

## 5° SEMESTRE PREPARATORIA ÁREA-II

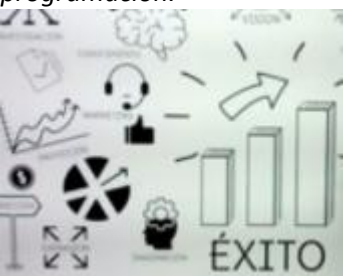
### SOFTWARE DE PROGRAMACIÓN 5TO GENERAL

#### ACTIVIDADES PARA EL MES DE AGOSTO

##### SEMANA 1 24 al 28 de septiembre

<b>ACTIVIDAD</b>	<b>PRODUCTO</b>
<p><i>Realizar en Genially la historia de los lenguajes de programación , incluir año, autor y avances importantes así como datos sobresalientes de cada lenguaje de programación .</i></p> <p><i>Nota: utilizar el banco de imágenes del programa sugerido.</i></p> <p><i>Elaboración de cuadro comparativo de lo que son los lenguajes de alto y bajo nivel así como el lenguaje ensamblador.</i></p>	<p>Subir presentación en Genially sobre los lenguajes de programación.</p> <p>Realizar en su cuaderno un cuadro comparativo de los lenguajes de programación.</p>

##### SEMANA 2 31 de agosto al 4 de septiembre

<b>ACTIVIDAD</b>	<b>PRODUCTO</b>
<p><i>Realizar un Infograma sobre Lógica de programación.</i></p>  <p>Lógica es la técnica utilizada para desarrollar instrucciones en una secuencia para lograr determinado objetivo. Es la organización y planificación de instrucciones en un algoritmo, con el objetivo de tornar visible la implementación de un programa o software. <i>Utilizando el programa FREEPIK utilizar el banco de imágenes para describir la lógica de programación.</i></p>	<p>Realizar en Genially el infograma sobre la lógica de programación.</p> <p>Entregar un la presentación con FREEPIK y subir a classroom.</p>

LAVE CPB	Conocimientos Básicos	Habilidades	Actitudes	Aprendizajes Esperados
BTIC6	<p>Lógica de programación:</p> <ul style="list-style-type: none"> <li>• Algoritmos.</li> <li>• Diagramas de flujo.</li> <li>• Pseudocódigo.</li> <li>• Decisiones.</li> <li>• Ciclos.</li> </ul> <p>Lenguajes de programación:</p> <ul style="list-style-type: none"> <li>• Tipos de lenguajes.</li> <li>• Metodología de programación. <ul style="list-style-type: none"> <li>▪ Estructurado.</li> <li>▪ Orientado a objetos.</li> </ul> </li> </ul> <p>Programación utilizando un lenguaje de alto nivel:</p> <ul style="list-style-type: none"> <li>• Entorno de desarrollo.</li> <li>• Variables.</li> <li>• Operadores.</li> <li>• Constantes.</li> <li>• Palabras reservadas.</li> <li>• Sentencia de decisión.</li> <li>• Estructuras: <ul style="list-style-type: none"> <li>▪ Condición.</li> <li>▪ Repetición.</li> </ul> </li> </ul> <p>Arreglos.</p>	<p>Analiza los elementos que integran los diagramas de flujo.</p> <p>Enuncia de manera secuencial los elementos para la resolución de problemas mediante algoritmo y diagramas de flujo.</p> <p>Examina el tipo y métodos de lenguaje de programación con relación a una necesidad específica.</p> <p>Identifica los elementos que integran la programación en un lenguaje de alto nivel.</p> <p>Emplea y estructura propuestas de solución empleado lenguaje de programación de alto nivel.</p>	<p>Resuelve situaciones de forma cotidiana.</p> <p>Aporta ideas en la solución de problemas promoviendo su creatividad.</p> <p>Expresa diversas opciones para dar solución a problemas de su contexto.</p> <p>Afronta retos asumiendo la frustración como parte del proceso.</p>	<p>Plantea el uso de diagramas de flujo y algoritmos, fomentando su desarrollo creativo, para solucionar problemas cotidianos de su contexto.</p> <p>Explica los lenguajes de programación y sus metodologías de forma consciente, asertiva y empática, en la resolución de problemas del ámbito académico y laboral.</p> <p>Propone la creación de códigos con instrucciones secuenciales, condicionales y/o repetitivas, asumiendo la frustración como parte del proceso de aprendizaje, en la solución de problemas de su entorno.</p>

### SEMANA 3 7 al 11 de septiembre

ACTIVIDAD	PRODUCTO
<p><i>Algoritmos y diagramas de flujo.</i></p> <p><i>Realizar un infograma sobre los algoritmos, aplicaciones.</i></p> <p><i>Ventajas</i></p> <p><i>Desventajas</i></p> <p><i>Características</i></p> <p><i>Realizar algoritmos de uso cotidiano en CANVA</i></p> <p><i>Realización y solución de algoritmos</i></p>	<p>Subir el infograma realizado en CANVA y subir a CLASSROOM</p> <p>Entregar rutas en PowerPoint y subir a CLASSROOM</p>

**SEMANA 4 14 al 18 de septiembre**

<b>ACTIVIDAD</b>	<b>PRODUCTO</b>
<i>Diagramas de flujo.</i>	Subir el infograma realizado en CANVA y subir a CLASSROOM, bir diagramas de flujo solucionados .  Subir diagramas de flujo en DRAW.IO  Entregar rutas en PowerPoint y subir a CLASSROOM
<i>Realizar un infograma sobre los Diagramas de Flujo</i>	
<i>Ventajas</i>	
<i>Desventajas</i>	
<i>Características</i>	
<i>Realizar diagramas de flujo uso cotidiano en DRAW.IO</i>	
<i>Realización y solución de DIAGRAMAS DE FLUJO.</i>	
<i>Investigación sobre RAPTR</i>	

**SEMANA 5 21 al 29 de septiembre**

<b>ACTIVIDAD</b>	<b>PRODUCTO</b>
<i>Pseudocodigo, decisiones y Ciclos</i>	Entrega de folleto sobre RAPTOR.
<i>Realizar un <b>FOLLETO</b> en CANVA sobre el programa raptor.</i>	Entregar en PowerPoint diagrama de flujo de RAPTOR.
<i>Entregar ejercicios de Diagramas de Flujo secuenciales en RAPTOR</i>	Entregar una presentación sobre las RUTAS de PowerPoint.

---

## ACTIVIDADES DEL CURSO DE DIAGNÓSTICO DE CÁLCULO I

### QUINTO SEMESTRE

Semana del 24 al 28 de Agosto

Día 1

Operaciones básicas con fracciones

$$1) \frac{3}{4} + \frac{1}{6} =$$

$$2) \frac{5}{2} + \frac{4}{9} =$$

$$3) \frac{4}{7} + \frac{3}{8} =$$

$$4) \frac{3}{4} - \frac{1}{6} =$$

$$5) \frac{5}{2} - \frac{4}{9} =$$

$$6) \frac{4}{7} - \frac{3}{8} =$$

$$7) \frac{3}{4} \times \frac{1}{6} =$$

$$8) \frac{5}{2} \times \frac{4}{9} =$$

$$9) \frac{4}{7} \times \frac{3}{8} =$$

$$10) \frac{3}{4} \div \frac{1}{6} =$$

$$11) \frac{5}{2} \div \frac{4}{9} =$$

$$12) \frac{4}{7} \div \frac{3}{8} =$$

Día 2

Productos notables/factorización

$$1) (x+2)(x-2)$$

$$2) (3x-1)(3x+1)$$

$$3) (5x^2-2y)(5x^2+2y)$$

$$4) (x+2)(x-5)$$

$$5) (x-3)(x-5)$$

$$6) (x-4)(x+2)$$

$$7) (x+4)^2$$

$$8) (3x+4y)^2$$

$$9) (4x^2-3y)^2$$

$$1) (x^2+2x-15)$$

$$2) (x^2-6x+5)$$

$$3) (x^2+7x+10)$$

$$4) (4x^2-9y^4)$$

$$5) (16x^2-25)$$

$$6) (49x^2-36y^6z^2)$$

$$7) (x^2+2x)$$

$$8) (3x^3-6x^2+12x)$$

$$9) (24x^2+8y+16z)$$

Día 3

Repaso de los temas anteriores

ACTIVIDADES DEL CURSO DE CÁLCULO DIFERENCIAL E INTEGRAL I

### **Semana 31 de Agosto al 4 de Septiembre de 2020**

Día 1

Introducción a la materia: importancia

Día 2

Valor numérico de las funciones. Uso de calculadora

Día 3

Valor numérico de las funciones. Ejercicios 1-18. Páginas 8-11

### **Semana del 7 al 11 de Septiembre de 2020**

Día 1

Funciones. Propiedades y características I

Día 2

Combinación de Funciones I. Ejercicios 1-13. Páginas 12-15

Día 3

Combinación de Funciones II. Ejercicios 14-25. Páginas 15-18

### **Semana del 14 al 18 de Septiembre de 2020**

Día 1

Combinación de Funciones III. Ejercicios 1-20. Páginas 16-22

Día 2

Continuidad I. Intervalos de continuidad. Ejercicios 1-15. Páginas 22-25

Día 3

Continuidad II. Ejercicios 16-30. Páginas 25-27

## **Semana del 21 al 25 de Septiembre de 2020**

Día 1

Concepto de Límite

Día 2

Límites I. Ejercicios 1-15. Páginas 33-35

Día 3

Límites II. Ejercicios 16-30. Páginas 35-38

## **Semana del 28 de Septiembre al 2 de Octubre de 2020**

Día 1

Límites indeterminados I. Ejercicios 1-9. Páginas 39-40

Día 2

Límites indeterminados II. Ejercicios 1-10. Páginas 41-43

Día 3

Repaso

---

**FRANCÉS**

### **1. Cinquième semestre**

Jour 1 : Message de bienvenu et présentation.

Jour 2 : Parler de ses goûts et de ses loisirs. Devoir page 5

Jour 3 : L'utilisation du verbe « faire » + la préposition « de »

Jour 4 : Par binôme, réalisez les activités des pages 8-9-10.

Jour 5 : Corrections des activités des pages 8-9-10.

Jour 6 : Production orale : Travail en binôme. Qu'est-ce que tu fais le week-end ? Cite au moins cinq activités en formulant des phrases.

Jour 7 : Introduction à la compréhension des écrits

Jour 8 : Lisez le chapitre 1 du livre de lecture (Intrigue au stade).

**GEOGRAFÍA QUINTO  
SEMESTRE PREPARATORIA**

**SEMANA 1**

Investigar diferentes conceptos de geografía y sus ciencias auxiliares

Divisiones de la geografía: el alumno conoce las diferentes formas de la geografía y sus campos de estudio

**SEMANA 2**

Dibujo del sistema solar y todos sus componentes cósmicos

Investiga en que consiste la teoría del BIG BANG

**SEMANA 3**

Ilustra capas de la tierra

Realizar dibujo de líneas y puntos imaginarios de la tierra

**SEMANA 4**

Buscar una noticia que hable acerca de un sismo y su impacto en la corteza terrestre

Investigar las eras geológicas y exponer en clase las características de cada una de esas

**SEMANA 5**

Investigar en qué países se encuentra la mayor parte de las aguas continentales y su ubicación

Escribir las medidas que utiliza para el cuidado del agua

---

**ENGLISH ACTIVITIES FOR BEGINNERS**

Day 1

Diagnostic week

Pronouns

Manual pages 6 and 7.

Day 2

Diagnostic week

Simple present. Affirmative, Negative and Interrogative form.

Manual pages 27, 28 and 29.

Day 3

Diagnostic week

Reading comprehension exercise.

Day 4

Alphabet and numbers from 1 to 1000.

Manual pages 1,2 and 3.

Day 5

Cardinal and ordinal numbers.

Dictation of numbers.

Day 6

Punctuation

Manual pages 13, 14 and 15.

Exercise. Use the correct punctuation rules in sentences and paragraphs.



Day 7

Nouns

Manual pages 16, 17, 18 19 and 20.

Day 8

Everyday healthy living and Nutrition.

Manual pages 133, 134 and 135.

Day 9

Physical activity and Mental health and relationships.

Manual pages 21 and 22.

Day 10

Definite articles The, a / an.

Manual pages 21 and 22.

Day 11

Adjectives

Manual pages 22, 23 and 24.

Description exercise.

Day 12

Much / Many

Manual pages 25 and 26.

How much and how many exercise.

Day 13

Simple present review

Dictation of sentences and exercise.

Day 14

Simple past

Manual pages 30 and 31.

Simple past writing exercise.

Day 15

Verbs practice

Regular and irregular list of verbs.

Day 16

Verb "to be" review

Manual pages 31 and 32.

Dictation of sentences.

Day 17

Reading comprehension exercise.

---

**IMPORTANT ASPECTS.**

- ❖ All the activities need to be written in the notebook on the correct section
- ❖ All the activities are going to be at CLASSROOM since the beginning of the week.
- ❖ All the pages must have name and date

**WEEK 1**

Day 1

Class Work: Presenting Ourselves and Code of Conduct

Homework:

- ☺ Divide notebook and make frontpages
- ☺ Print and solve Paper 1 (The paper is in *Classroom*)

Day 2

Class Work: Review Level 5 (Part A)

Homework:

- ☺ For each question, write the correct answer. Use **only** one word in each gap.

**Our Holiday in Spain**

Our trip to Spain was wonderful! First, we flew to Valencia, one of the **(1)** ..... beautiful cities in Spain. It's a nice and elegant port city. We stayed at Hampton by Hilton there for three nights. We went sightseeing and just relaxed at the swimming pool.

From Valencia, we flew to Ibiza, arriving **(2)** ..... Saturday morning. We went to Las Salinas, **(3)** ..... is one of the most popular beaches in Ibiza. The next day, we had a go **(4)** ..... water skiing or parasailing. One night, we took a bus tour to a traditional Ibizan village and stayed for dinner and a Flamenco show. We heard Spanish songs for voice and guitar, and we saw traditional dances - it **(5)** ..... a very special evening.

From Sant Jordi, we drove to San Rafael. We stayed there for two nights. The very next day, we drove back to Ibiza and flew back to Valencia. We plan to come back to Spain soon, **(6)** ..... for now, we're on our way to Portugal!

### Day 3

Class Work: Review Level 5 (Part B)

Homework:

- ☺ Listen carefully and write the answers  
<https://www.youtube.com/watch?v=XVxlyMib6Nk&t=12s>
- ☺ Homework: Make a composition about “My Expectations of this course” 45-60 words (Writing Section) (Upload in *Classroom*)

## **WEEK 2**

### Day 4

Class Work: Review Simple Present and Present Continuous

Homework

- ☺ Manual p. 6-9

### Day 5

Class Work: Checking Homework and Activities of Review

Homework:

- ☺ Manual p. 10
- ☺ Manual p. 150-151

### Day 6

Class Work: Manual p. 11 and Notebook activities

Homework:

- ☺ *Classroom* Activity
- ☺ Manual p. 152

## **WEEK 3**

### Day 7

Class Work: Simple Past and Past Progressive

Homework:

- ☺ Manual p. 12-14.

## Day 8

Class Work: Simple Past and Past Progressive

Homework:

- ☺ Listen and write the answers in your notebook  
[https://www.youtube.com/watch?v=b\\_fn9Jpp7ts&t=9s](https://www.youtube.com/watch?v=b_fn9Jpp7ts&t=9s)

## Day 9

Class Work: Reading The Fruitcake Special Part A

Homework:

- ☺ Finish questionnaire 1
- ☺ [Write a paragraph in your notebook about the Best Moment in your Life](#)

## **WEEK 4**

### Day 10

Class Work: Reading Activity Independence Day

Homework:

- ☺ Start preparing the monthly Project

### Day 11

Without Class (Independence Day)

### Day 12

Class Work: Skills Activities

Homework:

- ☺ Listen and write the answers in your notebook  
<https://www.youtube.com/watch?v=Qa5-dRfe6wg>
- ☺ Read the text below and choose the correct word (A, B, C or D) for each space.

### Stop the Invaders

Even if you take good (1) ... of your body, you can still get sick sometimes. Germs can invade even a healthy body! Getting sick can make you feel miserable, but there are some things that you can do to help yourself get better quickly and be more comfortable. The first thing to do when you are not feeling well is to (2) ... your parents know.

Sometimes it is hard to tell whether you have a cold, the flu, or something more serious. So your parents may take you to the doctor. Your doctor can (3) ... tests that will let you know what is making you sick. You may be sick because of bacteria. Strep throat is an (4) ... of an illness caused by bacteria. If bacteria has made you sick, your doctor (5) ... give you antibiotics. Antibiotics are medicines that are designed to help your body get rid (6) ... the bacteria that is making you sick.

- |             |                   |              |            |
|-------------|-------------------|--------------|------------|
| 1. A) care  | B) responsibility | C) attention | D) trouble |
| 2. A) admit | B) permit         | C) let       | D) allow   |
| 3. A) do    | B) put            | C) carry     | D) follow  |
| 4. A) case  | B) model          | C) symbol    | D) example |
| 5. A) have  | B) will           | C) is        | D) had     |
| 6. A) for   | B) from           | C) of        | D) in      |

## WEEK 5

### Day 13

Class Work: Review

Homework

- ☺ Study for quiz

### Day 14

Class Work: Grammar quiz and Skills Practice

Homework

- ☺ Listen to the next recording and answer in your notebook

<https://www.youtube.com/watch?v=iYIXGSWS7uA&t=5s>

### Day 15

Class Work: Manual p. 17

Homework

- ☺ Manual p. 153-154 Read and make a creative squeme in the Speaking Section
- ☺ Upload the monthly proyect

## **WEEK 6**

### Day 16

Class Work: Skills Practice

Homework

☺ Classroom Activity

### Day 17

Class Work: Phrasal Verbs

Homework

☺ Manual p. 155

### Day 18

Class Work: Present Perfect

Homework

☺ Manual p. 20

☺ Read the text below and choose the correct word (**A, B, C or D**) for each space.

### **London Parks**

London is famous (1) ... its parks and gardens. Some of them belong to the Crown but they are all open to the public and the entrance is free of charge. In St James's Park you can watch and (2) ... swans, ducks, geese and other water birds. Hyde Park (3) ... to be a hunting ground and is still popular with horse riders.

Those who like a good argument should go to the Speakers' Corner to listen to individuals (4) ... their speeches on various subjects. Regent's Park now houses London Zoo and open-air theatre where Shakespeare's plays are staged in summer. Not (5) ... the parks are in the city centre. Greenwich and Richmond are located in the suburbs. All these areas of green give the city dwellers an excellent (6) ... to enjoy some peace and quiet away from traffic and crowded streets.

- |              |              |            |            |
|--------------|--------------|------------|------------|
| 1. A) by     | B) for       | C) from    | D) with    |
| 2. A) feed   | B) eat       | C) breed   | D) lead    |
| 3. A) should | B) ought     | C) used    | D) have    |
| 4. A) doing  | B) giving    | C) taking  | D) talking |
| 5. A) each   | B) whole     | C) every   | D) all     |
| 6. A) chance | B) knowledge | C) account | D) source  |

**AUGUST 24**

Choose the correct answer

1.- Long hours and unsociable shifts \_\_\_\_\_ take their toll on health, relationships and family life.

a) must b) can c) are able d) shouldn't

2.- \_\_\_\_\_are poor observers of their child's behavior so deviant behavior reaches unmanageable proportions.

a) Parents b) Parents that c) When parents d) If parents

3.- The Eiffel Tower \_\_\_\_\_ the International Exhibition of Paris of 1889 commemorating the centenary of the French Revolution

a) of b) commemorating c) was built for d) the

4.- Our sun, in many ways an average sort of star, has been around for nearly five billion years and has enough fuel to \_\_\_\_\_ going for another five billion years.

a) continue b) carry c) keep d) maintain

5.-When major food companies \_\_\_\_\_ using partially hydrogenated oils in the 1970s, they thought they were making these products more healthful.

a) these b) began widely c) in the d) they

**AUGUST 25**

**Choose the word or phrase that will correctly complete the conversation.**

1.- What year did you \_\_\_\_\_ university?

a) graduate b) graduate from c) graduating d) graduating from

2.- It seems to be getting worse. You had better \_\_\_\_\_ a specialist.

a) consult b) consult to c) consult for d) consult by

3.- Chicago is a large city. \_\_\_\_\_?

a) aren't b) doesn't c) won't d) isn't it

4.- Don't leave your book near the open fire. It might easily

a) catch the fire b) catch to fire c) catch on fire d) catch with fire

5.- Do you enjoy \_\_\_\_\_?

a) to swimming b) swim c) for swimming d) swam



## AUGUST 26

Complete the sentences with the correct word.

1.- During the early period of ocean navigation, \_\_\_\_\_ any need for sophisticated instruments and techniques.

- a) so that hardly
- b) when there hardly was
- c) hardly was
- d) there was hard

2.- Refrigerating meats \_\_\_\_\_ the spread of bacteria.

- a) slows
- b) slowing
- c) to slow
- d) is slowed

3.- Throughout the animal kingdom, \_\_\_\_\_ bigger than the elephant.

- a) whale is only the
- b) is the whale only
- c) only whale is the
- d) only the whale is

4.- The fact \_\_\_\_\_ credit cards are widely available has made them a popular form of payment.

- a) of
- b) that
- c) is that
- d) which is

5.- The Constitution gave the legislative branch of government \_\_\_\_\_ to pass laws.

- a) the power
- b) has the power
- c) the power is
- d) of the power

### **AUGUST 27**

LOOK IN A DICTIONARY THE MEANING OF THE VOCABULARY WORDS AND WRITE A SENTENCE WITH EACH ONE IN YOUR NOTEBOOK IN YOUR WRITING SECTION.

- 1.- brevity
- 2.- concise
- 3.- laconic
- 4.- pithy
- 5.- quiescent
- 6.- reticent
- 7.- succinct
- 8.- taciturn
- 9.- swamgwer
- 10.- pretentious

### **AUGUST 28**

Read the paragraph then answer the exercise

1. The Alaska pipeline starts at the frozen edge of the Arctic Ocean. It stretches southward across the largest and northernmost state in the United States, ending at a remote ice-free seaport village nearly 800 miles from where it begins. It is massive in size and extremely complicated to operate.

2. The steel pipe crosses windswept plains and endless miles of delicate tundra that tops the frozen ground. It weaves through crooked canyons, climbs sheer mountains, plunges over rocky crags, makes its way through thick forests, and passes over or under hundreds of rivers and streams. The pipe is 4 feet in diameter, and up to 2 million barrels (or 84 million gallons) of crude oil can be pumped through it daily.
  3. Resting on H-shaped steel racks called "bents," long sections of the pipeline follow a zigzag course high above the frozen earth. Other long sections drop out of sight beneath spongy or rocky ground and return to the surface later on. The pattern of the pipeline's up-and-down route is determined by the often harsh demands of the arctic and subarctic climate, the tortuous lay of the land, and the varied compositions of soil, rock, or permafrost (permanently frozen ground). A little more
  4. than half of the pipeline is elevated above the ground.
  5. The remainder is buried anywhere from 3 to 12 feet, depending largely upon the type of terrain and the properties of the soil.
  6. One of the largest in the world, the pipeline cost approximately \$8 billion and is by far the biggest and most expensive construction project ever undertaken by private industry. In fact, no single business could raise that much money, so eight major oil companies formed a consortium in order to share the costs. Each company controlled oil rights to particular shares of land in the oil fields and paid into the pipeline-construction fund according to the size of its holdings. Today, despite enormous problems of climate, supply shortages, equipment breakdowns, labor disagreements, treacherous terrain, a certain amount of mismanagement, and even theft, the Alaska pipeline has been completed and is operating.
1. The passage primarily discusses the pipeline's
    - a) operating costs
    - b) employees
    - c) Consumers
    - d) d) construction
  2. The word "it" in line 5 refers to the
    - a) pipeline
    - b) ocean
    - c) state
    - d) village

3. According to the second paragraph, 84 million gallons of oil can travel through the pipeline each
  - a) day
  - b) week
  - c) month
  - d) year
  
4. The phrase "Resting on" in line 15 is closest in meaning to
  - a) consisting of
  - b) supported by
  - c) passing under
  - d) protected by
  
5. The author mentions all of the following in the third paragraph as important in determining the pipeline's route EXCEPT the
  - a) climate
  - b) lay of the land itself
  - c) local vegetation
  - d) kind of soil and rock
  
6. The word "undertaken" in line 31 is closest in meaning to
  - a) removed
  - b) selected
  - c) transported
  - d) attempted
  
7. According to the last paragraph, how many companies shared the costs of constructing the pipeline?
  - a) three
  - b) four
  - c) eight
  - d) twelve

8. The word "particular" in line 35 is closest in meaning to
- a) peculiar
  - b) specific
  - c) exceptional
  - d) equal
9. According to the last paragraph, which of the following determined what percentage of the construction costs each member of the consortium would pay?
- a) How much oil field land each company owned
  - b) How long each company had owned land in the oil fields
  - c) How many people worked for each company
  - d) How many oil wells were located on the company's land
10. Where in the passage does the author provide a term for a layer of soil that always remains frozen?
- a) Line 4
  - b) Line 15
  - c) Line 23
  - d) Line 37

#### **AUGUST 31**

In your notebook in section reading write 150 words paragraph about technology and education.

#### **SEPTEMBER 1**

Go to [www.englishtag.com](http://www.englishtag.com) and answer the tests B2 AND C1

#### **SEPTEMBER 2**

Go to the link and answer the TOEFL grammar practice exercise.

<https://www.grammarbank.com/toefl-grammar-practice-tests-6.html>

### SEPTEMBER 3

Go to the link and practice your grammar skills.

<https://www.examenglish.com/index.html>

### SEPTEMBER 4

**Read the paragraph then in your notebook in the reading section do a mind map**

The craft of perfumery has an ancient and global heritage. The art flourished in Ancient Rome, where the emperors were said to bathe in scent. After the fall of Rome, much of the knowledge was lost, but survived in Islamic civilizations in the middle Ages. Arab and Persian pharmacists developed essential oils from the aromatic plants of the Indian peninsula. They developed the processes of distillation and suspension in alcohol, which allowed for smaller amounts of raw materials to be used than in the ancient process, by which flower petals were soaked in warm oil. This knowledge was carried back to European monasteries during the Crusades.

### SEPTEMBER 7

1. I bought myself a new set of tools ---- I am going to build a new home for Puffy.

- a) which
- b) when
- c) with which
- d) in which
- e) where

2. Aristotle was among those ---- tried to prove the Earth was actually spherical and not flat.

- a) whose
- b) to whom
- c) where
- d) who
- e) in which

3. Those are the kind of movies ---- many Americans would rate as mature.

- a) which
- b) where
- c) in which
- d) of which
- e) whose

4. There are known to be total of eight planets in the Solar System ---- is the Earth.
- a) which
  - b) that
  - c) through which
  - d) each of them
  - e) one of which
5. Eclipse is the event ---- tonight in North America.
- a) that observed
  - b) which are observing
  - c) being observed
  - e) having observed
  - f) whom observed
6. I don't like ---- by a cop car ---- I am driving alone because it makes me nervous.
- a) being followed/while
  - b) being followed/where
  - c) to follow/while
  - d) to be followed/that
  - e) to be following/ that
7. - I decided not to have a carrier in English, I still want to learn it.
- a) despite
  - b) although
  - c) therefore
  - d) due to
  - e) so that
8. She suddenly wants to get married, ---- moving out and finding a job in Michigan.
- a) while
  - b) moreover
  - c) in addition to
  - d) including
  - e) in contrast

9. ---- we all know how poor his campaign was, he still won the election.

- a) because
- b) in case
- c) as long as
- d) ever since
- e) despite the fact that

10.- The teacher advised us to go to every class and turn in our homework assignments timely ---- happens.

- a) due to the fact that
- b) accordingly
- c) however
- d) no matter that
- e) whereas

### **SEPTEMBER 8**

Astronomers on \_\_\_\_\_ announced the discovery of a new -- and possibly abundant -- class of planets that has more in common with Earth than the uninhabitable gas giants previously discovered.

- a) University research
- b) Tuesday
- c) NASA
- d) observatories

2.- Food is, after all, an important part of Chinese culture and mission controllers say it is important \_\_\_\_\_ China's space pioneers do not go hungry.

- a) so that
- b) make sure
- c) to ensure that
- d) that food is provided for

3.- Apple Computer has unveiled its new desktop computer design, \_\_\_\_\_ all disk drives and processors into a flat display less than two inches thick

- a) Which integrates
- b) which includes
- c) enclosing
- d) which contains



4.- \_\_\_\_\_ are poor observers of their child's behavior so deviant behavior reaches unmanageable proportions.

- a) Parents that
- b) Parents
- c) When parents
- d) If parents

5.- International trade in the world's 20-odd varieties of sturgeon \_\_\_\_\_ by the United Nations since 1998, after a drastic rise in poaching.

- a) is controlled
- b) is supposed
- c) has been regulated
- d) has been promoted

6 .- By far the most noticeable blemishes on the surface of the Sun \_\_\_\_\_ sunspots.

- a) are
- b) the
- c) that are
- d) in the

7.- Greece's achievement in the 2004 Olympics raise anew the question of whether Athens should be the permanent home of the Games.

- a) raise anew
- b) achievement in the
- c) wether
- d) should be

8.- Crushed ice is use to cool drinks, and is often applied to injuries where there is swelling, to remove excess heat generated in the tissues.

- a) is often
- b) where there is
- c) generated
- d) use

9.- Long hours and unsociable shifts \_\_\_\_\_ take their toll on health, relationships and family life.

- a) must
- b) are able to
- c) shouldn't
- d) can

**SEPTEMBER 9**

Choose the **one** word or **phrase** that best completes the sentence.

1. Vegetables are an excellent source \_\_\_\_\_ vitamins.
  - A. have
  - B. of
  - C. where
  - D. contain
  
2. Microscopes make small things appear larger than \_\_\_\_\_.
  - A. really are
  - B. are really
  - C. are they really
  - D. they really are
  
3. The city of Montreal \_\_\_\_\_ on an island in the Saint Lawrence River.
  - A. was built
  - B. has built
  - C. that built
  - D. built

4. A singer's struggle to succeed in popular music is the kind of story \_\_\_\_\_ a fascinating film could be made.
- A. with
  - B. by
  - C. for whom
  - D. about which

### SEPTEMBER 10

Each sentence has four highlighted words or phrases. The four highlighted parts of the sentence are marked A, B, C and D. Identify the **one** highlighted word or phrase that must be changed in order for the sentence to be correct.

1. A large (A) number of automobile (B) part are now (C) made of plastic (D) instead of steel.
- 2.- Although a kangaroo (A) normally uses (B) its large feet and strong legs (C) for hopping, (D) but it can also swim.
- 3.- When a (A) severe ankle (B) injury forced (C) herself to give up reporting in 1926, Margaret Mitchell (D) began writing her novel, *Gone with the Wind*.
- 4.- (A) The pineapple, a fruit (B) grow in tropical climates (C) throughout the world, (D) is native to parts of South America.
- 5.- Canals are (A) artificial waterways, often constructed (B) either to transport heavy loads or to (C) delivering water (D) to cities and farms.
- 6.- Anne Elizabeth McDowell is (A) best (B) remembered for a (C) weekly journal, *Woman's Advocate*, (D) who she launched in January 1855.
- 7- A ray of light passing (A) through (B) the center of a thin lens (C) keep its (D) original direction.

## SEPTEMBER 11

### CHOOSE THE CORRECT DEFINITION

1.- Move from one place to another. To transport physically. To send.

- a) to glide
- b) to rearrange
- c) to replace
- d) to transfer

2. Able to be read or to be deciphered, legible.

- a) readable
- b) focused
- d) understandable
- e) clear

3. A word or phrase that has the same meaning

- a) synonym
- b) likeness
- c) similarity
- d) resemblance

4. A solemn promise or undertaking. A vow or commitment.

- a) agreement
- b) pledge
- c) promise
- d) guarantee

5. Relating to recent times or the present. Contemporary or up-to-date. Advanced, recently developed techniques or style.

- a) new
- b) modern
- c) art
- d) inspiring

## SEPTEMBER 14

Determine whether the underlined portion of the sentences below is corrected or whether it needs to be revised.

1.- For homes in typically colder geographic regions, it is particularly important to have effective and efficient heating systems.

- a) For homes in typically colder geographic regions
- b) For people in homes in typically colder geographic regions
- c) For homes typically cold geographic regions
- d) People in typically colder geographic regions
- e) Homes in typically colder geographic regions

2.- Inside the glove compartment were legal documents, pictures, and there were a few napkins from the coffee shop, but no gloves.

- a) and there were a few napkins from coffee shop, but no gloves
- b) and there were a few napkins from the coffee shop, but not any gloves
- c) and napkins from the coffee shop, no gloves were there
- d) and napkins from coffee shop, no gloves were there

3.- Concerns about global warming have grown into actual efforts sanctioned by non-governmental organizations and governments that not only work to understand global warming and also to prevent it.

- a) understand global warming and also to prevent it
- b) understand global warming but also to prevent it
- c) understand global warming yet also to prevent it
- d) understand global warming but also to prevent its growth

4.- Even though I have seen the movie countless times, I still laughed when the sheriff throws his mug.

- a) laughed when the sheriff throws his mug
- b) laugh when the sheriff throws his mug
- c) laughed when the sheriff threw his mug
- d) laugh when the sheriff will throw his mug

5.- Yesterday I fell down the stairs and then tried to act like I did so on purpose.

- a) Yesterday I fell down the stairs and then
- b) Yesterday I fell down the stairs, I
- c) I fell down the stairs yesterday, I
- d) After I fell down the stairs yesterday, I

#### **SEPTEMBER 15**

Choose the meaning for the words

1.- deceive

- a) to happen
- b) to pull in
- c) to mislead
- d) crafty; wily

2.- chronic

- a) to push back
- b) to declare
- c) demanding
- d) prolonged

3.- repel

- a) to declare
- b) to push back
- c) to conclude from evidence
- d) acceptance

4.- exclaim

- a) equivalent or similar word
- b) to call out; shout
- c) to push back
- d) spoiled; dishonest

5.- credence

- a) to postpone
- b) behavior; activity
- c) acceptance
- d) equivalent or similar word

### **SEPTEMBER 17**

Choose the definition for each word

1.- What is the meaning of abandon?

- a) lose a of a cherished person or object
- b) complete control over
- c) surrender

2.- What's the meaning of abandonment?

- a) leaving someone, such as a child or a spouse, voluntary
- b) the act of putting someone or something before oneself
- c) leave someone alone

3.- What is the meaning of abate?

- a) increase in amount or intensity
- b) zero amount, degree
- c) reduce in amount, degree or intensity

4.- What is the meaning of abbreviate?

- a) make a word or a phrase longer
- b) make a word or a phrase short
- c) make a word or a phrase complex to understand

5.- What is the meaning of abbreviation?

- a) the official name of something
- b) a long form of a name
- c) a person's unofficial name

### **SEPTEMBER 18**

Write the suffix or prefix for each vocabulary word.

able ist ing ive im ic un ment ful ient

- 1.- It's always use \_\_\_\_\_ to carry some cash on your, in case of an emergency.
- 2.- Planning a holiday can be just as excit\_\_\_\_\_ as going on holiday.
- 3.- I found that this medicine is the most effect\_\_\_\_\_ for colds.
- 4.- She speaks arab\_\_\_\_\_ very well
- 5.- You must not be \_\_\_\_\_ polite to your boss.
- 6.- The CEO has been responsible for many \_\_\_\_\_ popular decisions.
- 7.- I'M un \_\_\_\_\_ to work on weekends.
- 8.- His sex\_\_\_\_\_ comments made him disliked by the female employees.
- 9.- I don't want to get into an argu\_\_\_\_\_ with you about this.
- 10.- Living close to the station is \_\_\_\_\_ for me.



## SEPTEMBER 21

Read the paragraph then answer the exercise

Robert Capa

1. Robert Capa is a name that has for many years been synonymous with war photography.
2. Born in Hungary in 1913 as Friedmann Endre Ernő, Capa was forced to leave his native country after his involvement in anti government protests. Capa had originally wanted to become a writer, but after his arrival in Berlin had first found work as a photographer. He later left Germany and moved to France due to the rise in Nazism. He tried to find work as a freelance journalist and it was here that he changed his name to Robert Capa, mainly because he thought it would sound more American.
2. 3. In 1936, after the breakout of the Spanish Civil war, Capa went to Spain and it was here over the next three years that he built his reputation as a war photographer. It was here too in 1936 that he took one of his most famous pictures, *The Death of a Loyalist Soldier*. One of Capa's most famous quotes was 'If your pictures aren't good enough, you're not close enough.' And he took his attitude of getting close to the action to an extreme. His photograph, *The Death of a Loyalist Soldier* is a prime example of this as Capa captures the very moment the soldier falls. However, many have questioned the authenticity of this photograph, claiming that it was staged.
3. When World war II broke out, Capa was in New York, but he was soon back in Europe covering the war for Life magazine. Some of his most famous work was created on 6th June 1944 when he swam ashore with the first assault on Omaha Beach in the D-Day invasion of Normandy. Capa, armed only with two cameras, took more than one hundred photographs in the first hour of the landing, but a mistake in the darkroom during the drying of the film destroyed all but eight frames. It was the images from these frames however that inspired the visual style of Steven Spielberg's Oscar winning movie 'Saving Private Ryan'. When Life magazine published the photographs, they claimed that they were slightly out of focus, and Capa later used this as the title of his autobiographical account of the war.
5. Capa's private life was no less dramatic. He was friend to many of Hollywood's directors, actors and actresses. In 1943 he fell in love with the wife of actor John Austin. His affair with her lasted until the end of the war and became the subject of his war

memoirs. He was at one time lover to actress Ingrid Bergman. Their relationship finally ended in 1946 when he refused to settle in Hollywood and went off to Turkey.

6. In 1947 Capa was among a group of photojournalists who founded Magnum Photos. This was a co-operative organization set up to support photographers and help them to retain ownership of the copyright to their work.

7. Capa went on to document many other wars. He never attempted to glamorise war though, but to record the horror. He once said, "The desire of any war photographer is to be put out of business."

8. Capa died as he had lived. After promising not to photograph any more wars, he accepted an assignment to go to Indochina to cover the first Indochina war. On May 25th 1954 Capa was accompanying a French regiment when he left his jeep to take some photographs of the advance and stepped on a land mine. He was taken to a nearby hospital, still clutching his camera, but was pronounced dead on arrival. He left behind him a testament to the horrors of war and a standard for photojournalism that few others have been able to reach.

9. Capa's legacy has lived on though and in 1966 his brother Cornell founded the International Fund for Concerned Photography in his honor. There is also a Robert Capa Gold Medal, which is given to the photographer who publishes the best photographic reporting from abroad with evidence of exceptional courage. But perhaps his greatest legacy of all is the haunting images of the human struggles that he captured.

Choose the correct answer

1.- Why did Capa change his name?

- a) To hide his identity
- b) Because he had been involved in protests
- c) To sound more American
- d) Because he had to leave Hungary

2.- Capa originally wanted to be

- a) A photojournalist
- b) a writer
- c) American
- d) a protestor

3.- Capa went to Spain to

- a) fight in the civil war
- b) build his reputation
- c) have a holiday
- d) take photographs

4.- Capa's famous picture *Death of a Loyalist Soldier*

- a) was taken by someone else
- b) was definitely genuine
- c) wasn't even taken in Spain
- d) cannot be proven genuine or staged

5.- When World War II broke out Capa

- a) went to New York
- b) swam ashore on Omaha Beach
- c) went to Europe
- d) went to Normandy

6.- A mistake meant that

- a) only one hundred of Capa's photographs were published
- b) Capa lost both of his two cameras
- c) Capa's images inspired an Oscar winning movie
- d) Most Capa's images of the D-Day landing were destroyed

7.- Capa's private life was

- a) less dramatic than his professional life
- b) spend mostly in Hollywood
- c) very glamorous
- d) spent in Turkey

8.- Capa's wanted his work to

- a) be famous
- b) show how glamorous war can be
- c) show the true horror of war
- d) make lots of money

9.- Which sentence best phrases paragraph 5?

- a) Capa had a tragic private life and was never able to settle down and find happiness
- b) Despite having many good friends and lovers, Capa always put his work first
- c) Capa wanted to make friends with important people in Hollywood so that he could move into the movie industry
- d) Capa's private life was very complicated. He could not choose between the two women he loved, so he went off to work in Turkey

10.- Which sentence best phrases paragraph 4?

a) Capa never tried to avoid danger. He risked his life to take photographs of the D-Day invasion, but then destroyed most of them

b) Capa took some of his most famous photographs during the D-Day invasion, but most were tragically destroyed in an accident.

c) Capa only kept the best eight D-Day photographs as the others were out of focus. These inspired the visual style of a Hollywood film.

d) Capa left Europe when the war broke out and went to take his most famous photographs of the D-Day invasion.

## SEPTEMBER 22

Go to [englishtag.com](http://englishtag.com) and answer test B2

## SEPTEMBER 23

### I.- USE OF ENGLISH.

A.- Underline the correct option

1.-

a) Wen are you going to go out?

b) When going out are we?

c) When do we go out?

2.-

a) I work tomorrow

b) I don't working tomorrow

c) I'm working tomorrow

3.-

a) Did you finish your project?

b) Have you finished your project?

c) Have you got finished your project?

4.-

a) Iam usually having some coffee and toasts for my breakfast

b) I am used to have some coffee and toasts for my breakfast

c) I usually have some coffee and toasts for my breakfast

5.-

a) I'm trying to eat a more healthy diet

b) I try to eat a more healthy diet

c) I'm trying to eat a more healthy diet

B.- Write the appropriate preposition

6.- I don't agree \_\_\_\_\_you

7.- Forget \_\_\_\_\_it!

8.- Does he still go \_\_\_\_\_school

9.- \_\_\_\_\_or is he \_\_\_\_\_University?

10.- Please look \_\_\_\_\_me when I'm talking!

## **SEPTEMBER 24**

Write a paragraph using between 40-50 words on one of the following topics:

- An Important Holiday.
- Technology

## **SEPTEMBER 25**

Go to the link and listen to the topic

<https://learnenglish.britishcouncil.org/skills/listening/intermediate-b1/a-weather-forecast>

Answer true or false

1. It will start raining at lunchtime today in the east.

True False

2. The weather in the north-west will be worse than in the south.

True False

3. There will be thunder in Leeds tonight.

True False

4. Most of England will be hot this week.

True False

5. Wet weather will move from the north to the south at the weekend.

True False

6. It will stay hot when the rain comes.

True False

## **SEPTEMBER 28**

Write a 50 word paragraph about technology

## SEPTEMBER 29

Read the information below then do a mind map in your notebook in the reading section

### Best Body Fitness

#### About us

You don't want just a gym membership. You want a membership that means something. And that means you need support, expert help and a community.

**Best Body Fitness** isn't just a gym: it's a full-service fitness membership made for you.

Here's how it works:

#### STEP ONE: Your assessment

We begin with an assessment session. This is a chance for you to see what we do at **Best Body**. Our assessment plans are no-cost and no-risk. We'll also make a training plan specifically for you.

#### STEP TWO: Your training

When you decide to become a **Best Body** member, we show you what to do, how to do it and why you are doing it. After a few sessions with an expert private trainer you will feel comfortable working out on your own. But don't worry, we'll always be nearby if you have questions.

#### STEP THREE: Your membership

Membership works on a month-to-month basis. There are no sign-up fees and no cancellation fees. Start and stop whenever you want. And the best part? Our fees are the most competitive in the whole downtown area.

#### STEP FOUR: Your community

At **Best Body Fitness**, we see everyone as part of a big team. And when you work with a team, you can do great things. Join any of our specialised classes, led by expert instructors. Come to our nutrition classes. Participate in our regular social events. Everything is included in your fee.

Finally, we wanted to share with you some reasons why our members say that they have chosen us over any other fitness centre in the city.

#### It's so EASY

- Easy to start, stop, cancel or refund a membership
- Easy to access – we're open 24/7, we never close
- Easy to do exercise – we have lots of equipment, no long wait
- Easy results – our trainers and equipment give you success, fast
- Easy to find – in the centre of town, near public transport and with parking

## **It's WONDERFUL**

- Wonderful members
- Wonderful trainers and staff
- Wonderful equipment
- Wonderful energy
- Wonderful location

Come and visit us for a personal tour!

## **SEPTEMBER 30**

### **What an Olympics!**

It's all over! I've been writing my blog from London every day during the Olympics and the Paralympics and this is my final post to look back on a wonderful couple of months. Here are some of the things that were the most memorable for me:

### **The Opening Ceremony**

This set the scene for the Games with an amazing show featuring music, dancing, historical figures, fireworks and British humor. A huge number of volunteers practiced for months to make everything perfect. The best moment was when the old lady in Buckingham Palace turned round and showed that she was neither a lookalike nor an actor but Her Majesty the Queen. The next best bit was when she jumped out of a helicopter with James Bond (although I think that actually was an actor!).

I was very proud of our team as we kept on winning medals and finished in third position in the medal table, which is truly a great result for Great Britain. There were so many incredible sportsmen and women. The ones that stand out for me are Mo Farah, the Somalian-born Londoner who won the 10,000 and 5,000 meters with the whole stadium going crazy, Jessica Ennis, the popular super-athlete from Sheffield who won the heptathlon, and Nicola Adams who won the first female boxing medal in Olympic history for Britain.

### **The Olympic Stadium crowd**

Although the crowd cheered on the British, there was lots of support for athletes of other nationalities too like the wonderful Usain Bolt, from Jamaica, who won the 100 and 200 metres



sprint to become the fastest man alive. There was also Oscar Pistorius of South Africa who was the first disabled person to compete in the Olympics. He go on to win two gold medals and a silver in the Paralympics.

### **New sports**

I have really enjoyed being able to watch sports which are not normally shown on television. Before the Olympics I didn't expect to love watching judo or find myself screaming at the television during a game of wheelchair tennis, but I really got into them. I didn't know anything about goalball before the Paralympics but it became one of my favorite sports.

### **The organization and the atmosphere**

It took seven years of planning and 70,000 volunteers to make everything go well. Many people have said that the organization was not as perfect as that of the Beijing Games, but there was a much better atmosphere which spread out through the whole city. The volunteers were always friendly and helpful and Londoners even began talking to each other, and visitors, on the underground trains!

### **ANSWER THE EXERCISE.**

#### **Match the sportsperson with their achievement.**

- |                     |  |
|---------------------|--|
| 1.- Mo Farah        | ( ) became the first British woman to win a      |
|                     | Boxing medal in the Olympics                     |
| 2.- Jessica Ennis   | ( ) won both the 100 and 200 meters sprint       |
| 3.- Nicola Adams    | ( ) won a gold medal in the heptathlon           |
| 4.- Usain Bolt      | ( ) became the first disabled person to complete |
|                     | the Olympics                                     |
| 5.- Oscar Pistorius | ( ) won gold in the 5, and 10,000 meters         |

**II.- Read the questions and choose the correct answer.**

6.- How long did the Olympics and Paralympics last?

- a) a couple of months
- b) two weeks
- c) seven years

7.- What does the blogger think was the best thing during the opening ceremony?

- a) the British humor
- b) the volunteers
- c) the Queen's appearance

8.- How does the blogger feel about the British athlete's performance?

- a) disappointed
- b) surprised
- c) proud

9.- Which of these British athlete's was born in a foreign country?

- a) Jessica Ennis
- b) Mo Farah
- c) Nicola Adams

10.- Which athlete competed in both the Olympics and Paralympics?

- a) Usain Bolt
- b) Oscar Pistorius
- c) Mo Farah

11.- Which sport was completely new for the blogger?

- a) wheelchair tennis
- b) goalball
- c) judo

12.- How did the London Olympics compare to the Beijing Olympics according to the blogger?

- a) it was better organized, but the atmosphere wasn't good
- b) it was very similar
- c) it was not as well organized, but there was a better atmosphere

13.- What did the blogger say changed about Londoners during the Olympics?

- a) They volunteer
  - b) They watched new sports
  - c) They talked to each other on the trains
-

**LEVEL 9 SENIOR HIGH**  
**FIRST CERTIFICATE SKILLS**  
**MISS ADRIANA LEON**

- Day 1. Welcome student`s warm up, ice breakers.
- Day 2. Grammar exercises: although, though, etc. (contrast). HOMEWORK: Read in English.
- Day 3. Grammar & Use of English exercises (contrast). HOMEWORK: Listen to conversations.
- Day 4. Grammar & Use of English exercises: Conditionals. HOMEWORK: Watch TV in English.
- Day 5. Grammar & Use of English exercises: Conditionals. HOMEWORK: No homework.
- Day 6. Grammar exercises: if. not, unless, whether. HOMEWORK: Study grammar.
- Day 7. Progress test 1 (Units 1-3) HOMEWORK: Read news in English.
- Day 8. Progress test 2 (Units 4-6) HOMEWORK: Listen to conversations.
- Day 9. Progress test 3 (Units 7-9) HOMEWORK: Watch TV in English.
- Day 10. Progress test 4 (Units 10-12) HOMEWORK: No homework.
- Day 11. Student`s book Unit 1, Personal info p. 8, 9. HOMEWORK: Study grammar.
- Day 12. Student`s book Unit 1, p. 10, 11. HOMEWORK: Read news in English.
- Day 13. Student`s book Unit 1, p. 12, 13. HOMEWORK: Listen to conversations.
- Day 14. Student`s book Unit 1, p. 14, 15. HOMEWORK: Watch TV in English.
- Day 15. Student`s book Unit 1, p. 16, 17. HOMEWORK: No homework.
- Day 16. Student`s book Unit 2, p. 18, 19. HOMEWORK: Study grammar
- Day 17. Student`s book Unit 2, p. 20, 21. HOMEWORK: Read news in English.

**TRABAJOS INICIO DE CICLO ESCOLAR 5G SISTEMAS DE INFORMACIÓN (septiembre)**

Guía para trabajos de la materia de programación el alumno se conectará al **ID 2533719746** y contraseña **Montreal** con el profesor **Cesar Medina**

Los ejercicios y trabajos desarrollados serán enviados como archivo al correo [camocomputo@gmail.com](mailto:camocomputo@gmail.com) para su evaluación por parte del profesor o serán enviados a la plataforma de classroom

En los datos de cada archivo enviado debe tener el nombre del alumno el nombre del archivo y su grupo como en el ejemplo. **(Cesar Medina 5G Sistemas de Información) en caso de no contar con los datos necesario el archivo no será tomado en cuenta como puntaje de evaluación y será un cero.**

Semana 1) Del 24 al 28 de agosto

- Introducción a los sistemas de información
  - El reto de los sistemas de información
  - Tipos y Usos
    - Tarea: Tipos y Usos de los sistemas de información (presentación P.P.)

Semana 2) Del 31 de agosto al 4 de septiembre

- Comprobar la suficiencia de atención de los alumnos (Diagnósticos)
- Los sistemas de información en las organizaciones
- Concientización corporativa
  - Tarea: Díptico para los puntos importantes de una Concientización corporativa

Semana 3) Del 7 al 11 de septiembre

- Desarrollo de un sistema
  
- Organigramas
  - Construcción de un organigrama
  - Técnicas para construir un organigrama
    - Tarea Tipos de organigramas (investigación)

Semana 4) Del 14 al 18 de septiembre

- Tipología en el sector organizacional
  
- Tipos de Organigramas.
  - Tarea: Realizar el organigrama jerárquico de una empresa o del colegio

Semana 5) Del 21 al 25 de septiembre

- Organigramas
  - Por su naturaleza
  - **Por su finalidad**
  - Por su ámbito
  
- Tarea: Ilustrar los diferentes tipos de organigramas

Semana 6) Del 28 de septiembre al 2 de octubre

- Organigramas
    - Específicos
    - Por su contenido
    - Por su presentación o disposición gráfica
  
  - Tarea: Ilustrar los diferentes tipos de organigramas
-

## TEMAS SELECTOS DE FÍSICA I

### QUINTO SEMESTRE

Semana del 24 al 28 de Agosto

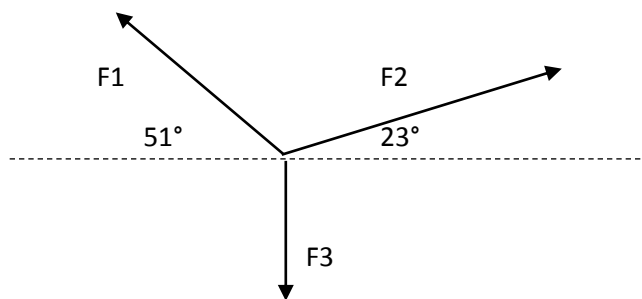
Día 1

Conversión de unidades I

- 1)  $53.4 \text{ ft} \rightarrow \text{m}$       2)  $645 \text{ lb} \rightarrow \text{kg}$       3)  $315 \text{ m}^2 \rightarrow \text{ft}^2$   
4)  $68.4 \text{ lb} / \text{in}^2 \rightarrow \text{kg} / \text{cm}^2$       5)  $760 \text{ kg} / \text{m}^3 \rightarrow \text{lb} / \text{ft}^3$

Día 2

Sistemas de fuerzas I



Día 3

Repaso de los temas anteriores

ACTIVIDADES DEL CURSO DE TEMAS SELECTOS DE FISICA I

QUINTO SEMESTRE

Semana 31 de Agosto al 4 de Septiembre de 2020

Día 1

Tiro parabólico. Conceptos básicos y fórmulas

Calcula alcance y altura máxima para un proyectil que tiene una velocidad inicial de 130 km/h y un ángulo de  $42^\circ$ .

Día 2

Tiro parabólico. Conceptos básicos y fórmulas

Calcula alcance y altura máxima para un proyectil que tiene una velocidad inicial de 70 km/h y un ángulo de 65°.

Semana del 7 al 11 de Septiembre de 2020

Día 1

Tiro parabólico en dos dimensiones

Calcula alcance y altura máxima para un proyectil que tiene una velocidad inicial de 150 km/h y un ángulo de 32°. Calcula posición y velocidad después de 0.8 y 1.3 segundos,

Día 2

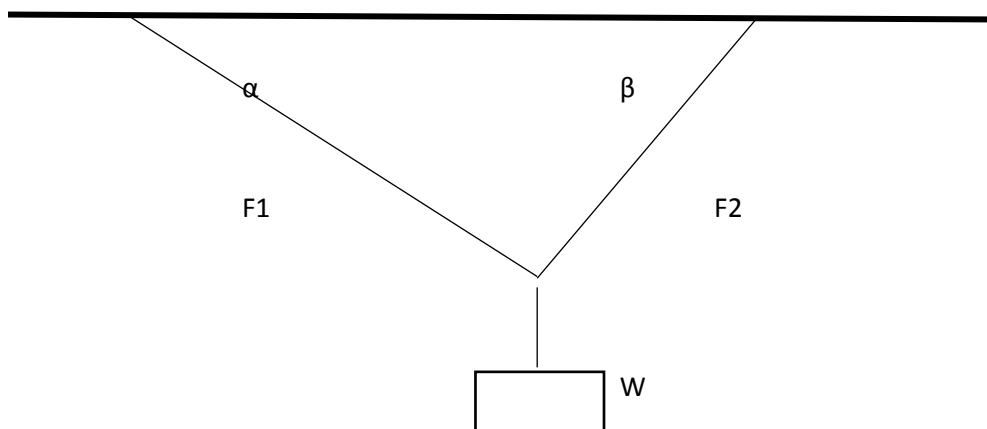
Tiro parabólico en dos dimensiones

Calcula alcance y altura máxima para un proyectil que tiene una velocidad inicial de 195 km/h y un ángulo de 27°. Calcula posición y velocidad después de 1.0 y 1.6 segundos,

Semana del 14 al 18 de Septiembre de 2020

Día 1

Sistemas de fuerzas I





$$m = 1700\text{kg} \quad \alpha = 38^\circ \quad \beta = 72^\circ$$

Día 2

Sistemas de fuerzas II

$$m = 3250\text{kg} \quad \alpha = 44^\circ \quad \beta = 71^\circ$$

Semana del 21 al 25 de Septiembre de 2020

Día 1

Sistemas de fuerzas III

$$m = 1150\text{kg} \quad \alpha = 37^\circ \quad \beta = 62^\circ$$

Día 2

Sistemas de fuerzas IV

$$m = 250\text{kg} \quad \alpha = 62^\circ \quad \beta = 73^\circ$$

Semana del 28 de Septiembre al 2 de Octubre de 2020

Día 1

Repaso I

Día 2

Repaso II

---

## Temas selectos de biología

Semana	Tema y actividades	Libro/Manual	Tareas Designadas
1	<b>1 Antecedentes históricos</b> 1.1 Orígenes 1.2 Corrientes de la biología <ul style="list-style-type: none"> <li>❖ Reduccionismo</li> <li>❖ Vitalismo</li> <li>❖ Mecanicismo</li> <li>❖ Preformacionismo</li> <li>❖ Epigensis</li> <li>❖ Fijismo.</li> </ul>		<ul style="list-style-type: none"> <li>• Investiga las características de las corrientes filosóficas, como el reduccionismo, vitalismo y mecanicismo.</li> <li>• Realiza un mapa conceptual de todas las corrientes filosóficas de la biología</li> </ul>
2	<b>II La investigación en biología</b> <b>2.1 La biología actual en el mundo y México</b> 2.2 La tecnología al servicio de la ciencia 2.3 el diseño de una investigación científica 2.3.1 Avances tecnológicos de la región.		<ul style="list-style-type: none"> <li>• Investiga que pasos necesarios para desarrollar una investigación.</li> <li>• Analizar un avance científico desarrollando su origen, desarrollo y aplicación actual</li> </ul>
3	<b>III Procesos celulares</b> <b>3.1 Transporte a través de la membrana</b> 3.1.1 Modelo mosaico fluido 3.1.2 transporte pasivo 3.1.3 Transporte activo 3.1.4 Endocitosis y exocitosis		<ul style="list-style-type: none"> <li>• Describiré los procesos de transporte activo y pasivo</li> <li>• Utilizará ejemplos para identificar los procesos de endocitosis y exocitosis</li> </ul>
4	<b>3.2 Comunicación celular</b> 3.2.1 Generación del Impulso nervioso 3.2.2 Transmisión del impulso nervioso. 3.2.3 Neurotransmisores		<ul style="list-style-type: none"> <li>• Deberá investigar la importancia y función del impulso nerviosos</li> <li>• Investigará la función de los neurotransmisores</li> </ul>
5	<b>3.3 Procesos de dif. Celular</b> 3.3.1Capas germinales 3.3.2Células madre		<ul style="list-style-type: none"> <li>• ¿Qué es un embrión?</li> <li>• Investiga el origen de las células madre</li> </ul>

**Semana del 24 a 28 de Agosto 2020**

Día 1

Suma y resta de expresiones algebraicas

$$1) a^2 - (3ab - 6 + 3a^2 - 8ab) \quad 2) x^3 + 4x^2 - 6 - 5x^2 - 11x + 5 - (x^4 - 1)$$

$$3) (x^6 + 2x^2y^4 - y^6) + (-4x^4y^2 + 3x^2y^4 + 6y^6) - (5x^4y^2 + 6x^2y^4 + 5y^6 - 3x^6)$$

Día 2

Multiplicación y división de expresiones algebraicas

$$1) (m^3 + n^3 + 6mn^2 - 5m^2n)(m^3 - 4mn^2 - n^3)$$

$$2) 6(x^2 + 3) - 3(x^2 + 1) + 5(x^2 + 2)$$

$$3) \left(\frac{1}{4}a^2 - ab + \frac{2}{3}b^2\right)\left(\frac{1}{4}a - \frac{3}{2}b\right)$$

$$1) (8m^9n^2 - 10m^7n^4 - 20m^5n^6 + 12m^3n^8) / 2m^2$$

$$2) (4a^{x+4}b^{m-1} - 6a^{x+3}b^{m-2} + 8a^{x+2}b^{m-3}) / -2a^{x+2}b^{m-4}$$

$$3) \left(\frac{2}{5}a^5 - \frac{1}{3}a^3b^3 - ab^5\right) / 5a$$

Día 3

Repaso de los temas anteriores

**ACTIVIDADES DEL CURSO DE TEMAS SELECTOS DE MATEMATICAS I****QUINTO SEMESTRE****Semana 31 de Agosto al 4 de Septiembre de 2020**

Día 1

Conjuntos. Conceptos y notaciones

Día 2

Operadores

Día 3

Operaciones con conjuntos I

$$S = \{1,2,3,4,5,6,7,8,9,10,11,12\}$$

$$A = \{5,6,7,8,9,10,11,12\} \quad B = \{3,6,9,12\} \quad C = \{4,7,9,11\} \quad D = \{1,2,3,4,5,6,7\}$$

$$1) A \cup B \quad 2) C \cup D \quad 3) B \cup D \quad 4) B \cap C \quad 5) D \cap A$$

$$6) A^c \cup B \quad 7) C \cup D^c \quad 8) B^c \cup D^c \quad 9) B^c \cap C \quad 10) D \cap A^c$$

**Semana del 7 al 11 de Septiembre de 2020**

Día 1

Operaciones con conjuntos II

$$S = \{1,2,3,4,5,6,7,8,9,10,11,12\}$$

$$A = \{5,6,7,8,9,10,11,12\} \quad B = \{3,6,9,12\} \quad C = \{4,7,9,11\} \quad D = \{1,2,3,4,5,6,7\}$$

$$1) (A \cup B) \cap D \quad 2) C \cup (D \cup B) \quad 3) (B \cup D)^c - A \quad 4) B \cap (C \cup A)^c \quad 5) B - (D \cap A)^c$$

Día 2

Diagramas de Venn-Euler I

$$S = \{1,2,3,4,5,6,7,8,9,10,11,12\}$$

$$A = \{5,6,7,8,9,10,11,12\} \quad B = \{3,6,9,12\} \quad C = \{4,7,9,11\} \quad D = \{1,2,3,4,5,6,7\}$$

Día 3

Diagramas de Venn-Euler II

$$S = \{1,2,3,4,5,6,7,8,9,10,11,12\}$$

$$A = \{5,6,7,8,9,10,11,12\} \quad B = \{3,6,9,12\} \quad C = \{4,7,9,11\} \quad D = \{1,2,3,4,5,6,7\}$$

$$1) A \cup B \quad 2) C \cup D \quad 3) B \cup D \quad 4) B \cap C \quad 5) D \cap A$$

$$6) A^c \cup B \quad 7) C \cup D^c \quad 8) B^c \cup D^c \quad 9) B^c \cap C \quad 10) D \cap A^c$$

## Semana del 14 al 18 de Septiembre de 2020

Día 1

El campo de los números reales. Propiedades de campo

Día 2

Aplicaciones I

$$1) \frac{5x}{3} - 4 = 7 \quad 2) 6x + 5 = \frac{9}{2} \quad 3) \frac{7}{3}x - 4 = \frac{8}{15}$$

Día 3

Aplicaciones II

$$1) \frac{3x}{5} - 8 = -3 \quad 2) 2x - 8 = \frac{11}{3} \quad 3) \frac{5}{4}x + 3 = \frac{2}{9}$$

## Semana del 21 al 25 de Septiembre de 2020

Día 1

Funciones y relaciones

Día 2

Aplicaciones I

$$1) 3x^2 - 2 = \frac{5}{4} \quad 2) \sqrt{3x+4} = 7 \quad 3) (x+3)^2 = 7+2x$$

Día 3

Aplicaciones II

$$1) 4 \cos x^2 = 2.85 \quad 2) 6e^{3x+1} = 7.4 \quad 3) \frac{\log(x^2+1)}{9} = 3.9$$

**Semana del 28 de Septiembre al 2 de Octubre de 2020**

Día 1

Gráficas de funciones I

1)  $y = 2x + 5$

2)  $y = 6x^2 + 3$

3)  $4x - 5 = 3y^2 + 1$

Día 2

Gráficas de funciones II

1)  $y = \ln(2x + 5)$

2)  $y = \text{sen}6x^2 + 3$

3)  $10^{2x-1} = 3y^2 + 1$

Día 3

Repaso

---

## **Programación temas selectos de salud**

Se enviará al correo de los alumnos el material necesario para completar sus trabajos en el caso de que no puedan conectarse.

### **Clase N°1**

Se anotará en el cuaderno una lluvia de ideas relacionado a que se enfoca la materia. El maestro explicara la información desde diferentes enfoques.

### **Clase N°2**

Introducción a la materia. El maestro dará información necesaria para entender qué es la salud y su importancia.

### **Clase N°3**

Continuación clase N°2. El ser humano como un ser biológico, psicológico y social. El alumno deberá anotar en su cuaderno la definición de cada uno de los puntos de vista del ser humano.

### **Clase N°4**

Actividad N°1. El alumno anotará en su cuaderno una serie de preguntas que deberá responder basándose en sus conocimientos y experiencias.

### **Clase N°5**

Bienestar y salud mental. El maestro explicará la diferencia entre bienestar y salud mental, enfatizando en su definición. El alumno deberá tomar apuntes y anotarlos en su cuaderno.

### **Clase N°6**

Enfermedad. El maestro explicará qué es la enfermedad y el proceso de esta misma. El alumno deberá tomar apuntes y anotarlos en su cuaderno.

### **Clase N°8**

Actividad. El alumno tomando en cuenta lo aprendido y extrayendo información de otras fuentes, creará una nueva definición de salud, redactándola en un párrafo y realizando un mapa conceptual.

#### Clase N°9

Enfermedades transmisibles y no transmisibles. El maestro explicará qué es la enfermedad y el proceso de esta misma. El alumno deberá tomar apuntes y anotarlos en su cuaderno.

#### Clase N°10

Se crearán 2 grupos en el cual los alumnos deberán crear un cuadro comparativo de enfermedades transmisibles y no transmisibles que hayan padecido.

#### Clase N°11

En base a los datos recabados deberán responder una serie de preguntas que el maestro les entregará.

#### Clase N°12

El maestro explicará y pedirá a los alumnos dibujar en sus cuadernos el triángulo de la triada epidemiológica.

---



## TEMAS SELECTOS DE QUÍMICA I.

### SEMANA 24 – 28 AGOSTO

#### DÍA 1.

De manera individual tanto la profesora como cada estudiante deberá hablar sobre su persona, utilizando para ello la información indicada en documento: ¿Quién soy yo? (ANEXO TSQI) y en una hoja escribir un pequeño texto con el tema: ¿Cómo me he sentido tanto física como emocionalmente en esta cuarentena? y platicarlo en plenaria. TAREA: Ver la película “Ágora” 1:39:11 <https://www.youtube.com/watch?v=SJM-jMBByAw> y elaborar un comentario escrito a mano, de mínimo 20 renglones, en el que se incluya el uso de la observación y la “tecnología” para la resolución de los problemas, y el papel de la mujer en el desarrollo de los avances en la ciencia.

#### DÍA 2

Mediante una lluvia de ideas e imágenes, se rescatan los conocimientos que recuerden sobre: los estados físicos de la materia, la diferencia entre cambio físico y cambio químico, los diferentes tipos de reacciones químicas que existen. Registrar participaciones individuales a cada estudiante. Hacer las anotaciones en su cuaderno, con el título: Repaso de Ciencias. TAREA: hacer la portada y escribir dos reflexiones sobre el **valor del mes: Fe** e ilustrarlos.

### SEMANA 31 AGOSTO - 4 SEPTIEMBRE

#### DÍA 3.

En plenaria explicar el tema: *Características de los gases y las leyes que los rigen*, tomar nota en el cuaderno y observar diferentes experimentos en los cuales se muestren las leyes que rigen el comportamiento de los gases. TAREA: Elaborar un cuadro que incluya las fórmulas de las siguientes leyes de los gases.

#### DÍA 4

En plenaria, contestar la Serie de Ejercicios de gases (ANEXO TSQI), resolver dudas al respecto. Registrar las participaciones de los estudiantes. TAREA: Ver el video: “*La alquimia, magia o ciencia*” 45:16 <https://www.youtube.com/watch?v=Qn575e7OOIU> y anotar en su cuaderno lo que no conocían sobre el tema.

### SEMANA 7 -11 SEPTIEMBRE

#### DÍA 5

Continuar resolviendo la Serie de Ejercicios de Gases, comentar los dos videos observados. Registrar las participaciones de los estudiantes. TAREA: resolver los ejercicios sobre la ley de Avogadro, Ley de Dalton y Ley de los gases ideales.

#### DÍA 6

En plenaria, revisar las respuestas de los ejercicios de tarea y resolver dudas. Explicar las características del estado sólido y líquido de la materia. TAREA: ver el video “*Propiedades de los líquidos*” 6:11 <https://www.youtube.com/watch?v=hNr7zpd5HZM> y tomar nota de lo más importante.

## SEMANA 14 – 18 SEPTIEMBRE

### DÍA 7

En plenaria explicar el tema: *Características del estado líquido de la materia*, tomar nota en el cuaderno y observar diferentes experimentos en los cuales se muestren las leyes que rigen el comportamiento de los líquidos. TAREA: investigar sobre algunas las tablas de propiedades de los líquidos.

### DÍA 8

Elaborar un cuadro que incluya algunas fórmulas y datos útiles para calcular propiedades de los líquidos. TAREA ver los videos:

- a) "EL MOL Y EL NÚMERO DE AVOGADRO" 5:11 <https://www.youtube.com/watch?v=-WFD5Cfczks>
- b) "Estado sólido" 5'54" <https://www.youtube.com/watch?v=wf1NAhdk36I>

y escribir ideas principales en el cuaderno

## SEMANA 21 – 25 SEPTIEMBRE

### DÍA 9

En plenaria explicar el tema: *Características del estado sólido de la materia*, tomar nota en el cuaderno y observar diferentes experimentos en los cuales se muestren las propiedades del estado sólido. TAREA: investigar sobre algunas las tablas de propiedades de los sólidos.

### DÍA 10

En plenaria, contestar la serie de Ejercicios: Líquidos y Sólidos (ANEXO TSQI) y resolver dudas.

## SEMANA 28 – 2 OCTUBRE

### DÍA 11

En plenaria, continuar respondiendo la serie de Ejercicios: Líquidos y Sólidos y resolver dudas.

### DÍA 12

Examen escrito.



**COLEGIO MONTREAL A. C.**  
**PREPARATORIA GENERAL**  
**SERIE DE EJERCICIOS DE GASES**

1. ¿Qué dice la teoría cinética acerca de lo siguiente?:

a) Partículas de un gas:

\_\_\_\_\_

b) Movimiento de las partículas de un gas:

\_\_\_\_\_

c) Distancia entre las partículas de un gas:

\_\_\_\_\_

d) Atracción entre las partículas de un gas:

\_\_\_\_\_

e) Efecto de la temperatura en los gases:

\_\_\_\_\_

f) Velocidad de las partículas de un gas:

\_\_\_\_\_

2. Las cuatro propiedades que se emplean para describir un gas

son: \_\_\_\_\_

3. Elige la respuesta correcta:

A. Si se aumenta la presión de un gas, manteniendo constante la temperatura, entonces:

a) Disminuye el producto  $P \times V$

b) Aumenta el producto  $P \times V$

c) Aumenta  $V$

d) Disminuye  $V$

B. Los choques de las moléculas de los gases ideales:

a) Provocan ganancia de energía  
presión

c) Son inversamente proporcionales a la

b) Provocan pérdida de energía

d) Son completamente elásticos

C. La constante universal de los gases  $R$  tiene un valor de  $0.081 \text{ l atm / mol } ^\circ\text{K}$

a) Sólo en condiciones normales

c) En el cero absoluto

b) A una atmósfera

d) A cero grados centígrados

4. Completa la siguiente tabla:

<b>PROPIEDAD DE LOS GASES</b>	<b>DEFINICIÓN</b>	<b>EJEMPLO</b>
Compresibilidad		
Expansibilidad		
Difusión		
Efusión		

**Presión y volumen (Ley de Boyle)**

5. Un globo de 18 L contiene gas helio a presión de 3 atm ¿Cuál es la nueva presión cuando el volumen se expande a 32 L?

\_\_\_\_\_

6. Una muestra de gas nitrógeno ( $N_2$ ) tiene un volumen de 425 mL, a una presión de 1.50 atm. Si el volumen disminuye a 215 mL. ¿Cuál es la nueva presión?

\_\_\_\_\_

7. El volumen del aire en los pulmones de una persona es 615 mL, a una presión de 760 mmHg. La inhalación ocurre cuando la presión de los pulmones desciende a 752 mmHg. ¿A qué volumen se expanden los pulmones?

\_\_\_\_\_

8. Un tanque de oxígeno para emergencias contiene 13 L de este gas a una presión de 15 atm. ¿Qué volumen de  $O_2$  puede administrarse a un paciente si el gas se libera a una presión de 1.8 atm?

\_\_\_\_\_

**Temperatura y volumen (Ley de Charles)**

9. Un globo contiene 3 150 mL de gas helio a 75 °C. ¿Cuál es el nuevo volumen del gas cuando la temperatura cambia como se indica si  $n$  y  $P$  no cambian?  
**a)** 55°C                      **b)** 682°K                      **c)** -25°C

10. Un gas tiene un volumen de 4 L a 0°C. ¿Cuál es la temperatura final en grados Celsius necesaria para que el volumen del gas sea el que se indica, si  $n$  y  $P$  no cambia?  
**a)** 10 L                      **b)** 1 200 L                      **c)** 2.50L

**Temperatura y presión (Ley de Gay-Lussac)**

11. Una muestra de gas tiene una presión de 1 200 torr a 155°C. ¿Cuál es la presión final del gas si la temperatura desciende a 0°C?

\_\_\_\_\_

12. Un bote de aerosol tiene una presión de 1.40 atm a 12°C. ¿Cuál es la presión final del bote de aerosol si se emplea en una habitación a temperatura ambiente de 35°C?

---

13. Una muestra de hidrógeno (H<sub>2</sub>) a 127 °C tiene una presión de 2 atm. ¿A qué temperatura disminuirá la presión de H<sub>2</sub> a 0.25 atm?

---

**Ley combinada de los gases**

14. Una muestra de gas de 2 460 mL a 285°C y 620 torr se comprime a un volumen de 820 mL y 150°C ¿Cuál será la presión del gas?

---

15. Una burbuja de gas caliente de 100 mL a 250 °C y 2.4 atm escapa de un volcán de erupción. ¿Cuál será el nuevo volumen de la burbuja afuera del volcán, si la temperatura es -15°C y la presión es de 0.80 atm?

---

**Volumen y moles (Ley de Avogadro)**

16. Una muestra de 4 moles de argón tiene un volumen de 10 L. un pequeño orificio ocasiona que la mitad de las moléculas escapen. ¿Cuál será el nuevo volumen del gas?

---

17. 15.6 L de NH<sub>3</sub>, medidos en la Ciudad de México contienen  $3.01 \times 10^{23}$  moléculas. ¿Cuántas moléculas contendrán 15.6 L de CO<sub>2</sub> en las mismas condiciones de P y T?

---

18. Un globo que contiene 2 moles de helio tiene un volumen de 440 mL. ¿Cuál es el nuevo volumen después de que se le agregan 2 moles de helio al globo a la misma presión y temperatura? \_\_\_\_\_

19. ¿Cuántas moles de CO<sub>2</sub> hay en 4 L de gas CO<sub>2</sub> a TPS?

---

20. ¿Cuántas moles de H<sub>2</sub> hay en 1600 mL de gas H<sub>2</sub> a TPS?

---

21. ¿Qué volumen (L) ocupan 2.5 moles de  $N_2$  a TPS?

---

22. ¿Qué volumen (mL) ocupan 50 g de neón a TPS?

---

**Presiones parciales (Ley de Dalton)**

23. Un cilindro de acero contiene una mezcla de nitrógeno ( $N_2$ ) a 400 torr, oxígeno ( $O_2$ ) a 115 torr y helio gaseoso a 225 torr. ¿Cuál es la presión total de la mezcla de gases?

---

24. Una mezcla de gases ejerce una presión de 2 550 torr. La mezcla contiene oxígeno, nitrógeno y helio. Si la presión parcial del oxígeno es 425 torr, y la presión parcial del helio es 320 torr, ¿Cuál es la presión parcial del nitrógeno en la mezcla?

---

**Ley de los gases ideales**

25. ¿Cuál es la presión en atmósferas de 2 moles de helio en un recipiente de 10 L a 27°C?

---

26. ¿Qué volumen ocupa 5 moles de gas metano,  $CH_4$ , a una temperatura de 0°C y 2 atm?

---

27. Un cilindro de acero con oxígeno tiene un volumen de 20 L a 22 °C, y el oxígeno tiene una presión de 35 atm. ¿Cuántas moles de oxígeno hay en el recipiente?

---

1. Timberlake, Karen C. Química. Introducción a la química general, a la orgánica y a la bioquímica. 5ª ed. Oxford, México, 1997. Pp. 266-303.
2. Whitten, K.W. Química General. Interamericana. México. 1988. Pp. 231 – 265.



**COLEGIO MONTREAL, A.C.**  
**PREPARATORIA**  
**TEMAS SELECTOS DE QUÍMICA I**  
**LÍQUIDOS Y SÓLIDOS**

**I. Instrucciones:** En la siguiente tabla periódica, usa diferentes colores para identificar: metales, metaloides y no metales; líquidos, gases, escribe el número y nombre de cada familia A y B.

1 <b>H</b> Hydrogen 1.00794																	2 <b>He</b> Helium 4.003						
3 <b>Li</b> Lithium 6.941	4 <b>Be</b> Beryllium 9.012182																	5 <b>B</b> Boron 10.811	6 <b>C</b> Carbon 12.0107	7 <b>N</b> Nitrogen 14.00674	8 <b>O</b> Oxygen 15.9994	9 <b>F</b> Fluorine 18.9984032	10 <b>Ne</b> Neon 20.1797
11 <b>Na</b> Sodium 22.989770	12 <b>Mg</b> Magnesium 24.3050																	13 <b>Al</b> Aluminum 26.981538	14 <b>Si</b> Silicon 28.0855	15 <b>P</b> Phosphorus 30.973761	16 <b>S</b> Sulfur 32.066	17 <b>Cl</b> Chlorine 35.4527	18 <b>Ar</b> Argon 39.948
19 <b>K</b> Potassium 39.0983	20 <b>Ca</b> Calcium 40.078	21 <b>Sc</b> Scandium 44.955910	22 <b>Ti</b> Titanium 47.867	23 <b>V</b> Vanadium 50.9415	24 <b>Cr</b> Chromium 51.9961	25 <b>Mn</b> Manganese 54.938049	26 <b>Fe</b> Iron 55.845	27 <b>Co</b> Cobalt 58.933200	28 <b>Ni</b> Nickel 58.6934	29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.39	31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.61	33 <b>As</b> Arsenic 74.92160	34 <b>Se</b> Selenium 78.96	35 <b>Br</b> Bromine 79.904	36 <b>Kr</b> Krypton 83.80						
37 <b>Rb</b> Rubidium 85.4678	38 <b>Sr</b> Strontium 87.62	39 <b>Y</b> Yttrium 88.90585	40 <b>Zr</b> Zirconium 91.224	41 <b>Nb</b> Niobium 92.90638	42 <b>Mo</b> Molybdenum 95.94	43 <b>Tc</b> Technetium (98)	44 <b>Ru</b> Ruthenium 101.07	45 <b>Rh</b> Rhodium 102.90550	46 <b>Pd</b> Palladium 106.42	47 <b>Ag</b> Silver 107.8682	48 <b>Cd</b> Cadmium 112.411	49 <b>In</b> Indium 114.818	50 <b>Sn</b> Tin 118.710	51 <b>Sb</b> Antimony 121.760	52 <b>Te</b> Tellurium 127.60	53 <b>I</b> Iodine 126.90447	54 <b>Xe</b> Xenon 131.29						
55 <b>Cs</b> Cesium 132.90545	56 <b>Ba</b> Barium 137.327	57 <b>La</b> Lanthanum 138.9055	58 <b>Hf</b> Hafnium 178.49	73 <b>Ta</b> Tantalum 180.9479	74 <b>W</b> Tungsten 183.84	75 <b>Re</b> Rhenium 186.207	76 <b>Os</b> Osmium 190.23	77 <b>Ir</b> Iridium 192.217	78 <b>Pt</b> Platinum 195.078	79 <b>Au</b> Gold 196.96655	80 <b>Hg</b> Mercury 200.59	81 <b>Tl</b> Thallium 204.3833	82 <b>Pb</b> Lead 207.2	83 <b>Bi</b> Bismuth 208.98038	84 <b>Po</b> Polonium (209)	85 <b>At</b> Astatine (210)	86 <b>Rn</b> Radon (222)						
87 <b>Fr</b> Francium (223)	88 <b>Ra</b> Radium (226)	89 <b>Ac</b> Actinium (227)	104 <b>Rf</b> Rutherfordium (261)	105 <b>Db</b> Dubnium (262)	106 <b>Sg</b> Seaborgium (263)	107 <b>Bh</b> Bohrium (262)	108 <b>Hs</b> Hassium (265)	109 <b>Mt</b> Meitnerium (266)	110 (269)	111 (272)	112 (277)												

**II. Instrucciones:** lee y contesta lo que se te pide

1. Los compuestos se clasifican en:

a) **Moleculares**, que son aquellos que: \_\_\_\_\_

b) **Iónicos**, que se caracterizan por: \_\_\_\_\_

2. Clasifica cada una de las siguientes sustancias como elemento (E), compuesto (C), mezcla homogénea (MHo) o mezcla heterogénea (MHe):

Aire ( )	Cloruro de sodio ( )	Vino ( )	Sal ( )	Agua oxigenada ( )
Oxígeno ( )	Agua con limón ( )	Pintura ( )	Cobre ( )	Glucosa ( )

**III. Instrucciones:** Resuelve los siguientes ejercicios.

1. Una disolución salina contiene 0.90 g de NaCl por 100 ml de solución. ¿Cuál es su molaridad?
2. ¿Cuál es la concentración en PPM de una muestra tomada de un río cuyo cauce atraviesa una zona habitacional, si el análisis demuestra que contiene 0.005 g de fosfatos por cada 500 ml de muestra? \_\_\_\_\_. Se sabe que las normas internacionales solo permiten 0.7 mg/L, ¿El agua de ese río cumple con los estándares o está contaminado? \_\_\_\_ ¿Qué tipo de problemas presentará ese río, principalmente en la primavera? \_\_\_\_\_  
\_\_\_\_\_
3. Un medicamento contiene 8.5 g de hidróxido de magnesio en 80 ml de disolución, ¿Cuál es su concentración en %? \_\_\_\_\_
4. Completa las siguientes tablas en tu cuaderno:

<b>PROPIEDADES DEL ESTADO LÍQUIDO</b>	<b>DEFINICIÓN</b>	<b>FORMA DE DETERMINARLA</b>	<b>EJEMPLOS</b>
Presión de vapor			
Punto de ebullición			
Punto de congelación			
Tensión superficial			
Densidad			

<b>TIPOS DE SÓLIDO</b>	<b>CARACTERÍSTICAS</b>	<b>EJEMPLOS</b>
Cristalino		
Amorfo		

5. Describe ampliamente qué son las propiedades coligativas de las soluciones: \_\_\_\_\_  
\_\_\_\_\_

6. Completa la siguiente tabla:

<b>PROPIEDAD COLIGATIVA</b>	<b>FORMA DE DETERMINARLA</b>	<b>EJEMPLOS</b>
Disminución de la presión de vapor		
Elevación del punto de ebullición		
Disminución del punto de congelación		
Presión osmótica		



7. El agua oxigenada ( $\text{H}_2\text{O}_2$ ) es un producto muy utilizado en enfermería y cosméticos. Se descompone por efecto de una enzima que está presente en la sangre, produciendo grandes cantidades de oxígeno molecular. El poder desinfectante del agua oxigenada se debe a la acción oxidante sobre las bacterias del oxígeno producido. Si para desinfectar una herida se necesitan 25 moles de oxígeno ( $\text{O}_2$ ) ¿Cuántos mililitros de  $\text{H}_2\text{O}_2$  se requieren si se considera que la densidad del agua oxigenada es prácticamente 1g/mL y se sabe que al descomponerse libera la mitad del oxígeno que posee?