even if a problem is found to exist, it may have a pre structured solution and the level of involvement of the project manager is minimal. Critically analyze how matrix organizational structure impact on project team members and the organization.
5. (a) "Identification of stakeholders is critical to a project success". Agree or Disagree? Critically analyze.
- (b) A newsagent's branch is a part of a major national chain. The branch in question sells a wide selection of national and local newspapers, range of magazines ,booklets and books. The executive and regional management of the chain give the store manager some degree of independence. They select items to sell, decide what stocks to hold and how these are displayed. The branch employs a store manager, two full time assistants (one of whom act as an assistant manager), Saturday helpers and delivery boys and girls. Apart from the main public sales and display area there is a separate office and a staff rest room. One of the part time assistant who works mainly in the office acting as a stock clerk and book keeper.

Regional manger decides on a project to install a central computer with terminals in each branch. Apart from keeping a basic staff attendance record for computing wages, the store manager is free to decide what use may be made of the new facility.
 - a. Who might be the major influences on this branch?
 - b. Who are likely to be the stakeholders in existing practices and who will be affected by the project, and how might the project affect them?
 - c. Draw a stakeholder map like that described above. Draw the lines showing the relationship between stakeholders.
6. a. Deduce a model to address the risk involved in your organization.
b. Show how the model is working in case of a risk?
7. "Generally projects are managed by people with a marginal direct authority" Discuss with scenarios how a project manager manages his members to get the work done while keeping them motivated?
8. The basic model of the project life cycle involves the stages classified as 'plan', 'do', 'check' and 'act'. Identify the examples of the criteria that may be assessed at the end of each stage.