week 12 assignment 1

The due date for submitting this assignment has passed. Due on 2018-04-18, 23:59 IST.

Submitted assignment

1) Agitator speed is monitored using

- Thermostat
- Manometer
- Rotameter
- Tachometer

No, the answer is incorrect.
Score: 0
Accepted Answers: Tachometer

2) The electrically controlled valve is

- Diaphragm valve
- Butterfly valve
- Solenoid valve
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: Solenoid valve

3) The principle of dissolved O₂ probe is

- Calorimetry
- Potentiometry
- Turbidometry
- Amperometry

No, the answer is incorrect.
Score: 0
Accepted Answers: Amperometry
5) Chemical filter aid used for the separation of solids from the liquid is/are

- Bentonite clay
- Isinglass
- Kieselguhr
- Alum

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**

- Mass Spectrometer

6) In the liquid-liquid separation process the following parameter is considered for the separation of the chemicals

- Density
- Viscosity
- Boiling point
- Solubility

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**

- Solubility

7) Which of the following dimensionless number has significant role in continuous medium sterilization?

- Mach number
- Peclet number
- Prandtl number
- Grashof number

**No, the answer is incorrect.**
**Score: 0**
**Accepted Answers:**

- Peclet number

8) Quantitative analysis of volatile components present in the sample is carried out by GC with the help of

- Chromatogram
- Chromatograph
- Chromatophore
- None of the above
9) Steam consumption in kg/h in case of an evaporator is given by (where C, E are the capacity, economy of the evaporator, respectively)

- E/C
- C/E
- CE
- 1/CE

No, the answer is incorrect.
Score: 0

Accepted Answers:
Chromatogram

10) Conventional adsorption is a

- Reversible process
- Irreversible process
- Either reversible or irreversible
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Reversible process

11) Which of the following is not the physical method for the cells rupturing?

- Milling
- Homogenization
- Ultrasonication
- Enzymatic digestion

No, the answer is incorrect.
Score: 0

Accepted Answers:
Enzymatic digestion

12) In the pump, the mechanical energy is usually converted to ________.

- Electric energy
- Kinetic energy
- Chemical energy
- Wave energy

No, the answer is incorrect.
Score: 0

Accepted Answers:
Kinetic energy

13) The criteria for a successful commercial bioprocess is

- Low capital investment
14. High fructose corn syrup is an example of

- High value, Low volume product
- Low value, High volume product
- Low value, Low volume product
- High value, High volume product

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
- Low value, High volume product

15. The following is not included in capital cost estimation

- Instruments
- Building costs
- Raw material costs
- Equipment

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
- Raw material costs

16. The payback time \((y)\) can be calculated as

- Total Investment/Net profit
- Gross profit/Net profit
- Gross profit/Annual Revenues
- Total Investment/Annual Revenues

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
- Total Investment/Net profit

17. Cell mass separation in penicillin fermentation process is done by

- Centrifugation
- Plate and frame filter press
- Rotary vacuum filter
- All of the above

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**

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### Question 18
The life cycle of the microorganism can be developed through:

- Batch process
- Chemostat
- Fed-batch
- All of these

**No, the answer is incorrect.**  
**Score:** 0  
**Accepted Answers:**  
**Batch process**

### Question 19
Recycle ratio (\(\alpha\)) can be defined as:

- The ratio of cell concentration in recycle stream to the steady state cell concentration in the reactor
- The ratio of cell concentration in recycle stream to the cell concentration separator effluent
- The ratio of recycle flow rate to influent flow rate
- All of these

**No, the answer is incorrect.**  
**Score:** 0  
**Accepted Answers:**  
**The ratio of recycle flow rate to influent flow rate**

### Question 20
Which of the following(s) can be used as antifoaming agent:

- Vegetable oil
- Silicone oil
- Octadecanol
- All of these

**No, the answer is incorrect.**  
**Score:** 0  
**Accepted Answers:**  
**All of these**