



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF APPLIED CHEMISTRY
BACHELOR OF SCIENCE HONOURS DEGREE
END OF FIRST SEMESTER EXAMINATIONS – APRIL 2009
PROJECT DEVELOPMENT AND MANAGEMENT – SCH 4210
TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATES

Answer **ANY FIVE (5)** questions from the six (6) provided.
Each question carries 20 marks.
Start each question on a new page.

1. (a) Discuss the following project management terms:
- (a) Market Niche (5 marks)
 - (b) Strategic fit (5 marks)
 - (c) Market/Demand Curve (5 marks)
 - (d) Learning Curve (5 marks)
2. Study the following project cash flows (\$m) and answer the following questions.

Year	A	B	C	D	E
0	(10)	(15)	(10)	(12)	(8)
1	3	4	2	3	1
2	5	5	4	4	3
3	5	8	4	6	3
4	2	5	5	2	4
5	2	3	3	3	4

Interest rate is at 8%.

- (a) Draw the present value (PV) curves for each project. (10 marks)
 - (b) Identify with justification the best possible selection criteria for these projects. (2 marks)
 - (c) Use the criteria you have chosen in (b) to rank them. (8 marks)
3. Consider the following project network:

<u>Activity</u>	<u>Duration</u>
(1,2)	3
(1,3)	4
(1,4)	14
(2,6)	5
(3,4)	3
(3,5)	4

- (3,6) 6
- (4,5) 1
- (5,6) 1

- (a) Draw the A-O-A network and identify the critical path. (5 marks)
- (b) Calculate:
 - (i) Total Floats (4,5 marks)
 - (ii) Free Floats (4,5 marks)
- (c) If event 5 is delayed by 3 days, what effect will this have on:
 - (i) the overall duration of the project? (3 marks)
 - (ii) the critical path. (3 marks)

4. You have been contracted by T & S Plastics (PVT) Ltd to develop a manufacturing process for PVC tanks.

- (a) What type of contract will you enter into and why? (4 marks)
- (b) Develop a planning and control system for this project. (10 marks)
- (c) Describe three conditions that may result in the termination of this contract. (6 marks)

5. “Strategic positioning” is all that is required to operate a successful business enterprise.

- (a) Discuss the merits and demerits of this statement. (12 marks)
- (b) What do you understand by “employment of capital” in a balance sheet? (2 marks)
- (c) Name three (3) drivers of sales in a market? (6 marks)

6. Consider the following project:

<u>ACTIVITY</u>	<u>DURATION (days)</u>	<u>RESOURCE</u>
1,2	2	3
1,3	2	2
2,3	3	2
2,4	4	1
3,4	3	3

- (a) Draw the network and identify the critical path. (5 marks)
- (b) Allocate resources by the series method. (10 marks)
- (c) Sketch the resource allocation profile. (5 marks)

End of question Paper!!!