Date: 26.09.2018   **Time: 02 hours**

ANSWER ALL FOUR QUESTIONS

1.   Write an account on
  1.1.   factors that interfere the bioavailability of orally administered drugs.   (30 Marks)
  1.2.   enzyme inhibition.   (30 Marks)
  1.3.   drug-drug interactions.   (40 Marks)

2.
  2.1.   What is hepatic first-pass metabolism?   (15 Marks)
  2.2.   List five (5) drugs which undergo extensive hepatic first-pass metabolism   (20 Marks)
  2.3.   Explain how hepatic first-pass metabolism is going to affect the pharmacological effects of drugs with examples.   (25 Marks)
  2.4.   Describe the methods that are used to bypass hepatic first-pass metabolism with examples.   (40 Marks)

3.
  3.1.   Classify penicillin group of antibiotics with examples.   (25 Marks)
  3.2.   Describe the mechanism of action of penicillins.   (15 Marks)
  3.3.   Describe the pharmacological basis for using
         3.3.1. benzathine penicillin for rhematic fever prophylaxis.   (20 Marks)
         3.3.2. benzyl penicillin in pneumococcal meningitis   (20 Marks)
         3.3.3. flucloxacillin in osteomyelitis.   (20 Marks)

4.
  4.1.   Explain
         4.1.1. concentration dependent killing.   (10 Marks)
         4.1.2. time dependent killing.   (10 Marks)
  4.2.   Name one group of antibacterial agents that exhibit
         4.2.1. concentration dependent killing.   (05 Marks)
         4.2.2. time dependent killing.   (05 Marks)
  4.3.   Describe the mechanism of action of aminoglycosides   (20 Marks)
  4.4.   List five indications for aminoglycosides.   (20 Marks)
  4.5.   Explain the adverse effects of aminoglycosides.   (30 Marks)