

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: M PHARM  
BRANCH: PHARMACY

SEMESTER : I  
SESSION : MO/19

SUBJECT: MPL102T ADVANCED PHARMACOLOGY-1

TIME: 3:00 HOURS

FULL MARKS: 75

**INSTRUCTIONS:**

1. The question paper contains 7 questions each of 15 marks and total 105 marks.
  2. Candidates may attempt any 5 questions maximum of 75 marks.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Describe different process of drugs absorption. [7]  
Q.1(b) Explain correlation between pH and pKa and give their clinical significances with suitable example. [8]
- Q.2(a) Explain the terms potency, affinity and efficacy. [7]  
Q.2(b) Compare the pathways for G<sub>s</sub>, Gi and Gq signalling. [8]
- Q.3(a) What is clearance? Explain 1st order kinetics and Zero order kinetics with suitable examples & correlate the equation among clearance, Volume of distribution (Vd) and t<sub>1/2</sub> [7]  
Q.3(b) Write notes on [8]  
(i) Bioavailability & first pass metabolism  
(ii) BBB & Redistribution  
(iii) Maintenance and loading dose
- Q.4(a) Distinguish between partial, total and inverse agonists. [7]  
Q.4(b) Function of a receptor may be regulated by the process of desensitization". Justify [8]
- Q.5(a) Describe synthesis, release, termination & postjunctional action of neurohumoral transmitters [7]  
Q.5(b) Describe specific neurotransmitter such as Noradrenaline neuronal pathway in brain and their function. [8]
- Q.6(a) Explain the structure and process of activation of Receptor tyrosine kinase. [7]  
Q.6(b) Compare the mechanism of actions of general and local anesthetic. [8]
- Q.7(a) Define & Classify Angina pectoris. Classify antianginal and explain their mechanism of action and their uses. [7]  
Q.7(b) Define and classify heart failure. Write drug regimens for heart failure patients. [8]

::::::27/11/2019::::::E