

Institute of Energy & Environmental Engineering
Faculty of Electrical, Energy and Environmental Engineering
Quaid-i-Azam Campus, University of the Punjab, Lahore

General Guidelines for Entry Test (M.Phil. / M.Sc.) 2023

The composition of the entry test will be as follows.

Section	Marks	Total questions
Verbal Ability (Includes grammar and spellings, vocabulary, word analogy, reading comprehension)	15	15
Quantitative Reasoning (Includes Arithmetic, algebra, data analysis, geometry)	15	15
Analytical Reasoning (GRE style)	15	15
Subject based Questions (Includes <ul style="list-style-type: none">➤ Renewable Energy Sources including solar, wind, biomass, hydel etc.➤ Fossil fuels➤ World and regional energy scenario➤ Energy crisis of Pakistan➤ Environmental implications of energy generation➤ Stoichiometric calculations)	15	15
Total Marks	60	60
Time Allowed	90 min	

1. The use of calculators/mobile phones/smart phones, etc. is prohibited.
2. There is no negative marking. All questions are compulsory and carry equal marks.
3. The use of lead pencils/ink removers etc. are not allowed.
4. A separate sheet will be provided with answer sheets for rough work. No markings on question and answer sheets are allowed. Question sheet must be returned along with answer sheets.
5. It is mandatory to mention name and registration/roll no. on answer sheet, otherwise, sheet will not be considered for marking/evaluation.

General Guidelines for Entry Test (Ph.D.) 2023

The test for PhD will be in **two-parts**, Part A and Part B.

The composition of the entry test (**Part A**) will be as follows.

Section	Marks	Total questions
Verbal Ability (Includes grammar and spellings, vocabulary, word analogy, reading comprehension)	15	15
Quantitative Reasoning (Includes Arithmetic, algebra, data analysis, geometry)	20	20
Analytical Reasoning (GRE style)	15	15
Total Marks	50	50
Time Allowed	60 min	

The composition of the entry test (**Part B**) will be as follows.

Section	Marks	Total questions
Subject based Questions (Objective) Includes topics on <ul style="list-style-type: none">➤ Renewable Energy Sources including solar, wind, biomass, hydel etc.➤ Fossil fuels➤ World and regional energy scenario➤ Energy crisis of Pakistan➤ Environmental implications of energy generation➤ Stoichiometric calculations	40	20
Subject based Questions (Subjective) Topics for subjective portion are same as for objective section	10	1
Total Marks	50	21
Time Allowed	60 min	

1. The use of calculators/mobile phones/smart phones, etc. is prohibited.
2. There is no negative marking. All questions are compulsory and carry equal marks.
3. The use of lead pencils/ink removers etc. are not allowed.

4. A separate sheet will be provided with answer sheets for rough work. No markings on question and answer sheets are allowed. Question sheet must be returned along with answer sheets.
5. It is mandatory to mention name and registration/roll no. on answer sheet, otherwise, sheet will not be considered for marking/evaluation.

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M.Sc. (Engg.) Energy Engineering
SPECIMEN ENTRY TEST

Time Allowed: 2 Hours

Marks: 100

Name of Student: _____

Roll. No. _____

Note: Attempt all questions.

VERBAL ABILITY (Total Questions = 40)

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

1. Ali is _____ for the president of student society this year.
 - a. run
 - b. running
 - c. ran
2. Which of these statements is false?
 - a. The subject should usually follow the verb.
 - b. The object usually comes after the verb.
 - c. When there is an indirect object and a direct object, the indirect precedes the direct.
 - d. When the adjective is used attributively it comes before the noun which it qualifies.
3. They continued to work in the field _____.
 - d. Even though it rained heavily
 - e. Even though there is heavy rain
 - f. In spite the heavy rains
 - g. Although heavily rains
4. Select antonym of “attract”
 - a. Progress
 - b. Repel
 - c. Shy
 - d. Lousy
5. Select synonym of “excel”
 - a. Progress

- b. Move
- c. Slip
- d. Word

QUANTITATIVE ABILITY (Total Questions = 30)

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

- 1 Question: If $2x + 5y = 18$ and $x = 4$ then what is the value of y ?
 - a) 2
 - b) 3
 - c) 4
 - d) 5
- 2 Question: The value of $x^2 + 5x + 6$ at $x = 2$ is?
 - a) 2
 - b) 20
 - c) 40
 - d) 10
 - e) 15
- 3 Question: If 8 is 4 percent of k , then k is 4 percent of:
 - a) 5000
 - b) 4000
 - c) 800
 - d) 80
- 4 Question: If $a=3$, then what is the value of $(a^2)^3 - a$;
 - a) 240
 - b) 243
 - c) 726
 - d) 257

SUBJECT BASED QUESTIONS (Total Questions = 30)

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

1. During combustion coal reacts with _____.

a. Nitrogen	b. Oxygen	c. Moisture
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2. Which one of the followings is a fossil fuel?

a. Wind	b. Coal	c. Nuclear
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3. Coals are _____ to ignite than furnace oil.

a. Easier	b. Harder	c. Similar
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4. When burned, biomass does release _____, a greenhouse gas:

a. H_2S	b. CO_2	c. CH_4
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5. Methane has _____ odor.

- a. Pungent b. No c. Sweet
6. British Thermal Unit is measurement of;
- a. Volume b. Heat Content c. Mass
7. Boiling point of Water is;
- a. 32°F b. 100°F c. 212°F
8. Percentage of Oxygen in dry air by volume is _____.
- a. 20.95% b. 21.95% c. 22.95%

Resource/Helping Material for Test Preparation

For the preparation of verbal and quantitate sections, books available in market for general ability tests/examination (GAT) can be consulted. For subject based questions, candidates are encouraged consult books on the topic given in the test syllabus.

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