

I. Read the text and answer the questions below: (20 marks)

1. [Chemical Engineering is a branch of engineering that is concerned with the use of mechanical equipment in the chemical industry.] It essentially deals with the engineering of chemicals, energy and the processes that create and/or convert them.

The **chief** purpose of chemical engineering is [the large scale manufacture of valuable materials, where known raw materials are transformed into required new forms that are more valuable and useful.]

Modern chemical engineers are also concerned with pioneering valuable materials and related techniques, which are often essential to related fields such as nanotechnology, fuel cells and bioengineering.

In chemical engineering, **individual** processes are known as unit operation. Examples of such process include fractionation, extraction, absorption, adsorption, packing and milling. Process design involves combining sets of unit operations in varying configurations with the purpose of chemical separation and/or synthesis.

- 1) What is chemical engineering?
- 2) What is the purpose of chemical engineering?

II. Circle a, b, c, or d which best complete the following: (20 marks)

1) Chemical engineering essentially deals with :

a- energy. b- the engineering of chemicals. c- the processes. **d- a, b and c together.**

2) In the second paragraph, the word (chief) means:

a- main. b- not important. c- a person who cooks food. d- none of the mentioned.

3) In the second paragraph, the word (modern) means :

a- new. b- old. c- very old. d- none of the mentioned.

4) In the third paragraph, the word (individual) means:

a- group of men. b- group of women. **c- one person.** d- none of the mentioned.

III. Fill in the gaps with these words: (20 marks)

(in- down- out- through- about -out) **at**

- 1) The explorer broke through the underbrush to find the temple.
- 2) The teacher is able to bring out the best in her students.
- 3) She hopes to bring in a change in his attitude.
- 4) The cowboy worked long and hard to break at the horse.
- 5) I was late to school because my car broke down.

IV. Translate the following into Arabic: (20 marks)

1. The formal beginnings of chemical engineering occurred in Education. It emerged upon the development of unit operations, a fundamental concept of the discipline of chemical engineering. 10
2. Another important factor in the growth of chemical engineering has been the American Institute of Chemical Engineers. It was founded in 1908 and its early membership, which reads like a Hall of Fame, worked tirelessly to promote professional spirit exchange of ideas and excellence in chemical engineering education. 10

V. Choose the correct verb in brackets: (10 marks)

- 1) When I was sleeping, the phone (rang- is ringing- rings).
- 2) If she (has- is having-had) money, she would go to the party.

VI. Add question tags to these sentences: (10 marks)

- 1) He won't forget to come, will he?
- 2) I am happy, am I not?

Best of Luck
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