

**Institute of Chemical Engineering and Technology**  
**University of the Punjab, Lahore**

**General Guidelines for Entry Test-2020 for MSc/PhD (Engg)**

1. The composition of the entry test will be as follows:

<b>Section</b>	<b>Marks</b>	<b>No. of questions</b>
<b>Verbal Ability</b> (Includes English grammar and spellings, vocabulary, word analogy, reading comprehension, etc.)	<b>20</b>	<b>20</b>
<b>Quantitative Ability</b> (Includes arithmetic, algebra, data analysis, geometry, etc.)	<b>20</b>	<b>20</b>
<b>Analytical Reasoning</b> (Includes deductive and inductive logic and critical thinking)	<b>10</b>	<b>10</b>
<b>Subject Knowledge</b> (Includes Stoichiometry, Heat transfer, Mass transfer, Separation processes, Chemical reaction engineering, Fluid and particle mechanics, Thermodynamics, Instrumentation and process control, etc.)	<b>50</b>	<b>50</b>
<b>Total</b>	<b>100</b>	<b>100</b>

2. The test duration will be 2 hours.
3. The use of mobile phones/smart phones, etc., is prohibited.
4. There is no negative marking. All questions are compulsory and carry equal marks.
5. The use of lead pencils/ink removers, etc., is not allowed.
6. No markings on question- and answer-sheets are allowed. Question-sheet must be returned along with answer-sheet.
7. It is mandatory to mention name and registration/roll no. on answer-sheet, otherwise, it will be considered invalid.

**Institute of Chemical Engineering and Technology**  
**University of the Punjab, Lahore**  
**MSc/PhD (Engg) Chemical Engineering**

**SPECIMEN ENTRY TEST-2020**

(A few sample questions are provided, difficulty level may vary in actual test)

**Time allowed: 2 Hours**

**Marks: 100**

**Name of applicant:** \_\_\_\_\_

**Roll No.** \_\_\_\_\_

**Note: Attempt all questions.**

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**VERBAL ABILITY (Total Questions = 20)**

**Select one of the most appropriate choices given against each question.**

1. Despite his illness, Afridi was \_\_\_\_\_ in his team.
  - a. Disappointing
  - b. Useless
  - c. Vigorous
  - d. Instrumental
2. Shazia's home looked as though it had been \_\_\_\_\_ from a rag bin; her expensive burner was her sole \_\_\_\_\_ of luxury.
  - a. Cleaned - Expensive
  - b. Computerized - Cost
  - c. Modernized - Symbol
  - d. Salvaged - Sign
3. Progress of a nation depends \_\_\_\_\_ the hard work, dedication, and loyalty of its people.
  - a. upon
  - b. on
  - c. at

**QUANTITATIVE QUESTIONS (Total Questions = 20)**

**Select one of the most appropriate choices given against each question.**

- 1 Question: Ali starts a business with Rs 80,000/-. His first year profit is 10%. What is the total amount after first year?
  - a) 105,600
  - b) 201,200
  - c) 500,00
  - d) 100,00

- 2 If  $x/9$  is equal to  $2/3$ , then  $x$  is equal to;
- a)  $8/3$
  - b) 6
  - c) 3
  - d)  $27/2$
- 3 Question: If  $3y = 7$ , the value of  $6y-3$  is;
- a) 39
  - b) 13
  - c) 11
  - d) 10

**ANALYTICAL REASONING (Total Questions = 10)**

**Questions 1 – 3**

Nine individuals: Khizar, Bilal, Abdullah, Faisal, Qasim, Ahmed, Ayesha, Amna, and Aqsa are to serve on three committees labeled as A, B, and C.

- Each candidate should serve on exactly one of the committees
- Every committee must have at least one member
- Committee A should consist of exactly one member more than that of committee B
- Among Ayesha, Amna and Aqsa none can serve on committee A
- Among Faisal, Qasim and Ahmed none can serve on committee B
- Among Khizar, Bilal and Abdullah none can serve on committee C

**QUESTIONS**

1. In case Abdullah and Aqsa are the individuals serving on committee B, how many of the nine individuals should serve on committee C?

- a) 2
- b) 3
- c) 4
- d) 5

2. Of the nine individuals, the maximum number that can serve together on committee C is

- a) 5
- b) 6
- c) 7
- d) 8

3. In case Khizar is the only individual serving on committee B, which among the following should serve on committee A?

- a) Bilal and Abdullah
- b) Bilal and Faisal
- c) Faisal and Qasim
- d) Abdullah and Amna

**SUBJECT BASED QUESTIONS (Total Questions = 50)**

**Select one of the most appropriate choices given against each question.**

1. Rate of a chemical reaction \_\_\_\_\_ with an increase in temperature.  
a. increases            b. decreases            c. does not change            d. Remains constant
2. Distillation is possible only if the solution components are \_\_\_\_\_  
a. Volatile            b. Non-volatile            c. Cryogenic            d. None of the above
3. At equilibrium, the total Gibb's free energy for all the phases is:  
a. Minimum            b. Maximum            c. Infinity            d. Zero

**For details about admission rules and eligibility criteria, please visit**  
<http://pu.edu.pk/dpcc/rules.htm>