

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC2213

FACULTY OF APPLIED

SCIENCES BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

CONVENTIONAL PROGRAMME

THEORY: SSC2213: SPORTS SPECIALITY MODULE (SWIMMING)

APRIL 2014

3 HOURS (100 MARKS)

INSTRUCTIONS

Answer 4 questions only. Each question carries 25 marks. Where a question contains subdivisions, the mark value for each subdivision is given in brackets. Illustrate your answer where appropriate with large clearly labeled diagrams.

1. a) The abdominal wall is composed of four paired muscles that extend from the rib cage to the pelvis. The muscles can be divided into two groups—a single anterior group and two lateral groups that mirror each other. Identify these abdominal muscle names, analyzing what these muscles do during the butterfly stroke. (15marks)
- b) Write on why these muscles are called core muscles? (10marks)
2. Compare a swimmer who swims with forked hands to that swimming in tightly clasped hands. Who among the two has the advantage of swimming faster and why? (25marks)
3. Some swimmers float more easily than others. Using the principles of gravity and buoyancy, how would you explain this to young coaches at a swimming coaching clinic in Bulawayo. (25marks)
4. Outline the health benefits of swimming and how it is an injury free sport. (25marks)
5. Discuss the role of timing in the execution of the butterfly stroke. (25marks)
6. Write short notes on the following:
 - a) Hydrodynamic forces. (5marks)
 - b) Undulating movements. (7marks)
 - c) Streamlining technique. (8 marks)
 - d. Stroke cycle. (5marks)

END OF EXAMINATION

