Total No. of printed pages = 2

MPH 203 T

Roll No. of candidate

2022

M.Pharm. 2nd Semester End-Term Examination

Pharmaceutics

COMPUTER AIDED DRUG DELIVERY SYSTEM

Full Marks – 75   Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following : (very short answer) $(10 \times 2 = 20)$

    (a) Explain contour plots.

    (b) What do you understand by ACAT and GITA model?

    (c) What are CPPs?

    (d) What is QbD concept?

    (e) What is the importance of Virtual trials?

    (f) Enlist two software used for PK-PD modelling simulation.

    (g) Clarify Artificial Intelligence.

    (h) What are the advantages of pharmaceutical automation?

    (i) What are BCRP and OATP?

    (j) What do you mean by Bio waivers?

2. Answer any **seven** questions : $(7 \times 5 = 35)$

    (a) Elucidate the importance of computational fluid dynamics.

    (b) Tabulate different types of optimization techniques with its uses.

    (c) Describe the role of ASBT and nucleoside transporters in ADMET modelling?

    (d) Write in brief about PBPK prediction strategy for oral absorption prediction with the help of a flow chart.

[Turn over

(e) Write in brief about the prospective of QbD for industry and regulatory bodies.

(f) Discuss in brief about different types of data collection system.

(g) Discuss patents as data protection tool in algorithm and machine-machine interfaces.

(h) Explain the ethical issues relating with computer ethics.

(i) Explain :

    (i) Optimal design

    (ii) Population modeling.   (2.5+2.5)

3. Answer any **two** questions :   (2 × 10 = 20)

(a) Explain the theoretical background of an ACAT model interpretation in in vivo drug behavior with suitable diagram.

(b) Discuss some examples of scientifically based applications of QbD in drug delivery system.

(c) Discuss the how drug absorption helps in the development of *in silico* models in drug disposition.