



# INFORMATICS

*Question Only*

OXFORD BROOKES UNIVERSITY  
BACHELOR OF SCIENCE (HONOURS)

APRIL 2003 EXAMINATION

17<sup>TH</sup> APRIL 2003

M 8034: SOFTWARE PROJECT MANAGEMENT

TIME: 2 HOURS + 10 MINUTES READING

## INSTRUCTIONS:

- All Questions in Section A are Compulsory and choose any 2 questions in Section B.
- Section A carries 40 marks.
- All questions in Section B carry 30 marks each.
- Please start every question on a new page.
- Answers will not be marked if they are illegible.
- Enter the question numbers (in the order you have attempted) in the boxes provided in the answer script.
- Write your INDEX NUMBER and MODULE NUMBER on the cover page of the answer script.

## SECTION A ANSWER ALL QUESTIONS

M 8034 - 17<sup>th</sup> April 2003

### A CASE STUDY

The Garage Follow-up Invoicing and Extension Letters to debtors (GARFIELD) system will keep records of customers and their vehicles. It will send reminders to customers whose vehicles are due for a MOT (compulsory annual test of the road worthiness) in the following week. When a vehicle is booked in for servicing, it will print a job sheet for the mechanic, describing the work to be done. When the job is completed, the time spent and the prices of the spare parts fitted will be added up and an invoice will be sent to the customer. At the end of the month, it will print a list of all unpaid invoices. It will print reminders to be posted to all customers whose invoices have not been paid for some time.

The prices of spare parts will be taken from the garage's existing stock control database, which is not actually part of GARFIELD, though it will need to be updated when spares are taken out of the stores. GARFIELD must run on the garage's existing personal computer, which is on-line to the stock control database, and it must be easy to use.

### QUESTION 1:

- a. What development method is preferred for the project described in the case study. Justify your choice. [10 MARKS]
- b. Show all deliverables of your chosen method and highlight their features. [10 MARKS]
- c. Identify one developmental risk and one operational risk in the case study and explain in detail. How it can be mitigated? [20 MARKS]

[TOTAL: 40 MARKS]

M 8034 - 1<sup>st</sup> April 2003

## SECTION B

### ANSWER ANY 2 QUESTIONS

#### QUESTION 2:

- a. Explain the purpose of Software measurement and state whether it is essential?

[5 MARKS]

- b. State any five most important essential skills that software project manager should possess and how can these skills be acquired.

[10 MARKS]

- c. State and briefly explain the different levels in CMM.

[10 MARKS]

- cis. Justify with relevant reasoning, how CMM is used in support of process improvement.

[5 MARKS]

[TOTAL: 30 MARKS]

#### QUESTION 3:

- a. State any four important indicators of software quality and explain in detail.

[16 MARKS]

- b. What do you mean by testing strategy?

[8 MARKS]

- c. List any six basic principles of Software Project scheduling.

[6 MARKS]

[TOTAL: 30 MARKS]

M 8034 - 1<sup>st</sup> April 2003

#### QUESTION 4:

You are a new quality staff of a software company and you want to use FTR (Formal Technical Review) to increase the software quality. For making the FTR more effective, you are going to give a briefing to all programmers. In the briefing, you will tell them the basics of review summary report. The basics include:

- a. Three basic questions should be answered in the review report.

[12 MARKS]

- b. Two main purpose of the report.

[10 MARKS]

- c. The general guidelines for the conduct of formal technical reviews.

[8 MARKS]

[TOTAL: 30 MARKS]

-- END OF PAPER --



OXFORD BROOKES UNIVERSITY

AUGUST 2003 EXAMINATION

14<sup>th</sup> AUGUST 2003

M8034 Software Project Management

TIME : 2 Hours + 10 Minutes Reading  
 NUMBER OF PAGES : 1 Cover Sheet and 2 pages of questions

**INSTRUCTIONS:**

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OBUM8034QP August 2003

**SECTION A – Answer ALL Questions**

**QUESTION 1: CASE STUDY**

*Project Cost Control System (PCCS)*

The PCCS will need to run on the client's UNIX host machine, which runs a popular RDBMS and its associated 4GL.

The system needs to interface with the existing Financial, Inventory, Purchase Order, Subcontract and Labour Costing systems. The PCCS will provide a central database with all relevant cost information pertaining to projects. These cost data will need to be extracted on a daily basis from the existing systems and updated into the PCCS database.

The PCCS should also provide functions for the project managers to enter the budgets (to the appropriate level of detail). The system should also allow known cost information that is committed to the project (but not yet captured through the existing systems) to be input into the PCCS. In all these cases, proper access controls need to be built to ensure that only authorized persons are able to update such cost sensitive information.

A number of standard reports (and on-line queries) will be required from the PCCS. At the project level, the PCCS should provide variance reports highlighting cost overruns for the different job components within the project. The PCCS should also project the final cost of the project based on the cost gathered to-date and the budgeted costs. All these reports are required to be generated by the PCCS on demand by the project managers. The user interface has to be friendly as the project managers are not considered to be skilled in using the computerised IS.

To allow the General Manager to keep a pulse on the health of the company, a consolidated report for all projects showing cost incurred to-date, budgeted costs, and projected costs to completion should be made available by the PCCS on request.

- (a) Explain the common Process Framework Activities in connection to the case study. [16 marks]
- (b) Identify and briefly explain the 4 P's of the Project management. [8 marks]
- (c) What Development method is preferred for the project described in the case study? Justify your choice. [16 marks]

[Total: 40 Marks]

Please turn over

**SECTION B – Answer Any TWO Questions****QUESTION 2**

- (a) Explain why Project fails? Identify any five reasons to support your identification. [10 marks]
- (b) Identify the three kinds of Metrics and their purpose in software measurement. [10 marks]
- (c) State and briefly explain any five Estimation guidelines. [10 marks]

[Total: 30 Marks]

**QUESTION 3**

- (a) Explain the various activities involved in defining Task Sets and their need in Scheduling. [10 marks]
- (b) State the Quality concepts and how it is implemented in Project management? [10 marks]
- (c) Explain the concept of Debugging in detail. [10 marks]

[Total: 30 Marks]

**QUESTION 4**

- (a) Identify and briefly explain the five stages of Risk management paradigm. [10 marks]
- (b) In building a Risk table, what are all the factors need to be included? Explain those factors identified in detail. [10 marks]
- (c) Explain briefly the RMMM stages in handling the Risk management. [10 marks]

[Total: 30 Marks]

**- END OF PAPER -**



# INFORMATICS

OXFORD BROOKES UNIVERSITY

BACHELOR OF SCIENCE (HONOURS)

DECEMBER 2003 EXAMINATION

11<sup>th</sup> DECEMBER 2003

**M8034 : SOFTWARE PROJECT MANAGEMENT**

**TIME**

: 2 Hours + 10 Minutes Reading

**NUMBER OF PAGES : 1 Cover Sheet and 2 pages of questions**

**INSTRUCTIONS:**

- ALL Questions in SECTION A are **COMPULSORY** and choose any **TWO** questions in SECTION B.
- Section A carries 40 marks.
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OBUM80340P - December 2003

## SECTION A

(Answer ALL questions in this section)

### Question 1

A Case Study:

#### Brewery On-line Sales and Supply (BOSS) System

BOSS will provide Lion Brewery with very detailed reports of the sales of all products in each of its bars on a daily basis. It will consist of the following subsystems:

1. **BARs: 'Bar Audit and Retail System'**. This will be an automated till. Several of these units will be installed behind the bar. (The precise number will depend upon the size of the premises, but it is estimated that one till will be required for every four bar-staff.) Each member of staff will log in on any one of the BARs (the system will be able to use all of the tills. Each till will have a touch screen and a cash drawer. When making a sale, the bartender will identify him/herself to a particular BARs till, and select the type and quantity of each item ordered. The price of each item will be displayed as it is selected, and added to the bill for that order. When the bartender closes the order, the total price will be shown on the screen. The bartender will enter the amount paid, and the screen will display the change due and open the cash drawer. The bartender will deposit the money, give change and close the drawer, and an itemised receipt for the customer will then be printed automatically.
  2. **CELLARS: 'Control Each Local Lease and Report Sales'**. One CELLARS computer will be installed in each public house, and each BARs till will be connected to it. It will have a screen, keyboard and printer of its own, and will be located in the cellar or office. Bar staff will normally have access to CELLARS. During the day, it will receive and record details of every item sold. After the public house closes, the system will 'cash up' and check the stock. CELLARS will provide a statement of the amount of cash that should be in each BARs till. The amount actually present will be counted and checked before the money is locked in the safe. The statement will also include the amount of stock of each product line that should be on the shelves or in the barrels, and this will also be checked. Any discrepancies will be recorded on CELLARS, which will go on-line to the brewery and download a report of the entire day's transactions.
  3. **MASTER: 'Main Audit System for Takings and Expended Relationships'**. The MASTER computer will be located in manager's office at Lion Brewery. It will include a monitor screen, keyboard, printer etc., as well as a modem through which the CELLARS in each of the Lion bars will dial it up at the end of each day. The manager will be able to view or print summary reports of business in any bar over any specified period. Any discrepancies in stock or takings will be announced automatically each morning, together with a report of each product line in each bar for which the level of stock has fallen below the reorder level, so that the manager can arrange a delivery.
- a) What development method is preferred for the project described in the case study? Justify your choice. [10 marks]
- b) Show all deliverables of your chosen method and highlight their features. [10 marks]
- c) Identify one developmental risk and one operational risk in the case study and explain in detail how each can be mitigated. [20 marks]

**TOTAL: 40 MARKS]**

Please turn over

**SECTION B**(Answer any TWO questions in this section)**Question 2**

- a) State the Project management main tasks. [5 marks]
- b) Identify any five important essential skills that software project manager should possess and elaborate on how can these skills be acquired? [10 marks]
- c) Explain in detail the different levels in Capability Maturity Model (CMM) and justify how CMM is used in support of process improvement. [15 marks]

**[TOTAL: 30 MARKS]****Question 3**

- a) Identify and explain briefly any five important indicators of software quality. [15 marks]
- b) Explain the various software testing strategies in detail, along with their purpose and necessity identified. [15 marks]

**[TOTAL: 30 MARKS]****Question 4**

- a) Identify any two basic questions should that should be answered with in the review report. Detail the necessity of those questions importance. [10 marks]
- b) Identify the two main purpose of the report and elaborate your identification. [10 marks]
- c) State the general guidelines for the conduct of formal technical reviews. [10 marks]

**[TOTAL: 30 MARKS]****- END OF PAPER -**



# INFORMATICS

OXFORD BROOKES UNIVERSITY

BACHELOR OF SCIENCE (HONOURS)

APRIL 2004 EXAMINATION

22<sup>nd</sup> APRIL 2004

**M8034: SOFTWARE PROJECT MANAGEMENT**

**TIME : 2 Hours + 10 Minutes Reading**

**NUMBER OF PAGES : 1 Cover Sheet and 3 pages of questions**

**INSTRUCTIONS :**

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OBUM8034QP - APRIL 2004

## SECTION A

(Answer ALL questions in this section)

### QUESTION 1

A Case Study

*Travel Reservations and Automated Inventory Navigator (TRAIN)*

GoFort Ltd wishes to give their customers the facility to book their travel via the World Wide Web (WWW) using an Internet browser (e.g. Microsoft Explorer or Netscape Communicator). GoFort Ltd operates a large fleet of trains with an extensive timetable for many journeys each day. It is important that a customer is notified of seat availability or unavailability on any given scheduled train to their chosen destination on their requested dates and times, while on-line and with an acceptably short response time. To satisfy this requirement, TRAIN requires the integration of two other systems. One is the Train Integrated Engineering System (TIES) database that holds information on the operational status of each physical train (locomotive and carriages). The second is the Seat Enquiries and Assignment of Tickets System (SEATS) that is the database used in ticketing and seat reservations. Both are located centrally at the head office in Manchester, England.

The user should be able, on one page or form, to specify their train travel requirements including date, destination, preferred departure station and preferred seat place (including front/back of train and forward/backward facing). This information is then used to check seat availability on the SEATS database and to verify train data from the TIES database.

Once a user has submitted their travel requirements, TRAIN should respond by presenting information including the availability or unavailability on the date of economy and business class tickets, departure station, and destination station. Payments by credit card for seat bookings, using the Credit Online Invoices with Network Security (COINS) system, are to be incorporated into the design of this internet-based ticketing system. COINS are an existing package that GoFort Ltd commissioned before the start of the TRAIN project.

At intervals TRAIN will provide a detailed report of customer profiles, of how many users have accessed the website, and what travel requirements they have selected (including class of travel and connecting train/travel information).

GoFort Ltd requires that the system must be operational within 12 months and should be revenue-producing within 18 months of the tender to contract.

- 1a) What development method is preferred for the project described in the case study? Justify your choice. [10 Marks]
- 1b) Show all deliverables of your chosen method and highlight their features. [10 Marks]

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- 1c) Identify one developmental risk and one operational risk in the case study and explain in detail, how it can be mitigated?

[20 Marks]

[TOTAL MARKS FOR QUESTION 1: 40 MARKS]

## SECTION B

(Answer any 2 questions)

### QUESTION 2

- 2a) Explain why Project fail? Identify any five reasons, and support your identification with suitable reasoning. [10 Marks]
- 2b) State any five Estimation guidelines. [5 Marks]
- 2c) Explain in detail the different levels in Capability Maturity Model (CMM) and justify how CMM is used in support of process improvement. [15 Marks]

[TOTAL MARKS FOR QUESTION 2: 30 MARKS]

### QUESTION 3

- 3a) Explain briefly the RMM stages in handling the Risk management. [15 Marks]
- 3b) Explain the various software testing strategies in detail, along with their purpose and necessity identified. [15 Marks]

[TOTAL MARKS FOR QUESTION 3: 30 MARKS]

Page 2 of 3

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### QUESTION 4

- 4a) Identify any three basic questions that should be answered in the review report. Detail the importance of those questions. [15 Marks]
- 4b) Explain the various activities involved in defining Task Sets and their need in Scheduling. [15 Marks]

[TOTAL MARKS FOR QUESTION 2: 30 MARKS]

- END OF PAPER -

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# INFORMATICS

OXFORD BROOKES UNIVERSITY

BACHELOR OF SCIENCE (HONOURS)

AUGUST 2004 EXAMINATION

19 AUGUST 2004

**M8034: SOFTWARE PROJECT MANAGEMENT**

**TIME : 2 Hours + 10 Minutes Reading**

**NUMBER OF PAGES : 1 Cover Sheet and 3 pages of questions**

**INSTRUCTIONS :**

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08U/M8034QP – AUGUST 2004

## SECTION A

(Answer ALL questions in this section)

### QUESTION 1

#### A Case Study

The Garage Follow-up Invoicing and Extension Letters to debtors (GARFIELD) system will keep records of customers and their vehicles. It will send reminders to customers whose vehicles are due for a MOT (compulsory annual test of the road worthiness) in the following week. When a vehicle is booked in for servicing, it will print a job sheet for the mechanic, describing the work to be done. When the job is completed, the time spent and the prices of the spare parts fitted will be added up and an invoice will be sent to the customer. At the end of the month, it will print a list of all unpaid invoices. It will print reminders to be posted to all customers whose invoices have not been paid for some time.

The prices of spare parts will be taken from the garage's existing stock control database, which is not actually part of GARFIELD, though it will need to be updated when spares are taken out of the stores. GARFIELD must run on the garage's existing personal computer, which is on-line to the stock control database, and it must be easy to use.

1 a) What development method is preferred for the project described in the case study. Justify your choice.

[10 Marks]

1 b) Show all deliverables of your chosen method and highlight their features.

[10 Marks]

1 c) Identify one developmental risk and one operational risk in the case study and explain in detail. How it would be mitigated?

[20 Marks]

**[TOTAL MARKS FOR QUESTION 1: 40 MARKS]**

## SECTION B

(Answer any TWO questions)

### QUESTION 2

- 2 a) Explain the purpose of Software measurement and state why it is essential? [5 Marks]
- 2 b) State any five most important essential skills that software project manager should possess and how can these skills be acquired on the job. [10 Marks]
- 2 c) i) State and briefly explain the different levels in Capability Maturity Model (CMM). [10 Marks]  
 ii) Justify with relevant reasoning, how CMM is used in support of process improvement. [5 marks]

**[TOTAL MARKS FOR QUESTION 2: 30 MARKS]**

### QUESTION 3

You are a new quality staff of a software company and you want to use FTIR (Formal Technical Review) to increase the software quality. For making the FTIR more effective, you are going to give a briefing to all programmers. In the briefing, you will tell them the basics of review report. The basics include:

- 3 a) Three basic questions should be answered with in the review report. Detail the necessity of those questions importance. [12 Marks]
- 3 b) Two main purpose of the report. Elaborate your identification. [10 Marks]
- 3 c) The general guidelines for the conduct of formal technical reviews. [8 Marks]

**[TOTAL MARKS FOR QUESTION 3: 30 MARKS]**

### QUESTION 4

- 4 a) State any four important indicators of software quality and explain in detail. [16 Marks]
- 4 b) What do you mean by testing strategy? [8 Marks]
- 4 c) List any six basic principles of Software Project scheduling, with a brief description of each principle. [6 Marks]

**[TOTAL MARKS FOR QUESTION 2: 30 MARKS]**

- END OF PAPER -



**OXFORD BROOKES UNIVERSITY**  
**BACHELOR OF SCIENCE (HONS) COMPUTING**  
**AND INFORMATION SYSTEMS**  
**BACHELOR OF SCIENCE (HONS) COMPUTING AND SOFTWARE**  
**ENGINEERING**  
**AUGUST 2005 EXAMINATION**

**18<sup>th</sup> AUGUST 2005**  
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035UM8034QP – AUGUST 2005

**SECTION A**  
 (Answer ALL questions in this section)

**QUESTION 1**  
 A Case Study

Bus Holiday Ltd (BHL) is a travel agent that has become a market leader in short-distance bus travel between China and Hong Kong. Due to her success, BHL is seeking further improvements in the business by means of a web site offering comprehensive time-labelling and ticket information facility for an on-line booking / reservation.

BHL is currently inviting expression of interest prior to inviting tenders. As an independent Software Engineering Consultant in charge of a staff of sixteen, the following systems requirements have been faxed to your office.

**Ticket Reservations System (TRS)**

BHL wishes to give her customers the facility to book their ticket via the World Wide Web (WWW). BHL operates a large fleet of buses with an extensive timetable for many journeys each day. It is important that a customer is notified of seat availability (or unavailability) on any given scheduled bus, to their chosen destination on their requested dates and times while on-line, and within an acceptably short response time.

The customer should be able to specify their bus travel requirements including date, destination, preferred departure location and preferred seat place (front/middle/back and left/right). This information is then used to check seat availability on the database.

Once a user has submitted his ticket requirements, TRS should respond by presenting information including the availability (or unavailability) of the tickets. Payments by credit card for seat bookings are to be incorporated into the design of this internet-based ticketing system.

At intervals TRS will provide a detailed report of customer profiles. This will consist of how many users have accessed the website, and what travel requirements they have selected.

BHL requires that the system must be operational within 9 months of the tender to contract.

**End of Statement of Requirements for TRS**

- a) List and briefly describe the main software modules of TRS and identify the main inputs and outputs of each. Classify each module by its size and complexity. (Note: Ten software modules are expected and only a rough classification is required, e.g. "large, average, small" & "simple, moderate, complex". You may also devise your own classification scheme.) **[20 marks]**
- b) Critically evaluate the application of GAMMA to the development of TRS. Why would you need to continue to make measurements during the "operation and maintenance" phase of TRS? **[20 marks]**

**[TOTAL MARKS FOR QUESTION 1: 40 MARKS]**

## SECTION B

(Answer any TWO questions)

### QUESTION 2

Consider a project with the following information domain characteristics:

	Count	Weighting Factor
Number of user inputs	65	3
Number of user outputs	80	5
Number of user inquiries	38	4
Number of files	20	15
Number of external interfaces	3	10

- (a) Assume that the complexity adjustment value is 50 (summed value of answering the 14 questions, with scale 0 - 5 each). Compute the FP value for this project. [4 marks]
- (b) State two advantages of using FP over KLOC in project size estimation? [4 marks]
- (c) Assuming that your company produces 8 FP per person-month with labour rate of \$8000 per person-month. Estimate the effort and cost required to build the system. [6 marks]
- (d) Other than using method in part (c), by company experience, the LOOFP is 30 if Java is used. Assuming Java will be used for this project. Using the Intermediate COCOMO Model, compute the effort, development time and average number of people required for this project. Use the following parameters for your calculation (a = 3.0, b = 1.12, c = 2.5, d = 0.35 and effort adjustment factor = 1.25) [16 marks]

**TOTAL MARKS FOR QUESTION 2: 30 MARKS!**

### QUESTION 3

- (a) Why a highly complex module difficult to 'Unit Test'? [10 marks]
- (b) Why an Independent Test Group (ITG) is preferred in testing? [5 marks]
- (c) Discuss whether ITG and SQA (Software Quality Assurance) can use the same group of people. [5 marks]
- (d) As a project manager, you find that the project is seriously behind schedule. Some team members ask you to add more people to the team but doing so will certainly increase the project monthly payroll. Will adding people really help the situation? Will total project costs increase by adding people? Other than adding people, give three ways you can think of to improve the situation? [10 marks]

**TOTAL MARKS FOR QUESTION 3: 30 MARKS!**

### QUESTION 4

- (a) State and briefly explain the different levels in Capability Maturity Model (CMM). [10 marks]
- (b) Define and explain in concept of baseline with respect to software development. [5 marks]
- (c) List and briefly explain the items which are included in a software configuration management plan? [15 marks]

**TOTAL MARKS FOR QUESTION 4: 30 MARKS!**

- END OF PAPER -



**OXFORD BROOKES UNIVERSITY**  
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**BACHELOR OF SCIENCE (HONS) COMPUTING AND SOFTWARE**  
**ENGINEERING**  
**DECEMBER 2005 EXAMINATION**

**15<sup>th</sup> DECEMBER 2005**  
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ORU/M8034QP - DECEMBER 2005

## SECTION A

(Answer ALL questions in this section)

### QUESTION 1 A Case Study

Ruffles Restaurant has been serving fine food to the city-state of 1 square for over 150 years. However it has recently been taken over by "Burgers 'R Us" who have decided that a new computerised information system will have TWO main subsystems.

One subsystem will handle reservations and the other subsystem will hold information on food and drinks orders and produce customer bills.

#### Reservation Subsystem

##### General Information

The restaurant has a fixed number of tables, each table can hold up to 4 people. For larger parties, tables are put together, so 2 tables will hold 6 people, 3 tables 8, 4 tables 10 etc. If there are less than 4 people in a group, the group will have a whole table to themselves.

##### Requirements

Advance reservations are made either by telephone or face to face at the restaurant. The person making the reservation will give the date and time preferred and the number of people. The computer system will check availability and confirm the reservation if there is sufficient table(s) available for that date, time, and number of combination. If there are not sufficient tables, the computer system will search forwards at 15 minute intervals up to last order time (10.00 p.m.) to see if there is space later and backwards at 15 minute intervals to opening time (6.00 p.m.) to see if there is space earlier. (To calculate available space the computer system assumes that a person dining will stay in the restaurant for 2 hours). If there is still no space the person making the reservation is invited to try another date. Once a table is booked, it will be booked for a period of 2 hours.

Customers may come to the restaurant without any reservation. If they do so, the reservation subsystem is used to determine if there is room to accommodate them or not. If not, the computer system will search forwards (only) as described above to determine the likely waiting time for the potential customer.

#### Ordering and Billing Subsystem

##### General Information and Requirements

All orders will be taken using wireless keypads linked to the computer, on which the waiter will enter the code of the various items ordered. (Codes are shown on the menu for this purpose). Upon completion of the order, the keypad will display back the items ordered so that the waiter can confirm the order. Food item requests will be sent to the kitchen, where they will be displayed on a large plasma screen.

OBUJMS034QP - DECEMBER 2005

Once an item is ready to be served, the kitchen staff will use the kitchen terminal to indicate its readiness. Waiters will receive notification of the item's readiness on their wireless keypad and can then serve the item to the appropriate table. Drinks orders are relayed to a LCD screen in the bar once again, when the drinks are ready to be served. The bar staff will use the bar terminal to indicate this. Waiters will receive notification of the drinks' readiness on their wireless keypad and can then serve the drinks to the appropriate table.

#### End of Statement of Requirements

- a) Identify the common Process Framework Activities and relate them to the case study elements with reasonable justification. [20 marks]
- b) What Development method is preferred for the project described in the case study? Justify your choice. [20 marks]

[TOTAL MARKS FOR QUESTION 1: 40 MARKS]

OBUJMS034QP - DECEMBER 2005

## SECTION B

(Answer any TWO questions)

### QUESTION 2

- a) Why do some Projects fail? Identify any five reasons to support your identification. [10 marks]
- b) Identify the three kinds of Metrics and their purpose in software measurement. [10 marks]
- c) State and briefly explain any five Estimation guidelines. [10 marks]

[TOTAL MARKS FOR QUESTION 2: 30 MARKS]

### QUESTION 3

- a) Identify and briefly explain the five stages of Risk management paradigm. [10 marks]
- b) In building a Risk table, what are all the factors need to be included? Explain these factors identified in detail. [10 marks]
- c) Explain briefly the RMMM stages in handling the Risk management. [10 marks]

[TOTAL MARKS FOR QUESTION 3: 30 MARKS]

### QUESTION 4

- a) Explain the various activities involved in defining Task Sets and their need in Scheduling. [10 marks]
- b) State the Quality concepts and how it is implemented in Project management? [10 marks]
- c) Explain the concept of Debugging in detail. [10 marks]

[TOTAL MARKS FOR QUESTION 4: 30 MARKS]

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