

**UNIVERSITY OF ESWATINI  
FACULTY OF HEALTH SCIENCES  
AUGUST 2020 FINAL EXAMINATION**

**TITLE OF COURSE: KIDNEY TRANSPLANT  
COURSE CODE: GNS 472**

**TIME ALLOWED: 2 HOURS**

**PAGES: 3**

**MARKS: 75**

**INSTRUCTIONS:**

1. ASSURE THAT YOU ARE WRITING THE EXAM FOR THE  
COURSE IN WHICH YOU ARE REGISTERED.
2. ANSWER ALLTHREE (3) QUESTIONS
3. EACH QUESTION CARRIES 25 MARKS
4. START EACH QUESTION ON A NEW PAGE.
5. WRITE LEGIBLY.

**THIS PAPER IS NOT TO BE OPENED UNTIL THE INVIGILATOR  
HAS GRANTED PERMISSION**

## QUESTION 1

Mrs. Mokena has been on haemodialysis for the past 10 years at the Charlotte Maxeke Hospital in Johannesburg, South Africa. Her original cause of kidney failure is not known because she presented late to the renal unit. She is a married mother of 3. Her medical history includes an emergency hysterectomy for severe post-partum haemorrhage after the birth of her last child. She received a call from the Transplant Co-ordinator that a potential donor kidney has been identified from a 23-year-old young man who has been declared brain dead in ICU after a motor vehicle accident 2 weeks ago.

1. The Transplant Co-ordinator is very anxious to ensure that all the tissue typing has been performed well for Mrs.Mokoena.

1.1 Explain what is meant by tissue typing and list 3 types of test that can be used to detect donor specific antibodies. (10)

1.2 Discuss the key aspects in confirming brain death in Mrs.Mokoena's potential donor.(10)

1.3 What conditions from Mrs.Mokoena's medical history could increase the risks of allograft rejection? (5)

**TOTAL = 25 MARKS**

## QUESTION 2

Mrs.Mokoena's is brought to the Transplant Unit 2 hours after successful surgery and her family is very relieved. She tolerates all her transplant medication well until Day 3 when she develops severe vomiting and is unable to eat or drink. Day 4 blood tests reveal that her serum creatinine has shot up from  $70\mu\text{mol/l}$  to  $130\mu\text{mol/l}$ . Acute rejection is investigated and confirmed and appropriate treatment is commenced.

2.1 Discuss the types of acute rejection that need to be excluded in Mrs.Mokoena. (5)

2.2 Discuss the investigations that need to be done to confirm the type of reactions.(10)

2.3 Discuss the treatment of each type of acute rejection. (10)

**TOTAL = 25 MARKS**

### **QUESTION 3**

Mrs. Mokeona is finally able to be discharged home. As her Transplant Nurse it is your duty to ensure her chances for a successful outcome are as good as possible. Her immunosuppressive treatment includes Tacrolimus, Mycophenolate Mofetil and Prednisone, and she is also given prophylactic medication (cotrimoxazole, isoniazid with pyridoxine and valganciclovir because she received antithymocyte globulin).

3.1 Discuss the advice you will give her to ensure infection control once she is discharged. (10)

3.2 Discuss the medication that is most likely to place her at risk of developing new onset diabetes after transplant, as well as the advice you would give her about how to reduce this risk. (10)

3.3 Discuss the reasons for the prophylactic medication and name one organism that each is intended to protect against. (5)

**TOTAL = 25 MARKS**