The University of Lahore

Admission Kit

Department of Civil Engineering

Undergraduate & Graduate Programs

Admission Office

1-km Raiwind Road Lahore. Ph.: 042-35963421-28
1-km Defense Road, Off Raiwind Road, Near Bhootian Chowk Lahore. Ph.:042-35321456-60

Web: www.uol.edu.pk   Email: admissions@uol.edu.pk
Brief Programs Information

Program Name: Bachelor of Science in Civil Engineering (offered annually)
Entry Requirements: Minimum 60% F.Sc (Pre-Engg.)DAE (Civil)/A-Levels
Program Duration: 4 Years (08 semesters) 131 Credit Hours Fulltime
Program Recognition: Pakistan Engineering Council & HEC
Program Location: Raiwind Road Campus

Program Name: Master of Science in Civil Engineering
Entry Requirements: Minimum 60% or 2.50 CGPA BS Civil Engineering. However, for the Environmental Engineering program, students with a B.Sc. engineering degree from other disciplines like Chemical and Environmental Engineering may be considered on case by case basis. UOL test, interview and qualification of GAT with 50% marks.
Program Duration: 3 Years (0 semesters) Credit Hours Evening
Program Recognition: HEC
Program Location: Raiwind Road Campus

SAMPLE TEST BSCE

<table>
<thead>
<tr>
<th>Section 1</th>
<th>Time Allowed: 30 Minutes</th>
<th>Questions: 20</th>
<th>Choose the correct answer for each question and encircle the corresponding choice on answer sheet.</th>
</tr>
</thead>
</table>

ENGLISH SECTION

Instructions
1) Indicate your choice by encircling the corresponding choice on the answer sheet.

PART -1 READING COMPREHENSION

Directions: Read the two passages and answer all the questions.

In late infancy, the baby takes an interest in games, songs and even books. Progress toward walking moves through standing, balancing, bouncing in place and walking with others. As soon as the baby walks well alone, it has passed from infancy into the active toddler stage.

1) A baby in a late infancy would be able to do all of the following EXCEPT
A. Makes any speech sound  
B. Walk well alone  
C. show interest in games  
D. intimate actions

2) Treponema palladium causes  
A. Syphilis  
B. Gonorrhea  
C. AIDS  
D. Genital herpes

PART -2 VOCABULARY

Directions: choose the answer which best explains the meaning of the word in bold type

1) Our Company has just **acquired** two new tractors.  
A. bought  
B. purchased  
C. stolen  
D. obtained

Directions: choose the most appropriate synonym

1) Comprehend  
A. red  
B. colorful  
C. understand  
D. sky

<table>
<thead>
<tr>
<th>Section 2</th>
<th>Time: 30 Minutes</th>
<th>Questions: 25</th>
<th>Choose the correct answer for each question and encircle the corresponding choice on answer sheet.</th>
</tr>
</thead>
</table>

MATHEMATCIS (Aptitude Section)

Instructions
1) Indicate your choice by encircling the corresponding choice on the answer sheet.
2) You can solve each problem while deciding the best of the choices given, using any available space on the question booklet.

1) If $5c + 3 = 3c + 5$, what is the value of $c$?
2) \(5t^2 + 30t =\)
\[5t\]
A. \(-29t\)
B. \(t-6\)
C. \(t+6\)
D. \(5-6t\)

3) If the selling price of model B is 60% more than the selling price of model A, what percent of the total sales do the sales of model A represent?
A. 25%
B. 36%
C. 40%
D. None of the above

### Section 2
Undergraduate

<table>
<thead>
<tr>
<th>Time: 30 Minutes</th>
<th>Questions: 25</th>
<th>Choose the correct answer for each question and encircle the corresponding choice on answer sheet.</th>
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</thead>
</table>

**MATHEMATICS (Achievement Section)**

**Instructions**

1) Indicate your choice by encircling the corresponding choice on the answer sheet.
2) You can solve each problem while deciding the best of the choices given, using any available space on the question booklet.

1) The next term in the sequence is 3, 9, 19, 33, 51... is
A. 55
B. 63
C. 47
D. None of the above

2) A square matrix A is symmetric if A =?
A. \(A^t\)
B. A
C. \(-A\)
3) The point $(\rho \cos \theta, \rho \sin \theta)$ always lies on
   A. Circle
   B. Hyperbola
   C. Parabola
   D. None of the above

**Section 4**

**Time: 30 Minutes**

**Undergraduate**

**Questions: 30**

Choose the correct answer for each question and encircle the corresponding choice on answer sheet.

**PHYSICS (Aptitude Section)**

**Instructions**

1) Indicate your choice by encircling the corresponding choice on the answer sheet.
2) You can solve each problem while deciding the best of the choices given, using any available space on the question booklet.

1) An object with the greatest temperature will appear
   A. Green
   B. Blue
   C. White
   D. Orange Red

2) The Unite of ____________ is hetz
   A. Frequency
   B. Time Period
   C. Wave Length
   D. Sound

3) A 5 gm. bullet leaves the muzzle of a rifle with a speed of 320 m/s. What force (assumed constant) is exerted on the bullet while it is travelling down the 0.82 m long barrel of the rifle?
   A. 7.92 Newton
   B. 8.14 Newton
   C. 8.98 Newton
   D. None of the above
PHYSICS (Achievement Section)

Instructions
1) Indicate your choice by encircling the corresponding choice on the answer sheet.
2) You can solve each problem while deciding the best of the choices given, using any available space on the question booklet.

1) \( \mathbf{A} \times \mathbf{B} = 0 \), then
   A. They are parallel
   B. Either \( \mathbf{A} \) or \( \mathbf{B} \) is null vector
   C. The vectors are equal to each other
   D. The vectors are opposite in direction

2) Find the rectangular components of velocity 10 m/sec when one of the component make angle of 30° with the resultant
   A. 4, 3
   B. \( 5\sqrt{3}, 5 \)
   C. \( \frac{5}{3}, 5 \)
   D. None of them

3) The Unit of angular momentum in SI system is
   A. \( \text{J} \times \text{s}^{-1} \)
   B. \( \text{J} \times \text{s} \)
   C. \( \text{N} \times \text{s} \)
   D. \( \text{N} \times \text{s}^{-1} \)
The University of Lahore

Master of Science in Civil Engineering

Entry Test (Sample)

(Time Allowed: Two Hours)

Total Marks: 100

Note: Attempt all sections. All questions are of worth 1 mark each. Please do not write anything on the question paper. Extra sheet will be provided on demand for the calculations. Return this document after entry test.

**Mathematics (Section-A)**

Tick the correct answer.

1) If \(|x-4|<1\) then

   a) \(1x<2\)  b) \(3<x\leq5\)  c) \(4<x<6\)  d) \(3<x<5\)

   Key (d)

2) \(\lim_{x \to 0} \tan 3x \cos 5 \cdot e^c x\)

   a) 0  b) \(\frac{3}{5}\)  c) \(\frac{2}{5}\)  d) \(\frac{15}{13}\)

   Key (b)

3) \(f(x) = \sqrt{x^2 - y^2}\) Then \(\frac{\partial f}{\partial y}\) is

   a) \(-2y\)  b) \(\frac{1}{2}(x^2 - y^2)(2y)\)  c) \(\frac{y}{\sqrt{x^2 + y^2}}\)  d) \(\frac{-y}{\sqrt{x^2 - y^2}}\)
4) \[ \int \sec x \, dx \]

\begin{align*}
  &\ a) \frac{\sec^2 x}{2} + c \\
  &\ b) \ln(\sec x + \tan x) + c \\
  &\ c) \cos x + c \\
  &\ d) \sec x + c
\end{align*}

Key (b)

**Structural Engineering (Section-B)**

1. The Minimum thickness of the cover at the end of a reinforcing bar should not be less than twice the diameter of the bar subject to a minimum of:

   - a) 10 mm
   - b) 15 mm
   - c) 20 mm
   - d) 25 mm
   - e) 30 mm

Key (d)

2. The entrained air in concrete:

   - a) increase workability
   - b) decrease workability
   - c) decrease resistance to weathering
   - d) increase strength
   - e) neither affects workability nor strength

Key (a)

3. After casting an ordinary cement concrete on draying:

   - a) expands
b) shrinks

c) shrinks

d) none of these

Key (c)

4. **The width of the flange of a T-beam should be less than:**

   a) one-third of the effective span of the T-beam
   
   b) distance between the centres of T-beam
   
   c) breadth of the rib plus twelve times the thickness of the slab
   
   d) least of the above

Key (d)

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**Geotechnical Engineering** *(Section-C)*

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1. **The water content of soil is defined as the ratio of:**

   a) volume of water to volume of given soil
   
   b) volume of water to volume of voids in soil
   
   c) weight of water to weight of air in voids
   
   d) weight of water to weight of solids of given mass of soil

Key (d)

2. **The Liquid limit and plastic limit exist:**

   a) sandy soils
   
   b) silty soils
   
   c) gravel soils
   
   d) clay soils

Key (d)
3. When the seepage pressure becomes equal to the pressure due to submerged weight of a soil, the effective pressure is reduced to zero and the soil particles have a tendency to move up in the direction of flow. This phenomenon is generally known:

a) quick condition  b) boiling condition  
c) quick sand     d) all the above

Key (d)

4. The coefficient of compressibility of soil, is the ratio of:

a) stress to strain  b) strain to stress

c) stress to settlement  d) rate of loading to that of settlement

Key (b)

Hydraulic & Irrigation Engineering *(Section-D)*

1. The intensity of Irrigation means:

a) Percentage of Culturable Commanded Area to be irrigated annually

b) Percentage of gross commanded area to be irrigated annually

c) Percentage of the mean of culturable commanded area and the gross commanded area to be irrigated annually

d) total depth of water supplied by the number of watering.

Key (b)

2. For diversion of flood water of rivers, the type of canal constructed, is:

a) ridge canal

b) perennial canal

c) inundation canal
d) canal

Key (c)

3. If $\Delta$ is the depth of water in metres, $B$ is the number of days of base period and $D$ is the duty in hactare/cumec, the relationship which holds good, is:

   a) $D = \frac{8.64 \Delta}{B}$
   
   b) $B = \frac{8.64 \Delta}{D}$
   
   c) $D = \frac{8.64 \Delta}{B}$
   
   d) $\Delta = \frac{8.64B}{D}$

Key (d)

4. A fall in a canal bed is generally provided, if:

   a) Ground slope exceeds the designed bed slope
   
   b) Designed bed slope exceeds the ground slope
   
   c) Ground slope is practically the same as the designed bed slope
   
   d) none of these

Key (a)

Environmental Engineering (Section-E)

1. Chlorofluorocarbons (CFCs) are gases that are released mainly from

   a) Leather Tanning Industry
   
   b) Refrigeration Industry
   
   c) Burning of garbage
   
   d) Biodegradation of Organic matter

Key (b)
2. **Suspended Particulate Matter (SPM) in air can**
   a) Damage the lungs
   b) Damage building exteriors
   c) Both a) & b)
   d) None of above

Key (c)

3. **Major man-made substance contributing to Global warming is**
   a) Oxide of Nitrogen (NOx)
   b) Carbon Dioxide (CO₂)
   c) Sulphur Dioxide (SO₂)
   d) Chlorofluorocarbons (CFCs)

Key (d)

4. **Major cause of acid rains is**
   a) Escape of acid from Acid producing industry
   b) Oxides of Nitrogen and sulphur produced due to burning of fossil fuels
   c) Chlorofluorocarbons (CFCs)
   d) Deforestation

Key (b)
Instructions for Applicants:

1. The applicants are encouraged to read the following information before filling up the Admission Form carefully and avoid overwriting.

2. The applicant either male or female, who fulfills the requirements prescribed by the University and conditions mentioned in the prospectus, is eligible to apply for admission.

3. The selection of applicant shall be on merit, determined on the basis of marks obtained in the last examination, entry test and such other criteria as University may determine.

4. Application for admission must be made on the prescribed form annexed to the Prospectus which may be obtained from Admission Office on payment of Rs.1500/- during office hours. An applicant can also download the Admission Form from the University website and send it through courier. In such cases, he or she will send a bank draft of Rs. 1700/- in favor of “The University of Lahore”. The foreign applicants will send a bank draft of US$ 25/-.

5. An applicant can apply in four degree programs at a time. However, he or she will be charged Rs. 300/- per choice excluding the first one.

6. Certified photocopies of the following documents are required to be attached with the Admission Form:
   a) 02 colored passport size photographs
   b) Matric, Inter, Bachelor and Master degrees
   c) CNIC card of the applicant of Form B of the father

7. Don’t attach Domicile, Character and Hope Certificate with Admission Form.

8. In case, an applicant does not have certified copies of the required documents, the same may be attested by University Admission Officer on submission of the original documents.

9. The Admission Form must be filled and signed by the applicant.

10. Applicants awaiting final exam result or those who have appeared in supplementary exam are eligible to apply for admission. However, in such cases, they will be deprived of qualification weightage and will be purely evaluated on the basis of their test score.

11. The applicants bearing O-Level, A-Level qualification or equivalent are required to submit their IBCC Equivalence Certificate in order to determine their eligibility. If an applicant fails to produce the same, he or she will not be given qualification weightage.
12. The foreign applicants are required to attach the following additional documents with the Admission Form:

a) Proof of Citizenship  
b) Copy of Passport  
c) Copy of Visa  
d) Visa issuance and expiry proof  
e) Copy of ID card

13. Please mention your mailing address clearly.

14. In order to get admission in MS/M.Phil. Programs, the applicants are required to qualify UOL Entrance Test, Interview or both. The successful applicants will have to qualify NTS test after admission as per policy of HEC. If they fail to do the needful, they will not be issued degree and final transcript. For admission in Ph.D., GRE (subject) test is mandatory.

15. The UOL offers female hostel. The rent per room is Rs. 10,000-12,000/- per month. The University transport is available throughout the Lahore City.

16. All admissions are granted on “Provisional” basis. It is the sole responsibility of the selected applicants to provide proof of their eligibility within 3 weeks of the declaration of the result failing which their admission will be cancelled.

17. The applicants are strongly encouraged to take special care of the fee deadlines otherwise he or she will be deprived of admission.

18. In order to avoid any inconvenience, please submit your Admission Form before the admission closing date.

19. The University is authorized to amend its rules including fee any time without prior intimation.

20. The University has not authorized any publisher or person for preparation of its Entrance Tests. So please beware of such elements.

21. Incomplete Admission Forms will be rejected. Documents once submitted are non-returnable.