Examination Period 3: 2016/17

SLS201517N

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 exam paper, and one question from Section B in a separate answer book. Label the answer book clearly with the number of the question you are answering.
• Students are not permitted to remove this examination paper from the examination room. For all purposes the examination paper remains the property of the University of Northampton.
• Insert your student number in the space below:

• Student Number………………………………………………………

No. of Pages  6
No. of Questions 18
Section A

Answer all questions from this section on the exam paper.

1. Briefly describe what you understand by the term “receptor”.

   (5 marks)

2. Explain the four receptor superfamilies and give one example of each family.

   (8 marks)

3. What do you understand by the term “pharmacokinetics”.

   (2 marks)
4. What are the four phases of pharmacokinetics? (4 marks)

5. Give five factors that can affect the absorption of drugs from the Gastro-intestinal tract. (5 marks)

6. Briefly explain how pH can affect the absorption of drugs. (4 marks)

7. Define the term “Volume of distribution” of a drug. (3 marks)
8. Where are drugs with a small volume of distribution (approx. four litres) likely to be found in the body?  

(1 mark)

9. Which of the following options is correct (please circle the correct answer below).  

(1 mark)

In clinical trials a phase I study indicates:

a. Pre-clinical testing  

b. ‘First in man’ studies  

c. Post-marketing studies  

d. Trials in patients with the target disease  

e. None of the above

10. What is meant by the term Therapeutic Index?  

(3 marks)

11. Give three aims of Clinical trials.  

(3 marks)

a.  

b.  

c.  

12. In Clinical trials, what does the term ‘Double Blind’ mean?  

(2 marks)
13. Using the list of words below, fill in the missing words in the paragraph relating to the action of nonsteroidal anti-inflammatories (NSAIDs). Write the letter that corresponds to the correct word in the space provided.

(5 marks)

Following an act of trauma _____ _______ are released by damaged cells. These are broken down by an enzyme called ______ _______ into a substance called arachidonic acid. This is then converted by enzymes to cyclic endoperoxides which in turn are converted to eicosanoids (thromboxane A, prostacyclins and _____________), these are the ________ of inflammation. NSAIDs work by inhibiting the __________ enzymes that convert arachidonic acid to cyclic endoperoxides, thus inflammation is reduced.

a. 5-lipoxygenase
b. prostaglandins
c. mediators
d. cyclooxygenase
e. phospholipids
f. phospholipase A2
g. leukotrienes
h. phospholipase C

14.

a. Name a clinically used anti-hypertensive calcium channel blocker. 

(1 mark)

b. Briefly describe how calcium channel blockers reduce blood pressure.

(3 marks)
Section B

Answer one question in a separate answer book. (50 marks)

15. Describe how drugs interact with the Autonomic nervous system. Include in your answer, an explanation of the clinical applications of any drugs you mention.

16. What are local anaesthetics? Describe their use and mechanism of action.

17. Describe how drug action can be measured in preclinical experiments and how they can be used to develop a new drug candidate.

18. Discuss the processes by which drugs are cleared from the body.

End of Section B
End of Paper