

FEDERAL UNIVERSITY OF TECHNOLOGY MINNA
SCHOOL OF PHYSICAL SCIENCES
DEPARTMENT OF GEOLOGY

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BTech GEOLOGY, 2015/2016
SESSION

COURSE: GEL 215 (INTRODUCTION TO METAMORPHIC PETROLOGY) UNIT: 2

DATE: 7th April, 2016.

TIME ALLOWED: 2hours

INSTRUCTIONS: ANSWER QUESTIONS ONE AND ANY OTHER TWO QUESTIONS OF YOUR CHOICE

- 1a. Explain in detail the classification of metamorphic rocks and give four example in each class
- 1b. In what types of rock is metasomatism common?
- 2a. Discuss the sources, role, and impact of hydrothermal fluid in metamorphism.
- 2b. Explain the evidences that indicate the metamorphism of carbonate rock.
- 3a. List and explain the processes involved in metasomatism.
- 3b. State conditions necessary for the formation of new minerals in contact metamorphism.
- 4a. Briefly enumerate the differences between load and dynamic pressure and highlight their effect on crustal rocks.
- 4b. Explain the characteristics of rocks by produced contact metamorphism.
- 5a. What are the factors responsible for a particular parent rock to be metamorphosed into several rocks.
- 5b. How will you distinguish the following rocks in hand specimen: (i) schist and gneiss (ii) quartzite and marble
(iii) granite and slate