Examination Period 3: 2017/18

SLS201518N

Module Title Pharmacology
Level Five
Time Allowed Two hours

Instructions to students:
- Enter your student number not your name on all answer books.
- Answer all questions from Section A on the examination paper.
- Answer one out of four questions from Section B in the answer books provided.
- Each section is equally weighted.
- Insert your student number in the space below:

Student Number.................................

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Section A

Answer all questions on the examination paper.

1. Briefly explain the following terms:
   (3 marks each)
   a. Spare receptors (receptor reserve)
   b. Drug clearance
   c. Volume of distribution
   d. $pA_2$
2. Briefly explain the two phases of drug metabolism. (5 marks)

3. 
   a. What type of drug is suxamethonium? (1 mark)
   
   b. Explain the mechanism of action of suxamethonium. (4 marks)

4. 
   a. What type of drug is Frusemide? (1 mark)
b. Explain how Frusemide acts on the body. (4 marks)

5.  
   a. Briefly describe the mechanism of action of benzodiazepines. (3 marks)

   b. For what conditions are benzodiazepines prescribed? (2 marks)

   c. How does flumazenil affect the action of benzodiazepines? (2 marks)
6. Briefly explain the difference between tricyclic antidepressants and SSRIs. (5 marks)

7. 
   a. Give an example of a NSAID drug. (1 mark)
   b. How are NSAIDs used therapeutically? (3 marks)
   c. Give a brief description of their mechanism of action. (2 marks)

8. Briefly explain why drugs often cause nausea and vomiting. (3 marks)
9. Which of the following drugs inhibit the transport of noradrenaline (norepinephrine) into synaptic vesicles, thereby leading to neurotransmitter depletion?

   (1 mark)

   a. Reserpine
   b. Methyldopa
   c. Bretylium
   d. 6-hydroxydopamine
   e. Guanethidine

10. The reuptake of noradrenaline (norepinephrine) into presynaptic nerve terminals (uptake 1) is inhibited by:

    (1 mark)

   a. Guanethidine
   b. Reserpine
   c. Methyldopa
   d. Methyltyrosine
   e. Cocaine

End of Section A
Section B follows overleaf
Section B

Answer one out of four questions in the answer books provided. (50 marks)

11. Discuss the use of drugs in the treatment of diabetes.

12. Discuss the actions of opiate drugs and their use in analgesia.

13. Give an account of how drugs are developed from “molecules to medicines”.

14. Discuss the use and actions of antibacterial drugs and how bacteria are becoming resistant to them.