

American University of Beirut
Department of Geology
Introduction to Marine Geology
Geology 103
Final Exam

Jan. 24th, 2006

Read the Notes on the Bottom Carefully **Before** You Start

Part I

Answer **very briefly** (in one sentence only) the following short questions **next to them** (3 pts each, total 24 pts):

- a. Diurnal tides (3 pts):

- b. Tidal range (3 pts):

- c. Semidiurnal tides (3 pts):

- d. Mixed tides (3 pts):

- e. Amphidromic point (3 pts):

- f. life (3 pts):

- g. spring tides (3 pts):

- h. neap tides (3 pts):

Part II.

Answer **only** 4 of the following 5 questions (19 pts each, total 76 pts):

1. Explain in detail the classification of marine sediments by source.
2. Draw and label a figure showing the orbital motion of water particles in a wave.
Draw and label a figure showing the anatomy of a progressive wave.
3. Draw and label a table showing the different particle sizes and their settling rates in sediment (type of particle, diameter, settling velocity, and time to settle 4 km).
4. Draw and label a detailed figure showing the actions of gravity and inertia at five different points on Earth
5. Draw and label a detailed figure showing the carbon cycle.

Notes:

- Time available: 2 hours.
- Put please your mobile off and away from you.
- Any attempt of cheating will be severely penalized.
- Read please very carefully each question before you answer it.
- A penalty exists if you answer more than 4 questions in Part II.
- Write please your name on both the questionnaire sheet and the examination book.
- Answer please Part I on the questionnaire sheets and Part II on the examination book.
- Start please the answer of every new question on a new page of the examination book.
- Use please the last page of the examination book as a scratch. Cross out this page when you finish.
- Do not tear please any sheet of paper out of the examination book, with the risk of canceling the whole exam.