Pre. Ph.D. Course Work (2017 Course) : SUMMER - 2018
(Pharmaceutics)
SUBJECT: PAPER-II- PHARMACEUTICS

Day : **Tuesday** Time: **10.00 AM TO 01.00 PM**
Date : **26/06/2018** **S-2018-4777** Max. Marks: 100.

N.B.:

1) Attempt any **FIVE** questions from Section-I and any **FIVE** questions from Section-II.
2) Both the sections should be written in **SEPARATE** answer books.
3) Figures to the **RIGHT** indicate full marks.
4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Explain the steps involved in QbD based approach for the development of a sustained release tablet formulation. **(10)**

Q.2 Discuss the QI ICH guideline with respect to the stability of pharmaceutical formulation. **(10)**

Q.3 What are lipid nanoparticles? Elaborate on the methods of preparation of the same. **(10)**

Q.4 What are SMEDDS? Give an account of the different components used in their preparation and their characterization. **(10)**

Q.5 Discuss the formulation considerations of parenteral depot formulations. **(10)**

Q.6 Write short notes on any **TWO** of the following: **(10)**

a) Pharmaceutical applications of polymeric micelles
b) Stability of Liposomes
c) Factorial design

SECTION-II

Q.7 Explain the special features of protein and peptide molecules and give the approaches to stabilize them. **(10)**

Q.8 Give an account of dry powder inhalers. What are the critical quality attributes of DPI. **(10)**

Q.9 What is active and passive targeting? Explain targeted drug delivery using nanocolonal antibodies. **(10)**

Q.10 Give an account of ex-vivo models for estimating oral drug absorption. **(10)**

Q.11 Give the protocol for acute toxicity testing as per OECO guidelines. **(10)**

Q.12 Write short notes on any **TWO** of the following: **(10)**

a) Ligands for targeted delivery
b) Quality insurance in toxicology studies
c) Approaches for gene delivery

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