Assignment 1

Due on 2019-06-14, 23:59 IST.

The due date for submitting this assignment has passed. As per our norms, you have not submitted this assignment.

1) In a selected distribution during its manufacture, which components are removed?
   - Water and azeotropic
   - Water and alcohol
   - Water and ether
   - Propyl and enhance
   - None of these
   Accepted answers: Water and alcohol

2) Media preparation is a:
   - Downstream process
   - Mid-process
   - Upstream process
   - Recovery process
   Accepted answers: Upstream process

3) Which downstream process is not used to remove solids from dairy?
   - Sedimentation
   - Filtration
   - Drying
   - None of the above
   Accepted answers: Drying

4) Deposition based on size is achieved in:
   - Adsorption chromatography
   - Gel filtration chromatography
   - Reverse phase chromatography
   - None of the above
   Accepted answers: Reverse phase chromatography

5) Three non-porous purification steps are used to obtain a product. The efficiency of product recovery in each step is 95%, 90%, and 98% respectively. What is the overall product loss in %?
   Accepted answers: 4.1%

6) Two heads A and B at 13 and 20 ft filter rate with 1 gpl and 1.5 gpl of sand respectively are being used in a separator. The filter is leaching the separator now contains 0.75 gpl of supernatant. What will be the concentration of CPH in ppm assuming the supernatant is 100 gpl?
   Accepted answers: 100 gpl

7) In the manufacture of steaming soda, 95% of the manufacturing cost is new spectators and the rest is waste disposed, raw power energy and QC. QC then promote costs 35% of this remaining. Waste disposal, energy and QC contribute equally to this remaining. What is the cost of QC in the overall manufacturing cost in %?
   Accepted answers: 35%

8) A filter costs Rs 10,80,000 and it annual depreciation is 10%. What will be its depreciated value after 5 years?
   Accepted answers: Rs 4,08,000

9) I am investing a cost of Rs 100 Lakhs in the year 2024. What will be its present value in the year 2027 (assuming interest rate is 10%)?
   Accepted answers: Rs 79,100

10) A fermentation broth contains 30 wt% of total mass and mass liquid, the latter needs to be measured fully. The annual production of the broth is 10,000 kg. A filter press retains 98.5% weight of the liquid in the solids waste, where it is centrifuged to yield the solids reject 1 weight% of the liquid. How much liquid is kept if a filter press is used?
   Accepted answers: 79,100