M.PHARM. (PHARMACEUTICAL BIOTECHNOLOGY) SEM.-I (CBCS-2019 COURSE): WINTER ' 2021 SUBJECT: ADVANCED PHARMACEUTIAL BIOTECHNOLOGY

Time: 10:00 AM-01:00 PM Day : Wednesday Max. Marks: 75 Date : 17-11-2021 W-20737-2021 N.B. Attempt ANY FIVE questions from the following. 1) Figures to the RIGHT indicate FULL marks. 2) Outline a process in producing transgenic mouse. **(15)** Q.1 Write a detailed account on significance of signaling pathways as drug targets. (15)**Q.2** What are xenobiotics? (07)**Q.3** a) How can you use microbial remediation to clear industrial waste? (08)b) Describe steps involved in PCR amplification of target DNA. Add a note on its (15) **Q.4** application. What do you understand by 'contig'? Q.5 (07)Describe hierarchical shotgun approach in sequencing large genomes. (08)**Q.6** Write short notes. (15)a) Application of biosensors **b)** Multiplexed vaccines c) Expression vectors