



Sadiq Public School

Do the right, fear no man

Summer Assignment 2022

S2

<p>English</p>	<p>PTB Lesson # 5-8 (Revision of Units 1-4)</p> <ol style="list-style-type: none">Translate any two paragraphs from each lesson.Make sentences of the words given in the exercise of each lesson.Answer the comprehension questions and answers from each lesson.Summarize of each of the poems. <p>Grammar and Composition (9-10)</p> <ol style="list-style-type: none">Story Writing (7-10)Comprehension passages unsolved (6-10)Letters (6-10)Dialogue Writing (3-4)Use of verb (Present and Past Tense) <p>Creative Work</p> <ol style="list-style-type: none">Describe three of the extra-curricular activities that took place at your School like Elocution, Quiz and Founder's Day etc.Watch the BBC news daily in order to equip yourself with the information and facts to be used as content in writing skills.Maintain a journal of English vocabulary by reading an English-language newspaper daily, writing at least 5 new words in your notebook, with their meanings.Read any one novel and describe in some detail at least 5 of the novel's characters. Choose any novel that interests you. You can download ebooks or you can buy a paper book – your choice, but read a novel that you enjoy. If you read the first 10 pages and don't like it, find another, better one.
<p>Urdu</p>	<p>مضامین :</p> <p>1- صبح کی سیر 2- استاد کا احترام 3- چھٹیاں کیسے گزاریں 4- میری زندگی کا دلچسپ واقعہ 5- کسی میچ کا آنکھوں دیکھا حال</p> <p>درخواست نویسی:</p> <p>1- ہیڈ ماسٹر کے نام سرٹیفکیٹ کے حصول کے لیے درخواست لکھیں۔ 2- میگزینوں کی کارپوریشن / چیئر مین یونین کونسل کے نام محلہ کی صفائی کے لیے درخواست تحریر کریں۔ 3- پوسٹ ماسٹر کے نام درخواست لکھیں جس میں اپنے علاقے کے پوسٹ مین (ڈاک) کی شکایت کریں کہ وہ وقت پہ ڈاک تقسیم نہیں کرتا۔ 4- فوڈ انسپکٹر کے نام درخواست لکھ کر راشن ڈپو مالک کی شکایت کریں کہ وہ غذائی اشیاء کی مصنوعی قلت پیدا کرتا ہے۔</p> <p>5- ہیڈ ماسٹر کے نام فیس معافی کی درخواست تحریر کریں۔</p> <p>مخطوط نویسی:</p> <p>1- بڑی بہن کے نام خط لکھیں جس میں چھٹیوں میں انہیں اپنے ہاں آنے کی دعوت دیں۔</p> <p>2- چھوٹے بھائی کے نام خط لکھیں جس میں اسے آوارہ لڑکوں کی صحبت سے بچنے اور تعلیم میں دلچسپی لینے کی تلقین کریں۔</p> <p>3- دوست / سہیلی کے نام خط لکھیں جس میں رابطہ نہ کرنے پر اس سے شکایت کریں۔</p> <p>4- ہمسائے کے نام خط لکھیں جس میں ریڈیو / ٹی وی کی آواز کم رکھنے کا مشورہ دیں۔</p> <p>5- ایک رسالے کے مدیر کے نام خط لکھ کر اسے آپ کے نام رسالہ جاری کرنے کی درخواست کریں۔</p>

	<p style="text-align: right;">مکالمہ نویسی:</p> <p>1- طبیب (ڈاکٹر) اور مریض کے درمیان پرہیز کی اہمیت پر مکالمہ تحریر کریں۔ 2- دوہم جماعتوں کے درمیان کھیل کی اہمیت پر مکالمہ تحریر کریں۔ 3- استاد اور شاگرد کے درمیان 'تاریخ پاکستان' کے موضوع پر مکالمہ تحریر کریں۔</p> <p>کہانی نویسی: 1- گیدڑ کی مکاری 2- جس کا کام اسی کو ساجھے۔ 3- قوم کی خاطر ایثار</p> <p>سرگرمیاں: 1- "بانگ درا" سے اپنی پسند کی تین نظمیں لکھیں۔ 2- "غیرت ہے بڑی چیز جہان تگ و دو میں" اس موضوع پر تقریر لکھیں۔ 3- کسی تفریحی مقام کی سیر کا آنکھوں دیکھا حال تحریر کریں۔</p>										
Islamiat	<p>الدرس الاول سورہ الانفال ا۔ ب۔ ج۔ احادیث نمبر ایک اور دو۔ موضوعاتی مطالعہ۔ قرآن مجید تمام سوالات لکھنے اور یاد کرنے ہیں۔</p>										
Computer	<p>1. Recall the concept of problem solving and revise the steps involved to solve a problem. Apply problem solving theory create an imaginary fund-raising event to raise funds from your family, friends and relatives etc. Also draw the flowchart of the solution using the relevant symbols.</p> <p>2. Draw a flowchart to find the largest number from three given numbers. Use two different approaches for the solution and compare them. Which approach has advantages over the other? Write your findings with logical reasons.</p> <p>3. Draw flowcharts to solve the following problems:</p> <ol style="list-style-type: none"> 1. Input two numbers X and Y. Determine whether X divides by Y (without a remainder) or not 2. Input a year and determine whether it is a leap year or not 3. Input a number and calculate its factorial 4. Find LCM of two numbers P and Q 5. Input a number and display its factors <p>4. Draw a flowchart to input units consumed by an electricity consumer and output of the amount he or she has to pay using the following data:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Units Consumed</th> <th>Rate/unit</th> </tr> </thead> <tbody> <tr> <td><300</td> <td>Rs. 2.5</td> </tr> <tr> <td>301 to 500</td> <td>Rs. 4.5</td> </tr> <tr> <td>501 to 700</td> <td>Rs. 5.5</td> </tr> <tr> <td>>700</td> <td>Rs. 7.0</td> </tr> </tbody> </table> <p>5. Recall the concept of test data and discuss its various types with examples. While filling online forms or entering online data, what kind of data errors do you encounter? Give real-life examples.</p> <p>6. Recall the concept of number system and perform the below mentioned activity. How many marks did you obtain in the final examination? Convert your subject wise and total marks in the binary number.</p> <p>7. Recall the concept of memory and its types. State the difference between the types of the memory, mentioning different storage (memory) devices and mention its type.</p> <p>8. Write your complete name using 8-bit binary ASCII codes.</p> <p>9a. Explain the need for establishing a computer network. State the advantages and disadvantages of using a network.</p> <p>9b. While being the part of the computer network, the client-server model is a widely-used approach. Describe the concept and the applications you are using as a client and name the</p>	Units Consumed	Rate/unit	<300	Rs. 2.5	301 to 500	Rs. 4.5	501 to 700	Rs. 5.5	>700	Rs. 7.0
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	<p>server of the related application.</p> <p>10. A geometric interconnection of computers in a network is called a network topology. There are various kinds of topologies. Draw each topology and state the advantages and disadvantages of each type.</p> <p>11. Data communication process involves several different components. Describe the components that are the fundamental part of the communication process and elaborate your answer with an example that clearly shows the involvement of those components.</p> <p>12. TCP/IP protocol suit is one of the most common protocol suits for the exchange of data between interconnected devices. Recall the class notes and text book contents and make play cards describing the function of each layer of TCP/IP suit. Map each layer function with an ordinary post office communication.</p> <p>13. Every time you access information from a website your web browser initiates a HTTP request to get web contents from WWW. Use the Internet to research the complete method how HTTP fetches web contents for your web browser.</p> <p>Projects</p> <p>1. Construct a working model showing the methods how the devices are connected on Star, Bus, Ring and Mesh topology. You can use LED lights to show the direction of flow of data. You can watch videos at https://www.youtube.com/watch?v=nI4j_IE87Xo , https://www.youtube.com/watch?v=qacBfYQvS6E to have a better insight how you model will look like.</p> <p>2. Make a practical representation of IPv4 and IPv6 addresses. Your model should clearly highlight the structure of both and the major differences between both types of IPs.</p> <p>3. Many online converters for number system are available. Try to find and use them. Write the names (links) of the converters you have explored also mention the tested values with its answers</p> <p>4. Make a model of a Computer Lab and install a smoke detector in it. Alarms should sound in the building as smoke is being detected in any part of it.</p>
<p>Math</p>	<p>Ch 3: Ex 3.1, 3.2, 3.3, 3.4 Ch 4: Ex 4.1, 4.2, 4.3, 4.4 Ch 7: Ex. 7.1, 7.2, 7.3 Ch 8: Ex. 8.1</p> <p>Project 1 Draw a 2D version of how you want the front of your house to look like. Must include four windows, and two doors. All lines must be drawn with the help of a ruler and must be in centimetres. Students must then determine the perimeter and area of each window and the door. You must also do the same for the front of the house such that the perimeter and the area. Then you must convert these measurements to millimetres. Each dimension must be written in a typical drafting fashion. Houses must be uniformly coloured, and students may add additional features.</p> <p>Project 2 Label and highlight the given angles from 6 different pictures. Select six of the following angles: acute angle, obtuse angle, straight, right angle, supplementary angles, and complementary angle. Then measure the acute angle, obtuse angle, supplementary angle, and complementary angles, and write their measures inside</p>

- ii. Write rules to find Significant figures.
- iii. A chocolate wrapper is 6.7 cm long and 5.4 cm wide. Calculate its area up to a reasonable number of significance figures.

2. Kinematics

1

- i. Differentiate between Scalar and Vector.
- ii. Differentiate between distance and displacement.
- iii. Define speed and velocity. Write down formulas and SI units.
- iv. Can a body moving at a constant speed have acceleration?
- v. Define acceleration and write its formula and SI unit.
- vi. Why vector quantities cannot be added or subtracted like scalar quantities?
- vii. Differentiate between circular motion and rotatory motion.
- viii. Define uniform speed.
- ix. Define Gravitational Acceleration.
- x. Define deceleration.

2

- i. Define and explain the types of motion.
- ii. A train starts from rest. It moves through 1 km in 100 seconds with uniform acceleration. What will be its speed at the end of 100 s.

3

- i. Derive the second equation of motion with help of a velocity time graph.
($S = Vt + \frac{1}{2}at^2$)
- ii. A cricket ball is hit vertically upwards and returns to ground 6 s later.
- iii. Calculate the maximum height reached by the ball
- iv. Calculate the initial velocity of the ball.

Dynamics

- i. Define momentum and write its formula and SI unit.
- ii. Define force and write its formula and SI unit.
- iii. Define the Force of friction.
- iv. Define Centripetal force and write its formula.
- v. What is the Law of Inertia?
- vi. Why does a passenger move outward when a bus takes a turn?
- vii. What is the law of conservation of momentum?
- viii. Describe ways to reduce friction.
- ix. On which factors does friction depend?
- x. Define Newton's 3rd law of motion with a suitable example.

2

- i. Explain the relation between Force and Newton's 2nd law of motion.
- ii. How much centripetal force is needed to make the body of mass 0.5 kg to move in a circle of radius 50 cm with a speed of 3ms^{-1}

3

- i. State and explain the Law of conservation of momentum with an example
- ii. A body has a weight of 20N. How much force is required to move it vertically upward with an acceleration of 2ms^{-1}

Turning effects of forces

1

- i. Define Torque and write its equation

	<ul style="list-style-type: none"> ii. Differentiate between Like and Unlike parallel forces. iii. State the Principle of moments. iv. What is the second condition of equilibrium? v. Define Couple. vi. Define Neutral equilibrium. vii. Define Center of Gravity viii. Define Resultant vector. ix. Why can a body not be in equilibrium due to a single force acting on it? <p>2</p> <ul style="list-style-type: none"> i. Define equilibrium. Discuss the 1st condition of equilibrium. ii. The Steering wheel of a car has radius 16 cm. Find the torque produced by a couple of 50 N. <p>3</p> <ul style="list-style-type: none"> i. Explain the method to find the center of gravity of an irregular shaped lamina? ii. Find the magnitude and direction of a force, If its x-component is 12 N and Y-component is 5N.
Chemistry	<ol style="list-style-type: none"> 1. Revise the first term's syllabus. 2. Read chapters 1, 2 from your text book carefully and make 30 MCQ's from each of these for your self-assessment. Write them in your summer assignment note book. 3. Write definitions of the followings and also write their scope with examples. Industrial chemistry, Physical chemistry, Analytical chemistry, Bio chemistry, Nuclear chemistry, Organic and Inorganic chemistry and environmental chemistry. 4. Make a list of 20 compounds along with their chemical formulae which you have studied in chapter 1. 5. List the names of 15 mixtures we use in our everyday life. 6. Read chapters 1, 2 from your text book (again) carefully and solve the tests yourself and exercise. 7. Describe how Ernest Rutherford discover that an atom has a nucleus located at the center of the atom? 8. Make your own dictionary of chemistry that includes 50 words you have selected from different topics from chapters 1 and 2. 9. Create 2 or more of the following: <ol style="list-style-type: none"> a. Structure of an atom b. Types of molecules c. Physical states of matter d. Rutherford's atomic model e. Bohr's atomic model f. Gas discharge tube for discovery of electrons g. Gas discharge tube for discovery of protons
Biology	<p>Chapter 1 Introduction to Biology</p> <p>a. Answer the following short questions.</p> <ul style="list-style-type: none"> i. Define biology? Also give the origin of the word "Biology". ii. Define Parasitology and Parasite? iii. What is Biochemistry? iv. What do you know about Fisheries? v. Give the name and percentage of the bio-elements that comprises 99% of total mass. <p>b. Answer the following long questions:</p> <ul style="list-style-type: none"> i. Write a note on the levels of organization ii. Write a note on different careers in biology

	<p>Chapter 2 Solving a biological problem Answer the following short questions.</p> <ol style="list-style-type: none"> What is the biological method? Name each step of the biological method. What is the difference between quantitative and qualitative observation? Give examples. Define hypothesis. Why formulation of an hypothesis is essential in solving a biological problem? What is the difference between a control group and an experimental group? <p>Answer the following long questions:</p> <ol style="list-style-type: none"> Write a note on how biological method is used to solve a problem. Explain the contributions of Ronald Ross for the discovery of malaria. <p>Chapter 3 Biodiversity Answer the following short questions.</p> <ol style="list-style-type: none"> Define biodiversity. Write importance of biodiversity. Define Taxonomy and Systematics. Define Species. Write the aims of classification. <p>Answer the following short questions</p> <ol style="list-style-type: none"> Write a note on five kingdom classification system. Explain the Binomial nomenclature with rules and significance. <p>3 Complete at least one project from the following.</p> <ol style="list-style-type: none"> Make the models for the different organs of the frog. Make a model of a breathing mechanism with the help of a glass jar, balloon and straws. Make models to show the working of human respiratory and circulatory systems. Selects and completes at least one project from the following. <ul style="list-style-type: none"> • Structure of an animal cell. • Structure of a plant cell. 	
Pak Studies	<ol style="list-style-type: none"> Write answers of questions of Chapters 1 and 2. Solve the exercises in notebooks and write the MCQs of Chapters 1 & 2. 	<ol style="list-style-type: none"> Make a list of prominent leaders of Pakistan Movements with a brief description of their contribution.