



## **SUKKUR IBA UNIVERSITY:**

Sukkur IBA University is located at the prime location of Nisar Ahmed Siddiqui Road Sukkur having a 30 acres area surrounded by dazzling green lawn.

This University is fully equipped with state of the art and modern facilities to provide its students a world class environment of learning and to professionally groom their respective field of study.

Sukkur IBA University has five different educational departments, including Business Administration, Computer Science, Education, Engineering and Mathematics.

### **MISSION:**

The mission of Sukkur IBA University is to subsidize and serve community by imparting knowledge through innovative teaching and applied research at the global levels of excellence. We aim to establish and sustain a competitive meritorious environment by strengthening faculty and using state of the art technology to produce graduates with analytical & creative thinking, leadership skills and entrepreneurial spirit, who possess global outlook and are conscious of ethical values.

### **VISION:**

To become a world class university in the field of Management Sciences, IT, Engineering, Education and Mathematics.

## **SUKKUR IBA STUDENTS COUNCIL (SISC):**

**Sukkur IBA Students' Council (SISC)** is a representative structure for students, through which they can be easily involved in the affairs/events of the institute, working as partnership with management, and staff for the benefit of the Institute and its students. In order to impart leadership qualities among students, it is crucial that extra-curricular, co-curricular and community services should be planned, organized, and managed by the students. Hence, Sukkur IBA has total of 15 societies/clubs functioning under the aegis of respective patrons with consultation of Sukkur IBA Students Council.

The main purpose of the student societies/clubs is to cater the opportunities to Sukkur IBA

Students to nurture and display their real talent in various fields such as event management.

## **Mathematics Society – SIBAU:**

The Mathematics Society - SIBAU, founded by Sukkur IBA University in 2014, to further the interests of Mathematics, its communication and uses. It serves Sukkur IBA University and national community through its workshops, competitions and other programs, which promote, support and encourage mathematical education and its understanding and skills at all levels. It works to foster an awareness and appreciation of mathematics and its connections to other disciplines in everyday life.

### **History:**

Mathematics Society – SIBAU is an active society, which has organized series of successfully events in the past. These events were Inter University Mathematics Olympiad 2014, 2015, National Mathematical Olympiad 2016, Pakistan National Mathematical Olympiad 2017, Calculus Contest 2017, Calculus Contest 2018, National Calculus Contest 2019, Pakistan National Mathematical Olympiad 2019 and much similar kind of events and competitions. Again, expanding the horizons, this year Mathematics Society is organizing Pakistan Mathematics Competitions 2022 for students from all across Pakistan.

## **Intra University Mathematics Competitions (IUMC) 2022:**

### **[Introduction]**

Intra University Mathematics Competitions (IUMC) is a contest for undergraduate students of all departments of Sukkur IBA University, organized by the Mathematics Society of Sukkur IBA University Students Council (SISC). It is comprised of three Engaging and Intellectual competitions including

- ◆ Intra University Calculus Contest (IUCC)
- ◆ Intra University Mathematical Olympiad (IUMO) Category A
- ◆ Intra University Mathematical Olympiad (IUMO) Category B
- ◆ Pakistan Poster Competition (PPC).

The Winners of Intra University Calculus Contest (IUCC) and Intra University Mathematical Olympiad (Category A) will represent Sukkur IBA University in Pakistan Calculus Contest (PCC) and Pakistan Mathematical Olympiad (PMO) respectively.

## **Intra University Mathematical Olympiad (IUMO) 2022:**

### **[Introduction]**

Intra University Mathematical Olympiad (IUMO) is a contest of mathematics among the students. The students of Sukkur IBA University can exhibit their talent and competency in this competition. There are two categories of IUMO i-e Category A and Category B. The Category B is general where any team (3 members) of any department can participate and the contents of this category are general. While the contents of category A require some more mathematics background. But every team has choice to join any category. *The Winners of Intra University Mathematical Olympiad (Category A) will represent Sukkur IBA University in Pakistan Mathematical Olympiad (PMO).*

**Note:** Students of Mathematics Department of semester 4 and onwards cannot apply in Intra University Mathematical Olympiad (IUMO) Category-B

Also note that a student can take part in any number of competitions. But he/she can take part in either Intra University Mathematical Olympiad (IUMO) Category A or Intra University Mathematical Olympiad (IUMO) Category B. And he/she can't take part in both categories because both categories will occur at same time.

### **Competition Format for Intra University Mathematical Olympiad (IUMO) 2022:**

- ◆ This competition is **NOT** designed for individual participants. It is a team competition.
- ◆ The team will be consisting of exactly 3 members.
- ◆ The competition will be consisting of two rounds namely Round-1 and Round-2
- ◆ Each round will be comprised of 3 hours.
- ◆ Each round will consist of subject questions. These rounds will not consist any type of MCQ's.
- ◆ Every team must submit solutions of the subjective questions. These solutions must be well organized with authentic arguments.

### **Eligible Participants for Intra University Mathematical Olympiad (IUMO) 2022:**

Students currently enrolled in any undergraduate program of Sukkur IBA University.

### Intra University Mathematical Olympiad (IUMO) - Category A:

#### **Cash Prizes for IUMO- 2022 Category A:**

- ♦ Winner: Rs. 10,000/
- ♦ 1<sup>st</sup> Runner Up: Rs. 6,000/
- ♦ 2<sup>nd</sup> Runner Up: Rs. 4,000/

#### **Contents for IUMO-2022 Category A:**

- ♦ Calculus and Analytical Geometry
- ♦ Linear Algebra
- ♦ Real Analysis
- ♦ Differential Equations

#### **Registration fees for IUMO-2022 Category A:**

Rs. 800/ per Team. (3 Members)

This fees includes participation in both rounds of IUMO and participation certificates. The winner teams will get opportunity to represent Sukkur IBA University in Pakistan Mathematical Olympiad (PMO).

### Intra University Mathematical Olympiad (IUMO) - Category B:

#### **Cash Prizes for IUMO- 2022 Category B:**

- ♦ Winner: Rs. 10,000/
- ♦ 1<sup>st</sup> Runner Up: Rs. 6,000/
- ♦ 2<sup>nd</sup> Runner Up: Rs. 4,000/

#### **Contents for IUMO-2022 Category B:**

- ♦ Basic Calculus and Analytical Geometry,
- ♦ Arithmetic of integers,
- ♦ Quadratic equations and expressions,
- ♦ Determinants: Evaluation and Manipulation,
- ♦ Trigonometry,
- ♦ Co-ordinate geometry,
- ♦ Systems of linear equations,
- ♦ Permutations and combinations,
- ♦ Factorization of polynomials,

- ◆ Elementary Inequalities of real numbers,
- ◆ Elementary combinatorics,
- ◆ Telescoping sums
- ◆ Sets and Functions of real numbers

### **Registration fees for IUMO-2022 Category B:**

Rs. 800/ per Team. (3 Members)

This fees includes participation in both rounds of IUMO and participation certificates.

## **Intra University Calculus Contest (IUCC) 2022**

### **[Introduction]**

Intra University Calculus Contest brings motivation and excitement among the students for enhancing and expressing their learning of mathematics in Calculus. As Calculus is a basic course in Mathematics which is taught in every department in early semesters. Hence, majority of students are aware and equipped with Calculus understanding. Therefore, IUCC also intends to check understanding of students in Calculus. IUCC is a competition which vary from the traditional contests in which students solve problems on paper. So, instead of using pen-paper in this contest, students will be solving problems relating to Calculus on white boards.

### **Competition Format for Intra University Calculus Contest (IUCC) 2022:**

- ◆ This competition is NOT designed for teams. It is an individual competition.
- ◆ All participants will be divided in set of five participants. All five participants in a set will compete with one another. Every set will go through five questions.
- ◆ Three (03) questions will be displayed on projector and participants will have to solve them on board within a given specific time.
- ◆ 120 seconds per question will be given to solve these three (03) questions.
- ◆ Two (02) questions will be asked in a Buzzer Round, and only that participant will be allowed to answer, who will hit the buzzer first. For these questions, you have to only tell the answer of the questions. You do not need to show your solution.
- ◆ There will be negative marking for wrong answers in Buzzer Round.
- ◆ From each set a limited number of students (1 or 2) will advance to the next level where again the remaining participants will be divided in sets. This process will go on and in last we will have our Winners.



### **Eligible Participants for Intra University Calculus Contest (IUCC) 2022:**

Students currently enrolled in any undergraduate program of Sukkur IBA University.

### **Cash Prizes for Intra University Calculus Contest (IUCC) 2022:**

- ♦ Winner: Rs. 10,000/
- ♦ 1<sup>st</sup> Runner Up: Rs. 6,000/
- ♦ 2<sup>nd</sup> Runner Up: Rs. 4,000/

### **Contents for the for Intra University Calculus Contest (IUCC) 2022:**

- ♦ Techniques of Solving Limits
- ♦ Techniques of Solving Differentiations
- ♦ Techniques of Solving Integrations

### **Registration fees for Pakistan Calculus Contest (PCC) 2022:**

Rs. 400/ per person.

This fees includes participation and participation certificates. The winners will get opportunity to represent Sukkur IBA University in Pakistan Calculus Contest (PCC).

## **Pakistan Poster Competition (PPC) 2022**

### **[Introduction]**

The Mathematics Society of Sukkur IBA University is going to organize the Poster Presentation Competition for the first time in Sukkur IBA University. The poster presentation consists of a visual display on a poster. The participants will design their posters and will give presentation based on their posters.

### **Competition Format for Pakistan Poster Competition (PPC) 2022:**

- ♦ Theme of the Poster: "Mathematics is Everywhere".
- ♦ Poster size should be 32 x 40 inches.
- ♦ The Deadline for poster submission (only soft copy) is same as the registration deadline 25th March, 2022.

- ◆ Posters must be original content created for this competition. Do not submit a poster that has been created by someone else.
- ◆ Submit the poster in more than one formats (including jpeg, jpg, pdf and ppt). If the poster file is of more than 25 MB in size, then provide the soft copy through Google-drive to our official email of Mathematics Society – SIBAU (sisc.mc@iba-suk.edu.pk).
- ◆ The posters will be reviewed by our technical review committee. The best graded posters will be accepted for display in the competition. A confirmation email will be sent by the 28th March, 2022 to teams whose posters will be accepted.
- ◆ Mathematics Society may additionally facilitate the contestants in getting the printouts of their posters submitted in soft form. The relevant team will have to pay the printing fee of the printouts of the posters (Rs. 300 approximately per print). The contestants may request for extra printouts of their posters for their private or institutional use.
- ◆ Poster evaluation will be carried out at the scale of 100 marks as per the details given below:

S.No.	Sections	Maximum Marks
1.	<b>Introduction:</b> Background, Motivation and Literature Review	10 Marks
2.	<b>Problem Specification/ Statement:</b> Clarity in the statement of the problem, assumptions, physical conditions, etc.	10 Marks
3.	<b>Model/Algorithm/Mathematical Formulation:</b> Organization of the Arguments, Writing Formats, Mathematical Syntax, etc.	20 Marks
4.	<b>Description and / or tabular/graphical presentation of the results/solution on the poster</b>	20 Marks
5.	<b>Oral Presentation (5-7 minutes) in front of the evaluation committee standing by the displayed poster</b>	40 Marks

### Eligible Participants for Pakistan Poster Competition (PPC) 2022:

Students currently enrolled in any undergraduate program of Sukkur IBA University.

### Cash Prizes for Pakistan Poster Competition (PPC) 2022:

- ◆ Winner: Rs. 10,000/



- ◆ 1<sup>st</sup> Runner Up: Rs. 6,000/
- ◆ 2<sup>nd</sup> Runner Up: Rs. 4,000/

### **Registration fees for Pakistan Poster Competition (PPC) 2022:**

Rs. 600/ per Team. (2 Members)

Registration fees includes participation fees of PCC, Lunch, High Tea, participation certificates and cards for the two team members.

### **[General Registration] Terms and Conditions:**

1. All the participants must be enrolled in any undergraduate program in Sukkur IBA University.
2. A person (or team) will be considered registered, if the required information of the person (or all the team members) in the registration form is submitted along with the registration fees before the deadline 25th March 2022.
3. A student can take part in any number of competitions. But he can take part in either Intra University Mathematical Olympiad (IUMO) Category A or Intra University Mathematical Olympiad (IUMO) Category B. and he can't take part in both categories because both categories will occur at same time.
4. Registration fees is non-refundable.
5. For cancellation of registration or changing of a team member, a written application along with registration details must be sent by the participant or team lead to official email of Mathematics Society – SIBAU (sisc.mc@iba-suk.edu.pk) within two days of closing of Registration.
6. Half amount of Registration fees will be refunded (In Case of Cancellation).
7. Every participant must bring their original CNIC and student card.
8. Calculator and mobile phones are strictly prohibited during the competitions.
9. Use of any kind of unfair means (especially getting direct support/signal from someone during the competitions) may lead to disqualification from the event.
10. Decision of the jury will be considered final. No applications for rechecking will be entertained.
11. Mathematics Society – SIBAU reserves right to disqualify any participant without any written explanation to anyone.
12. Mathematics Society – SIBAU reserves right to modify the competition at any time.
13. By entering, the entrants, including the winners, agree to allow the free use of their names, photographs and results on social media and news purposes.

14. Submission of an entry will be deemed acceptance of these terms and conditions.



## Overview of Registration Fees:

S.No.	Competition	Registration Fees
1.	Intra University Mathematical Olympiad (IUMO) 2022 – Category A	Rs. 800/ per team (3 Members)
2.	Intra University Mathematical Olympiad (IUMO) ) 2022 – Category B	Rs. 800/ per team (3 Members)
3.	Intra University Calculus Contest (IUCC)	Rs. 400/ per participant
4.	Pakistan Poster Competition (PPC)	Rs. 600/ per team (2 Members)

### **Registration Procedure:**

- ♦ Participant(s) for registration of any competition must submit the above mentioned amount with registration form before 25th March 2022 to on any registration help desks placed in front of Knowledge Centre, Academic Block 3 or Cafe.

**Link of Google Site of Mathematics Society – SIBAU:**

<https://sites.google.com/view/ms-sibau>

### **For Further Information:**

**Registration Head - Mathematics Society:** Mr. Riaz Ahmed (03444965429)  
**Co-ordinator Mathematics Society:** Mr. Ahmed Khan (0307-3445833)  
**Patron Mathematics Society:** Dr. Zahid Shaikh (0314-3919679)

### Intra University Mathematics Competitions (IUMC) 2022 Event Plan:

- Expected date of intra event is 27 & 28 March

**Tentative Event Plan of PMC:**

S.No.	Venue	Date	Time
<b>Day 01</b>			
Opening Ceremony	Auditorium	1 <sup>st</sup> April, 2022	9:00 am to 10:30 am
High Tea	Park Beside Auditorium	1 <sup>st</sup> April, 2022	10:30 am to 11:00am
PMO Round 1	Auditorium	1 <sup>st</sup> April, 2022	11:00 am to 1:30 pm
Lunch for Faculty & Guests	Park Beside Auditorium	1 <sup>st</sup> April, 2022	1:30 pm to 2:00 pm
PCC Round 1	Auditorium	1 <sup>st</sup> April, 2022	2:30 pm to 8:00 pm
<b>Day 02</b>			
PMO Round 2	Auditorium	2 <sup>nd</sup> April, 2022	9:30 am to 12:00 pm
High Tea	Park Beside Auditorium	2 <sup>nd</sup> April, 2022	12:00 pm to 12:30 pm
Poster Presentation	Park Beside AB-1	2 <sup>nd</sup> April, 2022	12:30 pm to 1:30 pm
Lunch for Faculty & Guests	Park Beside Auditorium	2 <sup>nd</sup> April, 2022	1:30 pm to 2:30 pm
PCC Round 2	Auditorium	2 <sup>nd</sup> April, 2022	2:30 pm to 8:00 pm
<b>Day 03</b>			
PMO Round 3	Auditorium	3 <sup>rd</sup> April, 2022	9:30 am to 12:00 pm
High Tea	Park Beside Auditorium	3 <sup>rd</sup> April, 2022	12:00 pm to 12:30 pm
Lunch for Faculty & Guests	Park Beside Auditorium	3 <sup>rd</sup> April, 2022	12:30 pm to 1:30 pm
PCC Final	Auditorium	3 <sup>rd</sup> April, 2022	1:30 pm to 2:30 pm
Closing Ceremony/Award Distribution	Auditorium	3 <sup>rd</sup> April, 2022	2:30 pm to 4:30 pm