

UNIVERSITY COLLEGE LONDON

EXAMINATION FOR INTERNAL STUDENTS

MODULE CODE : MSING001

ASSESSMENT : MSING001C
PATTERN

MODULE NAME : Project Management

DATE : Thursday 3 May 2018

TIME : 10:00

TIME ALLOWED 2 hrs

This paper is suitable for candidates who attended classes for this module in the following academic year(s):

Year

Suitable for all candidates

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**MSING001: PROJECT MANAGEMENT
EXAMINATION PAPER
APRIL/MAY 2018**

The examination will last **TWO (2)** hours.

There are **THREE (3)** sections: you are required to answer ALL THREE (3) sections.

Section A: Consists of **FIVE (5)** questions from which you must answer **THREE (3)**.

If you answer more than **THREE (3)** questions, only the first **THREE (3)** answers will be marked.

Total value of Section A: THIRTY (30) Marks

Section B: Consists of **ONE (1)** compulsory question. Candidates should attempt **ALL** parts of this question.

Total value of Section B: TWENTY (20) Marks

Section C: Is based on the *Novo Nordisk Engineering: Running for Fast-Track Project Execution Study* which was issued to you prior to the examination. If you have not been issued with a fresh copy of the Case Study at the start of the examination, please request a copy from the invigilators. The section consists of **FOUR (4)** questions C1, C2, C3 and C4. Answer **ALL FOUR (4)** questions.

Total value of Section C: FIFTY (50) marks

You are advised to allocate your time as follows:

Section A	- answer THREE (3) out of FIVE (5) questions	40 minutes
Section B	- answer ONE (1) compulsory question	20 minutes
Section C	- case study: answer ALL FOUR (4) questions	60 minutes

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Section A

Answer any **THREE (3)** out of **FIVE (5)** questions. Each question is worth **TEN (10)** marks. If you answer more than **THREE (3)** questions, only the first **THREE (3)** answers will be marked.

A1

Briefly describe the following components of a project which would be included in a project plan. Give examples to illustrate your points.

- a) Project objectives (2 marks)
- b) Deliverables (3 marks)
- c) Scope (3 marks)
- d) Success criteria (2 marks)

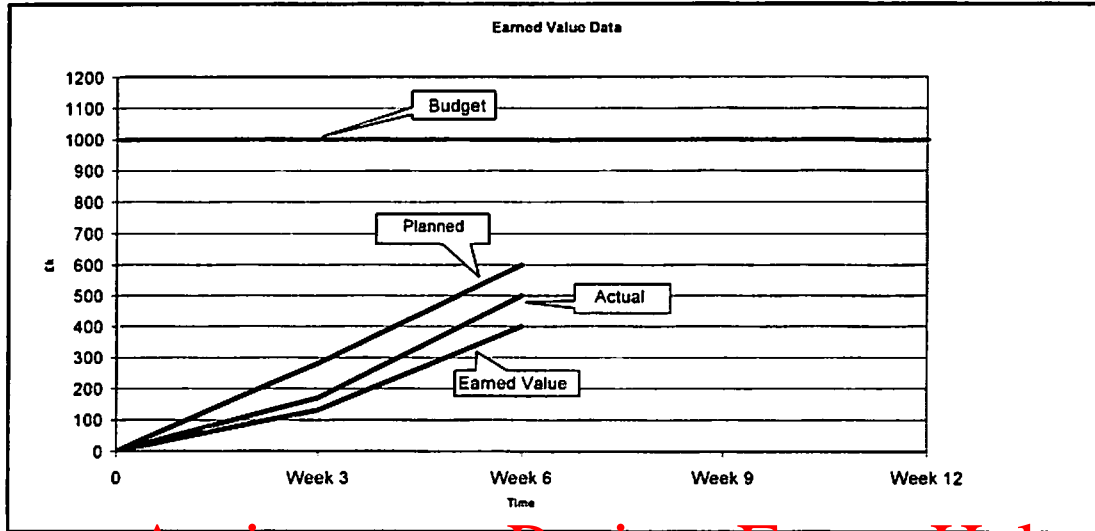
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A2

A project has a total budget of £1000k and is planned to be completed in 12 weeks. The earned value analysis at the end of week 6 shows the following:



Assignment Project Exam Help

- a) Calculate the cost performance index (CPI) and schedule performance index (SPI) for the project.

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(2 marks)

- b) What do these indices tell you about the project's progress to date?

(3 marks)

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- c) What percentage of the project has been completed so far? How does this compare to what was planned?

(3 marks)

- d) If the current cost trend continues, what is the estimated cost at completion?

(2 marks)

A3

Briefly describe **FOUR (4)** stages in the negotiation process. Your stages should be presented in sequence.

(10 marks)

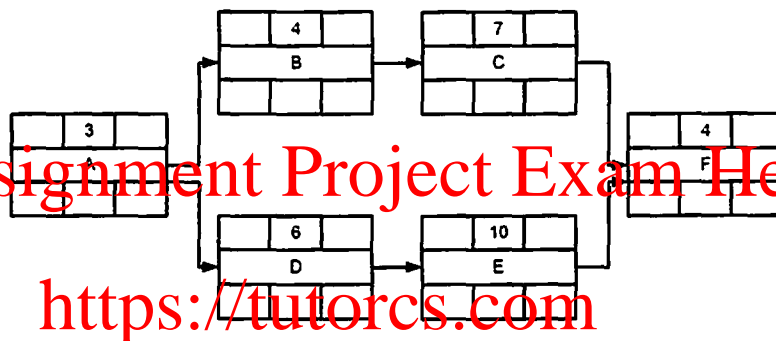
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A4

- a) Briefly explain why it is important to manage the stakeholders on a project.
(2 marks)
- b) Explain the role of the Power / Interest matrix in the stakeholder management process. Include a labelled diagram to illustrate your answer.
(8 marks)

A5

The following is the network for a small project (in days). You have just been advised that you have to include a waiting period of 3 days between tasks B and C.



Using the graph paper provided:

- a) What, if any, is the impact on the critical path and the duration of the project?
(1 mark)
- b) Redraw the network to include the waiting time.
(4 marks)
- c) Perform the forward and backward pass.
(4 marks)
- d) Highlight the critical path.
(1 mark)

CONTINUED

SECTION B

This section is worth TWENTY (20) marks. This section consists of ONE (1) question. Candidates should attempt all parts of the question. Answer question B.1 below.

B1

An organisation is evaluating two projects (A and B below) to decide which one to fund. Financial appraisal data is given:

	<i>Project A</i>		<i>Project B</i>
<i>Year</i>	<i>Net cash £k</i>		<i>Net cash £k</i>
0	(400)		(280)
1	150		130
2	250		110
3	180		120
4	140		100
NPV	173.83		180
IRR	29%		24%

Note: The company's cost of capital (interest rate) is 10%

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- a) Calculate the payback period for each project based on the simple (non-discounted) cash flows above. Which project is better on this basis? (6 marks)
- b) State ONE (1) principal benefit and ONE (1) principal disadvantage of evaluating the viability of potential project(s) on the basis of payback. (2 marks)
- c) Briefly explain why the time value of money concept is an important factor in the financial appraisal of projects. (4 marks)
- d) Which of the above projects is the most viable on the basis of:
- I. Net Present Value (1 mark)
 - II. Internal Rate of Return (1 mark)

In each case, briefly explain the reasoning for your answer.

- e) Overall, what would you advise the organisation regarding which project to fund? Briefly explain the reason(s) for your suggestions. (6 marks)

TURN OVER

SECTION C

This section is worth FIFTY (50) marks.

All the questions are based on *Novo Nordisk Engineering: Running for Fast-Track Project Execution* case study which was issued to you prior to the examination. If you have not been issued with a fresh copy of the Case Study at the start of the examination, please request a copy from the invigilators.

Answer all parts of all questions.

C1

- a) Briefly state what is meant by configuration management.

(2 marks)

- b) Page 3 notes the plant construction approach for the first NNE project:
"...breaking a plant down into modules constructed in parallel and tested at the supplier's premises..."

Explain **THREE (3)** reasons why strong configuration management would be critical to success with this construction approach.

(9 marks)

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C2

Expanding the number of fast track projects led to resource conflicts, as noted by Voigt [page4]: *"Managing resource conflicts is the most difficult part of running an engineering company."*

- a) Briefly explain **FOUR (4) distinct** ways in which a project manager might overcome resource constraints on a project.

(4 marks)

- b) For each identify **ONE (1)** benefit and **ONE (1)** disadvantage to a fast-track project such as those being undertaken by Novo Nordisk.

You should provide **different** arguments for / against each option you suggest.

(8 marks)

CONTINUED

C3

- a) What type of project team structure was employed by NNE on its fast-track projects? Briefly state the reason for your choice.
(3 marks)
- b) Explain how the team structure and the ways in which the team worked contributed to the success of the projects. You should identify and briefly explain **SIX (6)** attributes.
(12 marks)
- c) When NNE won the Bavarian Nordic contract it organized a one-week team-building exercise for the project management team, in the north of Sweden in winter [page 7]. Do you think this was a good exercise to undertake? State the reasons for your views.
(5 marks)

C4**Assignment Project Exam Help**

Figure 2 [Page 6] illustrates the difference between a specification-driven and a time-driven project.

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Explain:

- a) What each diagram is showing.
(3 marks)
- b) How they relate to the project management 'iron triangle'.
(4 marks)

END OF PAPER