



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BSC INFORMATION SYSTEMS
4TH YEAR 1ST SEMESTER 2018/ 2019 ACADEMIC YEAR
MAIN CAMPUS

COURSE CODE: IIS 3415

COURSE TITLE: SOFTWARE PROJECT MANAGEMENT

EXAM VENUE:

DATE: SEP-DEC 2018

STREAM: BIS

TIME: 2 HOURS

EXAM SESSION:

INSTRUCTIONS:

- 1. Answer question 1 (Compulsory) and any other two 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 (30 Marks)

Case Study on the New Passport Project:

The following is an extract of new passport systems roll- out with exact clear deliverable. The project indicates different phases with certain problem being realized in the development proceed which leads to the actual delay of rolling out the new systems.

Key dates and events in the project

July 1996 Passport Agency decides to introduce the digital passport to minimize the risk of the existence of fraudulent passports, replace its existing computer system and improve its efficiency and effectiveness.

This would be done through a private finance or outsourcing contract that should bring efficiency and savings for the government.

April 1997 Contractors' bids received.

June 1997 Passport Agency awards 10-year PFI contract, valued at £120 million, for printing and dispatching digital passports to The Stationery Office (now Security Printing & Systems Limited).

3 July 1997 Passport Agency awards 10-year PFI contract, valued at £120 million, to Siemens Business Services for the collection, storage and transmission of passport application data.

April 1998 Announcement made that from October 1998 children not already on a passport would require their own passports to travel abroad. Details of requirement included on new application forms distributed from this time.

5 October 1998 New IT system and outsourced procedures introduced to the Passport Agency's Liverpool Office. One hundred staff transferred to Siemens.

Introduction of requirement for children to hold a separate passport if not already included on a passport.

9 November 1998 Passport Agency Management Board decides to roll-out new system and procedures to the Newport Office.

16 November 1998 New system and procedures Introduced to Newport Office. 96 staff transferred to Siemens.

18 November 1998 Passport Agency Management Board decides to postpone introduction of new system to remaining four offices.

22/23 February 1999 Passport Agency Management Board decides to concentrate on prioritizing applications by travel dates. Other measures agreed to boost output including additional payment to staff to increase overtime working (subsequently extended and increased).

Mid-March 1999 Home Office expresses serious concern at developing situation. Business recovery plan agreed.

May 1999 Free two-year extensions to recently expired passports offered to public queuing at Passport Offices. Virtual shutdown of telephone enquiry service at Liverpool. Transfer of work from Liverpool and Newport to other offices ceases.

Late June/early July 1999 Range of emergency measures introduced, including additional 100 staff, free passport extensions at Post Offices, special telephone helpline established.

a) Using the case study above answer the following questions

i) Draw a detailed Gantt chart for the project showing all the main activities and milestones referred to in the report extract and the list of key events.

(5 marks)

ii) Identify the different phases of the above passport project

(5 marks)

- iii) Discuss the project management actions that could have been taken which may have avoided the problems experienced on the project. You should make recommendations for each stage of the systems development lifecycle and the overall project management approach. (10 marks)
- b) Define the following key concepts in relation to Project Management:
- i. Project Management (1 mark)
 - ii. Project Scoping (2 marks)
 - iii. Project Planning (1 mark)
- c) Explain project selection and the process involved in selection of projects (2 marks)
- d) Define a project. What are the five characteristics that help differentiate projects from other functions carried in the daily operations of the organization? (5 marks)

QUESTION TWO (20 Marks)

Steve Olive is the managing director of CIO group of Companies for software project. He realizes that they are half way through with the project. One of the team members has just delivered a preliminary version of the software. Despite this, in one of their weekly status meeting, one of the team member's points out that an important stakeholder is running into problems with one of the features of the current software. The member cites the problem is critical as it might jeopardize the outcome of the entire project. Three quarters of team member feels that there is a risk that the stakeholder will ask for changes in features of the software even though the change would be out of scope of the current release. The team members feel the stakeholder requests for change, is of a high probability with the change control board as they will approve.

Required (a)

- i. Identify the key stakeholders of this software projects (4 marks)
 - ii. Explain the reasons which might have led to the failure and omission on the software developmental (4 marks)
 - iii. As a Project Manager of the company explain the best approaches to solve this problem and why (4 marks)
- b) Discuss the software cost and estimation process? (8 Marks)

QUESTION THREE (20 MARKS)

- a) Discuss the risk management process in software engineering. **(6 Marks)**
- b) A project consists of seven activities and the time estimates of the activities are furnished as under:

Activity	Optimistic Days	Most likely Days	Pessimistic Days
1-2	4	10	16
1-3	3	6	9
1-4	4	7	16
2-5	5	5	5
3-5	8	11	32
4-6	4	10	16
5-6	2	5	8

Required

- Draw the network diagram. **(4 marks)**
 - Identify the critical path and its duration. **(2 marks)**
 - What is the probability that project will be completed in 5 days earlier than the critical path duration? **(2 marks)**
- c) What do you believe is more important for successful completion of a project-the formal project management structure or the culture of the parent Organisation? **(6 Marks)**

QUESTION FOUR (20 MARKS)

- a) As an IT Project Manager and a team leader in an upcoming project at IATech Consult Limited, you have had your initial meeting with the Sponsor of your project where you were given the Terms of Reference (TOR) and asked to produce your estimates of time and cost for the project. Describe in detail (analyzing their differences) four evaluating methods that could be used. **(8 marks)**
- b) Identify any FOUR feasibility analysis approaches for project management **(4 marks)**
- c) John a project manager for a software development firm in Kenya requires staff from the manager of the Quality Assurance department, he suggests a few test engineers with performance problems for your team. State the best the approach he should use in this situation? Why? **(4 Marks)**
- d) Performance driven management in Information Technology Team is one of the current trends adopted by the IT managers discuss any THREE characteristics of the same **(4 marks)**

QUESTION FIVE (20 MARKS)

a) **Balanced resourcing for Information System projects**

IT Week (2003b) reported on a survey of IT directors by London's Brunel University Fluid Business Team which found that only one in five project teams was assembled with staff who had the most relevant skills. Instead, the research suggested, firms were resourcing projects with staff who simply happened to be available or those who were cheapest to employ.

But failure to ensure staff have the right skills increases the risk that projects will be unsuccessful, said Professor Rob Macredie, head of Brunel University's Department of Information Systems and Computing, who gave this example: A firm might be looking for someone with Java skills for a software development project for example, but not everyone with Java skills would work well on that team.

Finding the right mix of people has its cost, but it's worthwhile.

He suggests that as part of the project closedown reviews (see later in this chapter), the question of whether the skills mix for the project was right should be assessed. He also pointed out that simply hiring contractors for a project for short-term cost or resource gains does not help develop in-company skills. He suggests that someone from the company must be on the team and that skills transfer should be one of the project objectives.

- i. Discuss how Software project manager should ensure that the right skills mix is attained. (4 marks)
- ii. Explain motivational factors that must be adopted to ensure success in the software project delivery (6 marks)

b) The diagrams show project networks

ID	Description	Predecessor
B	Identify topic	None
C	Research topic	A
D	Draft Paper	B
E	Edit paper	C
F	Create graphics	C
G	References	C
	Final draft	D,E,F

Draw a project network from the following information. What activity (s) is a burst activity? What activity(s) is a merge activity? **(6 Marks)**

- c) As an IT Manager and a team leader in an upcoming project at SmartSoft Consult Limited, you have had your initial meeting with the Sponsor of your project where you were given the Terms of Reference (Project Brief) and asked to produce your estimates of time and cost for the project. Describe in detail (analyzing their differences) Four evaluating methods that could be used.

(4 marks)

- a) Explain project attributes which are associated with any software project (5 marks)
- b) How does a communication plan benefit management of projects? (3 Marks)
- c) Discuss the Pros and Cons of the checklist versus the weighted factor method of selecting projects. (2 Marks)