Ongkharak Demonstration School
SRINAKHARINWIROT UNIVERSITY

Midterm Examination : Semester 2, 2021

Ongkharak Demonstration School

Mathayom 6/5

Monday 15th and Wednesday 17th and Friday 19th Nov, 2021

---

1. สาขาวิจัยและพัฒนาการสอนภาษาไทย

✸ **ภาษาไทยพื้นฐาน**

- การใช้ภาษาเพื่อแสดงทรรศนะ
- การใช้ภาษาเพื่อการโต้แย้ง
- การใช้ภาษาเพื่อโน้มน้าวใจ
- วรรณคดีเรื่องสามัคคีเภทคำฉันท์

2. สาขาวิจัยและพัฒนาการสอนคณิตศาสตร์

✸ **Mathematics Exam Topics**

Unit 4 : Random variables and probability distribution

- Random variable
- Discrete random variables
- Continuous random variable
- Probability distribution of discrete random variable
- Probability distribution of continuous random variable
- Cumulative probability distribution function of discrete random variable
- Cumulative probability distribution function of continuous random variable
- Expected value of discrete random variable
- Expected value of continuous random variable

Description

The examination will contain the following question types:

• Short answer questions in which students must show working

• Drawing and interpreting graphs and diagrams

• Matching Questions: Vocabulary Based

The questions will cover a range of difficulty from easy to difficult.

✸ **Additional Mathematics Exam Topics**

Unit 1 : Differential Calculus

The Idea of Limit

Derivative of a Function

    a. Quotient Rule; Chain Rule

    b. Implicit Function

    c. High Order Derivative

    d. L' Hospital Rule

    e. Applications of Derivative

       - Increasing and Decreasing Functions

       - Minimum and Maximum Values

       - Tangent and Normal to a Curve

       - Rate of Change of a Quantity

        Real Life Applications

Type of Test:

    Part I. Multiple Choice

    Part II. Problem Solving

3. สาขาวิจัยและพัฒนาการสอนวิทยาศาสตร์และเทคโนโลยี

✸ **Physics Exam Topics**

Content

Unit 5: Properties of Solids and Liquids

- Solids versus Fluids
- Elasticity in Solids
- Stress and Strain
- Young's Modulus
- Surface Tension in Liquids
- Viscosity of a Liquid

✴ <u>Physics Exam Topics</u>	✴ <u>Biology Exam Topics</u>
Unit 6: Fluid Dynamics	*Copy-paste the link in your computer browser to open and you can use it to study for your midterm exam. Topic Link will also be send to LINE group.
- Static Fluids	
- Pressure in Fluids	
- Devices for Pressure in Fluids	**Topic : Biodiversity**
- Buoyancy	LINK:<u>PPT OF BIODIVERSITY (slideshare.net)</u>
- Fluid Dynamics	
- Ideal Fluids	**Topic : Ecosystem**
- Continuity Equation	LINK:<u>Ecosystem	class 12	cbse (slideshare.net)</u>
- Bernoulli's Equation	**Topic : Interaction between living organisms**
- Applications of Fluid Dynamics	
Description	LINK:<u>https://docs.google.com/presentation/d/1E_I98I5wKI n0P7yalmgQV9AJPVnS31QD/edit?usp=sharing&ouid=1098 84879169697924299&rtpof=true&sd=true</u>
The examination will contain the following question types:	
• Short answer questions in which students must show working	**Topic : Change of Population**
• Drawing and interpreting graphs and diagrams	LINK:<u>Population Change Over Time by Paul Sweeney (prezi.com)</u>
• Matching Questions: Vocabulary Based	
	Topic : Ecological balance
The questions will cover a range of difficulty from easy to difficult.	LINK:<u>Ecological Balance (slideshare.net)</u>
	Topic : Natural Resources
	LINK:<u>(572) Geography and National Resources in Thailand - YouTube</u>