

BBL732: Bioprocess Plant Design Major Examination

**6th January, 2021
17.30 – 20.00 Hrs.**

Answer all questions. Maximum marks 40

1. Why is it necessary to use a gasket in a flanged joint? Explain how the maximum pressure at which the joint has to operate influences the selection of the material for the gasket.

(16 Marks)

2. In a multi-stage separation unit (distillation column) carrying out the continuous separation of the components of a binary mixture, what are the factors that determine the stage/plate efficiency? When will you achieve 100% stage efficiency and why is this difficult/impossible in reality? How can you check and correct these factors at the design stage?

(24 Marks)