

EPSC 201 Understanding Planet Earth

STUDENT NAME: \_\_\_\_\_ STUDENT NUMBER: \_\_\_\_\_

FACULTY OF SCIENCE

FINAL EXAMINATION

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

EPSC 201: UNDERSTANDING PLANET EARTH

Examiner: Prof. A.E. Williams-Jones  
Associate Examiner: Prof. J. Stix

Thursday, December 7, 2006  
9:00 A.M. – 12:00 P.M.

Instructions:

Answer **thirty** (30) questions in the spaces provided on the exam paper.

All questions are weighted equally.

Make sketches wherever appropriate.

This is a closed book exam. No notes or texts including dictionaries are allowed.

**TRANSLATION DICTIONARIES ARE NOT ALLOWED**  
Calculators are allowed.

Return the exam paper.

This exam comprises nine (9) pages, including the cover page.











- 26) Explain the idea of paired metamorphic belts. Where do you find them and why?
- 27) Explain what determines whether folding or faulting occurs.
- 28) Sketch two types of dip-slip fault and explain why they form.
- 29) Draw a geological map with three sedimentary units (labelled A, B, C; youngest to oldest) showing an east-plunging anticline and syncline.
- 30) Draw a map with a right-lateral strike slip fault normal to two sedimentary units.



36) Discuss the possible relationship of Black Smokers to the origin of life on Earth.

37) Why do banded iron formations provide evidence for the oxygenation of the atmosphere?

38) Provide a theory and the evidence to support it for the extinction of the dinosaurs.

39) Explain how oil and natural gas form.

40) Explain the formation of massive sulphide deposits of Cu and Zn.