**COURSE CODE / NAME:** STID3073! IT PROJECT MANAGEMENT  
**DATE:** 4 JUNE 2012 (MONDAY)  
**TIME:** 2.30 – 5.00 P.M. (2 ½ HOURS)  
**VENUE:** DSB K. T/WD

**INSTRUCTION:**

1. This exam paper contains **EIGHT (8)** questions in **Section A** and **FIVE (5)** questions in **Section B** in **EIGHTEEN (18)** printed pages excluding the cover page.
2. Answer **ALL** questions in the space provided.
3. You are **NOT ALLOWED** to remove the exam paper from the examination hall.

**MATRIC NO:**  
( With word )  
( with number )  
**IDENTIFICATION CARD NO.:**  
**LECTURER:**  
**GROUP :**  
**TABLE NO.:**

**DO NOT OPEN THIS EXAMINATION PAPER UNTIL INSTRUCTED**
SECTION A: STRUCTURED QUESTIONS (30 MARKS)

1. Explain clearly the FIVE (5) project management process groups. (5 marks)

2. Explain clearly the FIVE (5) knowledge areas of project management. (5 marks)
3. Explain briefly with the help of a diagram the concept of triple constraints and its effect on project.  

(3 marks)

4. Describe clearly the FIVE (5) steps for estimating the cost of a particular activity or task that has an estimated duration.  

(5 marks)
5. a) What is the purpose of a project charter?

(2 marks)

b) Why should the project manager and project team identify the cruxes of a project?

(2 marks)
6. Briefly describe the **FOUR (4)** checklists included in the scope verification checklist.  

(2 marks)

7. Trying to decide between three alternatives, a company employed a scoring model. Three criteria were chosen. Criteria A was believed to be the most important and so was given a weight of 50%. The other two were deemed to be equal to each other in importance. A relative scoring range of 0 to 10 was used. The table below shows each alternative and their scores. Based on your calculation, which alternative should the company choose?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>C</td>
<td>8</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

(3 marks)
8. Briefly describe the SIX (6) steps for administrative closure of a project. (3 marks)
SECTION B: (70 MARKS)

PROBLEM 1

You have been selected as a project manager for the development of Meeting Room Scheduling System. A user can use this system simply to request a room for a given size for a given period of time. For example, user can request a room that will hold 30 people from 1 p.m. until 3 p.m. this Friday. In addition, a user can request that an existing meeting (already defined in the system with a set of attendees) be scheduled at with a particular starting time and ending time. For example, a user can ask to have the One-Stop Center Project staff meeting scheduled this Thursday from 2 p.m. until 3 p.m.(That meeting has already been defined in the system and currently includes 11 attendees)

A user can cancel any scheduled meeting or any room assignment up until the point at which the meeting or assignment begins (i.e., up until 1p.m. on Friday and 2 p.m. on Thursday in the above two examples, respectively).

When a meeting is scheduled, an electronic message about that meeting must be sent to each attendee. Likewise, when a meeting is cancelled, each attendee must be informed by electronic mail about the cancellation.

A user must also be able to define or alter a meeting. When defining the meeting, the user provides a list of attendees. The user may alter a meeting definition by adding attendees to or removing attendees from the meeting. A user may also remove an entire meeting definition.

Based on the above case

a) Define the scope of the project using Use Case diagram.

(5 marks)
b) Develop a Work Breakdown Structure (WBS) and identify milestones for the project.

(5 marks)
c) Develop a logical process that your client and team will follow for identifying, cataloging, managing and responding to a scope change request. You are also required to propose templates or examples of any forms or logs that will be used to support the scope change process

(9 marks)
PROBLEM 2

Consider the following table:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
<th>Depend on</th>
<th>Resource type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2 days</td>
<td></td>
<td>System Analyst</td>
</tr>
<tr>
<td>B</td>
<td>10 days</td>
<td>A</td>
<td>Software Engineer</td>
</tr>
<tr>
<td>C</td>
<td>2 days</td>
<td>A</td>
<td>Software Engineer</td>
</tr>
<tr>
<td>D</td>
<td>2 days</td>
<td>C</td>
<td>Programmer</td>
</tr>
<tr>
<td>E</td>
<td>3 days</td>
<td>C</td>
<td>Programmer</td>
</tr>
<tr>
<td>F</td>
<td>2 days</td>
<td>C</td>
<td>Programmer</td>
</tr>
<tr>
<td>G</td>
<td>4 days</td>
<td>B,D,E,F</td>
<td>System Analyst</td>
</tr>
</tbody>
</table>

a) Draw a resource histogram showing the number of each type of resource needed on each day of the project.

(5 marks)
b) Assuming that there is only one software engineer, identify the best way of revising the plan to remove resource clashes

(5 marks)
PROBLEM 3

The requirement study of a Student Registration System is estimated to take four weeks. This is followed by the task of specifying the Student Registration System which is estimated as likely to take three weeks to complete. When this activity has been completed, work can start on four software modules A, B, C and D. Design and coding of the modules will need 6, 12, 12 and 10 weeks respectively. Module A and B can only be unit-tested together as their functionality is closely associated. This joint testing should take three weeks. The unit testing of modules C and D will need 5 and 8 weeks respectively. When all units testing have been completed, integrated system testing will be needed, taking a further six weeks. This testing will be based on the functionality described in the specification and will need twelve days of planning.

a) Draw the activity network for the above scenario.  

(5 marks)
b) For each activity, derive the earliest and latest start dates, and the earliest and latest finish dates.  

(5 marks)

c) What is the duration of the project?  

(1 mark)
d) Calculate the float of each task in the activity network diagram (5 marks)
PROBLEM 4

Suppose that you had a project that was targeted to finish in 12 months at a cost of RM60,000. After 3 months, the EV statistics is as shown below:

<table>
<thead>
<tr>
<th>Month</th>
<th>Planned Value(PV)</th>
<th>Actual Cost(AC)</th>
<th>Earned Value(EV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>RM5,000</td>
<td>RM5,000</td>
<td>RM3,000</td>
</tr>
<tr>
<td>February</td>
<td>RM15,000</td>
<td>RM10,000</td>
<td>RM12,000</td>
</tr>
<tr>
<td>March</td>
<td>RM40,000</td>
<td>RM30,000</td>
<td>RM25,000</td>
</tr>
</tbody>
</table>

a) Compute the Cost Variance (CV).  

b) Compute the Schedule Variance (SV).  

c) Compute the Cost Performance Index (CPI).  

d) Compute Schedule Performance Index (SPI).  

e) Calculate Estimate at Completion (EAC)  

(1 mark)

(1 mark)

(1 mark)

(1 mark)
f) Calculate Estimated Time to Complete. (1 mark)


g) Using cost information from the above questions, draw a graph to represent EV, PV, and AC. Explain what control actions are necessary to manage the project's performance based on your analysis of the data. (5 marks)
PROBLEM 5

Hotel Seri Damai is a 20-year old mid-range hotel chain. The hotels are strategically located in 21 locations throughout Malaysia, with a total number of rooms in excess of 2,000 units. Currently, each of the constituent hotels operated its own paper-based reservation system.

Recently, the management has decided to introduce IT-based “One-Stop” reservation system. The system will be situated centrally at the Hotel Seri Damai head office in Kuala Lumpur. The new system should allow potential customers to enquire and reserve rooms based in any hotel locations through a single contact point. The respective hotel branches should be able to deal with reservations for customers who drop in, by accessing the central reservation system from workstations in the check-in counter. Each hotel branches will also need access to the central reservation details for check-out process and billing. It should be noted that currently the head office has no staff to deal with reservations.

Although, Hotel Seri Damai has some IT staff providing user support for desktop applications, it has no in-house software development team. The intention is to outsource the development of the system to an external software development company.

a) Identify FIVE (5) possible risks for the Hotel Sri Damai Reservation System project.

(5 marks)
b) Construct risk impact table for the project and based on your subjective estimate rank the risks.  

(5 marks)

c) Explain the actions that may be taken to mitigate each risk in the Hotel Seri Damai Reservation System project.  

(5 marks)
END OF QUESTIONS