



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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Examination for the Subspecialty Certificate in Endocrinology
and Metabolism of the College of Paediatricians of South Africa

2 September 2011

1 Paper only

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 a) You have a 13-year-old boy in your practice with Type 1 Diabetes (diagnosed when he was 9-years-old). He is currently on insulin aspart and insulin detemir and well controlled with an HbA1c of 7.1%. He has been selected to play rugby for his school and needs advice on how to manage his diabetes on the afternoons that he trains and on Saturday mornings when he plays matches
- i) In broad principles, provide a management plan that accommodates the increased activity while playing rugby. (20)
 - ii) Discuss the risks associated with intensive exercise. (20)
 - iii) Under which circumstances should exercise be avoided? (10)
 - iv) How does exercise increase insulin sensitivity? (10)
- b) A 3-year-old boy with Type 1 Diabetes has been booked for an elective orchidopexy. Provide a management plan for the urologist and anaesthetist which should be used on the day of his surgery. (40)
- [100]
- 2 Discuss the following endocrine tests with respect to the indications, protocol to be followed and possible outcomes
- a) Water deprivation test. (25)
 - b) Growth hormone stimulation test. (25)
 - c) GnRH Stimulation test. (25)
 - d) Oral glucose tolerance testing in teenagers. (25)
- [100]
- 3 Disorders of sex development
- a) A neonate is referred with labio-scrotal fusion, a single opening at the base of a 1.5cm clitorophallus and no palpable gonads
 - i) Discuss the approach to this baby and the investigations required. (60)
 - ii) Discuss the advice you would give the parents of this baby at your first consultation. (20)
 - b) Discuss the known genes involved in the development of the testes and the effects of mutations in humans. (20)
- [100]
- 4 Write short notes on
- a) The causes and management of neonatal hypercalcaemia. (40)
 - b) The genetics of hypophosphataemic rickets. (30)
 - c) The management of congenital hyperinsulinism. (30)
- [100]