



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**

**UNIVERSITY EXAMINATION FOR THE MASTERS OF INFORMATION**

**TECHNOLOGY SECURITY AND AUDIT**

**1<sup>ST</sup> YEAR 3<sup>RD</sup> SEMESTER 2016/2017 ACADEMIC YEAR**

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**COURSE CODE: IIT 5213**

**COURSE TITLE: IT SECURITY PLANNING STRATEGIES AND PROJECT  
MANAGEMENT**

**EXAM VENUE: KISUMU LEARNING CENTRE**

**STREAM:**

**DATE:**

**EXAM SESSION:**

**TIME: 2.00 HOURS**

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**INSTRUCTIONS:**

- 1. Answer Question 1 (Compulsory) and ANY other three questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

### **Question One**

An international banking and financial services group intends to develop an internet-based personal finance management system (“IPFMS”), to allow high-worth individuals to better manage their affairs, by integrating their current account, savings, credit card, mortgage and personal loans to reduce interest payable by automatically moving cash between accounts.

This will involve three divisions of the company (banking, mortgage and credit card), each of which operates autonomously, and is responsible for meeting its own performance targets, and are based in Leeds, Chester, and London. The banking and mortgage divisions run their own IT applications in Oracle and C++ respectively, while the credit card division outsources its operations to a third party, Hyperion, specialising in financial applications, using DB2 on IBM mainframes.

IPFMS should allow individuals to access all their accounts under one umbrella over the internet, so that a full range of functions are supported, including viewing of balances, recent transactions, direct debits and standing orders, interest, etc., as well as inter-account transfers.

The new application will integrate the existing systems with a new front-end (which will involve technologies new to the group, including XML, ASP, Java,) and must address security issues as a top priority, to gain and retain customer confidence.

The product will go live on 1<sup>st</sup> May 2017, in 6 months’ time, and has already been announced to the financial press; an extensive advertising campaign is due to begin in mid-September. It is intended that distribution of software to customers by direct download will start on 1<sup>st</sup> April 2017. The main board of the group sees this as a means to catch up on rivals who have already gone down this route, and hope that IPFMS will be a strategic mainstay of the group for years to come. The group Finance Director has overall responsibility for the success of the project, and has appointed one of his senior executives to liaise with the project leader, to monitor progress, and set priorities for the development team. At present, the management structures for the new system still has to be finalised.

The team will be composed of 12 staff from the banking and mortgage divisions (database specialists, programmers and analysts), 15 new staff to develop the front end using the new technologies, 4 DB2 contractors to work closely with Hyperion on the credit card application, 2 staff seconded full-time from Hyperion, a communications expert, a security specialist, and 4 business analysts. Existing staff will continue to work at their current locations, while new staff and contractors will work in the London offices. Recruitment of the new staff and contractors is already in progress. Financial and marketing executives from both group headquarters and the divisions will be involved on short-term secondments. The project leader is an experienced IT manager from the banking division.

Required:

a) Identify the main risks facing this project. (10 marks)

b) Suggest how these could be managed. (10 marks)

### Question Two

a. Discuss how the financial costs and benefits of a proposed information system can be rigorously evaluated, noting any potential problems with your chosen approach. (12 marks)

b. The project board has an important place in managing a project using PRINCE2. Describe the role of the board, supporting your answer with reference to 3 processes in PRINCE2. (8 marks)

### Question Three

Discuss the issues you face in managing the human resources to staff the team, bearing in mind the following:

- ✓ morale and motivation of all staff
- ✓ retaining existing staff
- ✓ recruiting appropriate people
- ✓ team-building

(20 marks)

### Question Four

Activity	Duration	Depends on
A	7	-
B	6	-
C	9	-
D	4	A,B
E	7	B,C

F	4	C
G	7	D,E,F
H	8	E
I	8	F
J	4	H,I
K	3	I

a) Using an appropriate model, calculate the total duration of the project, and identify the critical activities.

(10 marks)

b) Discuss why the total float for activities which you have calculated is potentially misleading, and how you might improve on this.

(10 marks)

### Question Five

a) Using a practical example, provide a traditional approach to software quality, and discuss the limitations of this approach?

(10 marks)

b) Many metrics in use today would be eliminated by Watts' criteria – should we reject Watts' ideas as unworkable?

(10 marks)