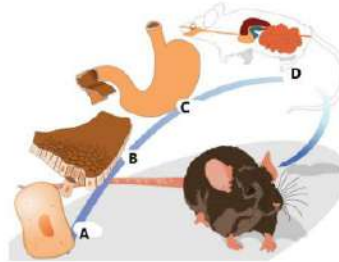




DR A.Q .KHAN SCHOOL AND COLLEGE BAHRIA TOWN PHASE-8, ISLAMABAD
SUMMER VACATION TASK
SUBJECT: BIOLOGY
CLASS: IX

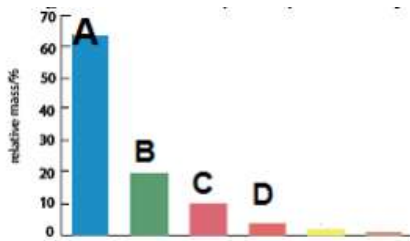
Q.1 Choose the correct answer of the following.

- i. Which one of the following branches of biology deals with the study of functions of heart?
A. Morphology
B. Physiology
C. Histology
D. Cell biology
- ii. Bacteria are used for making insulin. Which branch of biology it is?
A. Physiology
B. Histology
C. Cell biology
D. Biotechnology
- iii. Following diagram shows level of organization in a rat. Which one is the organ level?



- A. A
B. B
C. C
D. D

- iv. The following graph shows percentage composition of bio-elements by mass of a human being. Which labeled part represents Hydrogen?



- A. A
B. B
C. C
D. D

- v. Malarial patient has plasmodium in his blood. What would be the possible explanation if a healthy person who is not having any malarial symptoms shows plasmodium in his blood?

- A. Plasmodia are dead
B. Plasmodia are in incubation period
C. Plasmodia are not mature
D. Plasmodia are inactive

- vi. Which option has correctly matched disease and vector mosquito?

	Malaria in humans	Malaria in birds	Dengue fever
A.	Anopheles	Aedes	Culex
B.	Aedes	Culex	Anopheles
C.	Anopheles	Culex	Aedes
D.	Culex	Anopheles	Aedes

- vii. All of the following are macromolecules except:

- A. Protein
B. DNA
C. Starch
D. Glucose

viii. Which option is correct regarding the mode of nutrition of following organism?

	Animal	Prokaryote	Fungi	Plant
A.	Heterotrophic	Heterotrophic	Ingestive	Autotrophic
B.	Ingestive	Heterotrophic	Absorptive	Photosynthesize
C.	Ingestive	Absorptive	Autotrophic	Heterotrophic
D.	Absorptive	Autotrophic	Ingestive	Autotrophic

ix. Following are the characteristics of a good hypothesis, EXCEPT:

- A. Should be a complex statement
- B. Should be a tentative idea
- C. Should be testable
- D. Should agree with available observation

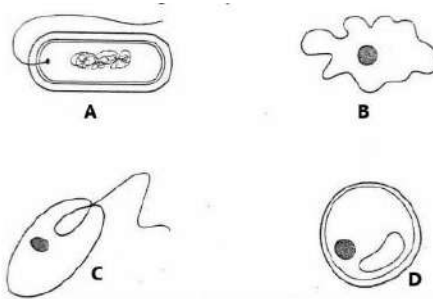
x. Which one of the following scientific name is according to the binomial nomenclature?

- A. *Oryza Sativa*
- B. *oryza sativa*
- C. *Oryza sativa*
- D. *ORYZA SATIVA*

xi. Select the one which is "NOT" the characteristic of a Prion:

- A. Composed of protein only
- B. Can replicate
- C. Cause disease in sheep
- D. Contain circular RNA

xii. Which cell is a prokaryote?



- A. Cell A
- B. Cell B
- C. Cell C
- D. Cell D

xiii. The term _____ is used for any preserved evidence of life from a past geological age, such as impressions and remains of organisms embedded in stratified rocks.

- A. Geological matter
- B. Preserved material
- C. Conserved material
- D. Fossil

xiv. Which one of the following is not the vegetative part of mustard plant?

- A. Flowers
- B. Stem
- C. Leaves
- D. Root

xv. The study of functions of various organs of an organism is:

- A. Morphology
- B. Histology
- C. Anatomy
- D. Physiology

xvi. Histology is the microscopic study of:

- A. Tissues
- B. Cells
- C. Fossils
- D. Plants

xvii. The other name of environmental biology is:

- A. Ecology
- B. Biotechnology
- C. Microbiology
- D. Cell biology

xviii. Microbiology is the study of:

- A. Fungi
- B. Animals
- C. Plants
- D. Microorganisms

xix. Which Muslim scientist is known as founder of medicine:

- A. Bu Ali Sina
- B. Abdul Malik Asmai

- xxi. C. Jabir Bin Hayan D. Ibne-Nafees
Which one of these bio-elements is highest percentage in the human body?
A. Hydrogen B. Oxygen
C. Carbon D. Nitrogen
- xxii. Which of the following contains unicellular organization?
A. Mustard B. Human
C. Euglena D. Frog
- xxiii. Which of these bio-elements is present in lowest percentage in human body?
A. Oxygen B. Phosphorus
C. Calcium D. Nitrogen

Q.2 Write the levels against each example.

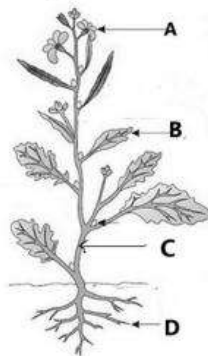
Organization	Level
Heart	
C ₆ H ₁₂ O ₆	
Parenchyma	
Blood	
Mitochondria	
Neuron	

Q.3 Write down the biological name of some animals.

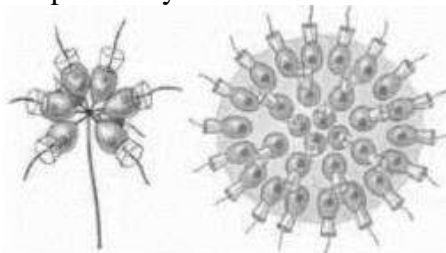
Local Name	English Name	Zoological Name
Makhi	Housefly	
Zarapha	Giraffe	
Kharpusht	Porcupine	
Bilee	Cat	
Titlee	Butterfly	
Kechwa	Earthworm	
Nolifar	Water lily	
Tambaku	Tobacco	
Dharek	Neem	
Suraj Mukhi	Sunflower	
Lehsan	Garlic	
Phool Matar	Sweet Pea	
Pyaz	Onion	
Baigun	Brinjal	
Aalo	Potato	
Chawal	Rice	
Sarson	Mustard	
Insan	Human beings	
Mendhak	Frog	
Gulaab	Rose	

4. Answer the following short questions.

i. Answer the following questions related to the Mustard plant.



- a. Name the level of organization exhibited by the Mustard plant. Also write its scientific name.
 - b. Mention the role of part A in the given plant.
 - c. Identify the part C and D of the plant on the basis of their function?
- ii. How did Ronald Ross prove the deduction, “Plasmodium should be present in mosquito”?
- iii. Observations are mainly of two types i.e., qualitative and quantitative. Describe them with the help of examples.
- iv. The following diagram shows two colonial organisms. When their cells were separated from each other, all cells were able to survive. Explain why?



- v. Justify viruses are at the borderline of living and non-living things.
 - vi. Which kingdom does Euglena belong to? Give reason for its placement. Enlist any three characteristics of that kingdom.
 - vii. Which kingdom does Bacteria belong to? Give reason for its placement. Enlist any three characteristics of that kingdom.
 - viii. Which kingdom does Yeast belong to? Give reason for its placement. Enlist any three characteristics of that kingdom.
 - ix. Which kingdom does Moss belong to? Give reason for its placement. Enlist any three characteristics of that kingdom.
 - x. Enlist the characteristics of two kingdom and five kingdom classification.
 - xi. Explain the difference between taxonomy and systematic.
 - xii. Why do organisms need to be given a scientific name in Latin?
 - xiii. What level of organization is exhibited by Volvox?
 - xiv. What is the difference between colonial and multicellular organization?
 - xv. Show different level of biological organization in a flow chart.
2. **Make a list of all the endangered and extinct animal species of Pakistan. What steps would you take to conserve these species? Write in detail.**



Dr. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD

SUMMER HOMEWORK TASK, 2022

SUBJECT: CHEMISTRY

CLASS: IX

Note: Answer the following questions on separate loose sheets.

- i. State Auf Bau Principle. Write the sequence of increasing order of energy of the sub-shells.
- ii. Differentiate between shells and sub-shells.
- iii. Write any three uses of isotopes in the medical field.
- iv. Which discoveries in chemistry are responsible to discard some postulates of Dalton's Atomic Theory?
- v. Do you know any element having no neutrons in its atom?
- vi. Write down the percentage abundance of isotopes of Uranium and Carbon.
- vii. Define formula unit with example.
- viii. Draw the structures of Hydrogen isotopes.
- ix. Explain periodicity of properties.
- x. Write down the factors affecting electron affinity.
- xi. Differentiate between representative elements and transition elements.
- xii. Give the scope of bio-chemistry and organic chemistry.
- xiii. How Mendeleev's periodic table is different from modern periodic table?
- xiv. Identify the period and group of the following elements:
 - a. ${}_{13}^{27}\text{Al}$
 - b. ${}_{16}^{32}\text{S}$
 - c. ${}_{8}^{16}\text{O}$.
- xv. Explain how Bohr's Atomic Theory is different from Rutherford's Atomic Theory.
- xvi. How many moles of hydrogen are there in 8.9×10^{23} Hydrogen atoms?
- xvii. Calculate the number of molecules present in 60g of CO_2 .
- xviii. Define shielding effect. Among (Li, Na) and (N, P) pairs, which one has higher shielding effect?
- xix. Show how cations and anions are related to the terms 'metals' and 'non-metals'.
- xx. Write two differences and two similarities between isotopes.

Note:

- Learn and write all above given questions because these are the part of First Term Syllabus.
- Write all practical work as directed in class.
- Learn the entire syllabus for First Term Exam.



Dr. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: PHYSICS
CLASS: IX

UNIT # 1 PHYSICAL QUANTITIES AND MEASUREMENT

Q.1 Answer the following questions:

- i. What are prefixes? Also Give examples.
- ii. What is meant by significant figures of measurement?
- iii. What safety equipments a school laboratory must have?
- iv. What is a stop watch? What is the least count of a mechanical and digital stop watch?
- v. On what factors does accuracy in measuring a physical quantity depends?
- vi. How can we measure the volume of an irregularly shaped object?
- vii. What is meant by scientific notation? Write the following numbers in scientific notation:
 - a. a. 0.0045
 - b. 145.7
- viii. Which one of the two instruments is more precise and why?
 - a. a. Vernier Callipers
 - b. Screw Gauge
- ix. What is the difference between astrophysics and geophysics?
- x. What is meant by mechanics and geophysics?
- xi. What is meant by derived units? Give two examples.
- xii. The sun is one hundred and fifty millions kilometres away from the earth. Write this as:
- xiii.
 - a. an ordinary whole number
 - b. in scientific notation
- xiv. Your hair grows at a rate of 1 mm per day. Find their growth rate in nm s^{-1} .
- xv. What is meant by atomic and nuclear physics?
- xvi. What role SI units have played in the development of science?
- xvii. What is meant by Vernier Constant. Give its value.
- xviii. How do prefixes micro and pico relate to each other?
- xix. On closing the stud and spindle of a screw gauge, the zero of the index line is behind the index line and 8th division of the circular coincides with the index line. There are 50 divisions on the circular scale and the distance between two consecutive threads is 0.5 mm. Find its zero error and zero correction.
- xx. On closing the jaws of a vernier callipers, zero of the vernier scale is on the left of its main scale zero such that 4th division of vernier scale coincides with one of the main scale division. Find its zero error and zero correction.
- xxi. Name any six base quantities.
- xxii. Define base quantities and derived quantities. Give one example of each.
- xxiii. Express the following quantities using prefixes:
 - a. a. 5000 g
 - b. 2000000 W
 - c. 52×10^{-10} kg
- xxiv. Define the term prefixes and write four prefixes commonly used.
- xxv. Write the following in standard form:
 - a. a. 11.68×10^{-27} m
 - b. 32×10^5 s
 - c. 725×10^5 kg
- xxvi.xxvi.

Attempt the following extensive questions:

Q.2 What is a physical balance? Explain.

- Q.3**
- a. On what factors does accuracy in measuring a physical quantity depends?
 - b. Write the following quantities in standard form:
 - i. 380000 km
 - ii. 0.00000058 kg

Q.4 What is the number of base units in system international? Write their names and symbols.

Q.5 What is the use of screw gauge? Describe the L.C and construction of screw gauge.

Q.6 Define significant figures. Which rules are helpful in identifying significant figures.

Unit # 2 KINEMATICS

Q.1 Answer the following questions:

- i. Draw the distance time graphs for an object:
 - a. At rest
 - b. Moving with constant speed
 - c. Moving with variable speed
- ii. Define gravitational acceleration. Give its SI unit and value.
- iii. How are vector quantities important to us in our daily life?
- iv. A cyclist completes half round of a circular track of diameter 636 m in 1.5 minutes. Find his velocity.
- v. Why the value of 'g' is taken as negative when a body is thrown vertically upward?
- vi. A train starts from rest. It moves through a distance of 1 km in 100 s with uniform acceleration. What will be its speed at the end of 100 s?
- vii. Can a body moving at constant speed have acceleration?
- viii. Find the retardation produced when a car moving at a velocity of 30 ms^{-1} slows down uniformly to 15 ms^{-1} in 5 s.
- ix. A train slows down from 80 kmh^{-1} with a uniform retardation of 2 ms^{-1} . How long will it take to attain a speed of 20 kmh^{-1} ?
- x. A cyclist completes half round of a circular track of radius 318 m in 1.5 minutes. Find the speed and velocity.
- xi. Convert the following:
 - a. 10 kmh^{-1} into ms^{-1}
 - b. $100 \mu\text{m}$ into nm
 - c. 5 litres into m^3
- xii. An object starts from rest. Write down the changed equations for the motion of object.
- xiii. A car is moving with velocity 'v'. On applying brakes, it comes to rest. Write down the changed equations of motion for the car.
- xiv. Define translatory motion and name its different types.
- xv. Define position.
- xvi. What is the difference between Dynamics and Kinematics?
- xvii. Differentiate between scalars and vectors.
- xviii. A car starts from rest, its velocity becomes 20 m/s in 8 s. Find its acceleration.
- xix. Define the term prefixes and write four prefixes commonly used.
- xx. Write the following in standard form:
 - a. $11.68 \times 10^{-27} \text{ m}$
 - b. $32 \times 10^5 \text{ s}$
 - c. $725 \times 10^5 \text{ kg}$
- xxi. Define the following:
 - a. uniform velocity
 - b. acceleration
 - c. Rotatory motion
- xxii. Differentiate between speed and velocity.
- xxiii. Differentiate between scalars and vectors.
- xxiv. Differentiate between distance and displacement.
- xxv. Derive the equation: $S = v_i t + \frac{1}{2} a t^2$

Answer the following extensive questions:

- Q.2**
- a. Derive or prove graphically: $2aS = v_f^2 - v_i^2$
 - b. A body has a weight 20 N. How much force is required to move it vertically upward with an acceleration of 2 ms^{-2} ?
- Q.3**
- a. Derive $S = v_i t + \frac{1}{2} a t^2$
 - b. A bullet of mass 20 g is fired from a gun with a muzzle velocity of 100 ms^{-1} . Find the recoil of gun if its mass is 5 kg.
- Q.4**
- a. i. Draw the distance time graph for the object moving variable speed.
 - ii. How can the slope of graph be determined?
 - iii. What information does the slope provide?
 - b. Describe three main types of motion with examples.
- Q.5**
- a. A car has a velocity of 10 ms^{-1} . It accelerates at 0.2 ms^{-2} for half minute. Find the distance travelled during this time and final velocity of the car.
 - b. A cricket ball is hit vertically upward and returns to ground 6 s later. Calculate:
 - i. Initial velocity of the ball
 - ii. Maximum height reached by the ball.



DR. A. Q. Khan School & College, Bahria Town, Phase-8, Islamabad
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: COMPUTER SCIENCE
CLASS: IX

Prepare Chapter 1 and 2 for 1st Term Exam.

Solve the following SLO based questions on loose sheets and also learn.

1. Write down two benefits and one drawback of laser printer.
2. With increasing memory sizes do you still think memory management is an important function of an operating system? Justify your answer.
3. Write down the purpose of shareware and freeware software. Give an example of each.
4. What will happen if storage devices are removed from a computer?
5. What type of problems you may face if you are not familiar with the operating system of your computer?
6. What type of problems you may face if no antivirus is installed in your computer system.
7. How is the job of system analyst different from programmer?
8. Between Linux and Macintosh, which Operating System would you prefer? Give reasons to support your answer.
9. Write down the applications of Supercomputer, Mainframe and Minicomputer.
10. Write down the applications of Batch processing, Timesharing and Real Time Operating System.
11. What is meant by managing data? and why is it important?
12. Compare GUI and CUI.
13. Compare RAM and ROM.
14. Compare Analog Computer and Digital Computer.
15. Compare single user and multi user Operating System.
16. Explain the features of UNIX and Windows.
17. Explain the tasks performed by operating system.
18. Explain the types of language processor.
19. Explain the features of RAM, ROM and Cache memory in detail.
20. Explain in detail the five functions of Operating System.



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD

SUMMER VACATION HOMEWORK TASK, 2022

SUBJECT: ECONOMICS

CLASS: IX

Answer the following questions.

1. What is meant by utility?
2. What is meant by scarcity?
3. What do you know about services?
4. Which factor creates value in a commodity?
5. Write down the definition of economics by Professor Robbins.
6. What do you know about pastoral stage in evolution of economic life?
7. What is division of labor?
8. Define Socialism.
9. How are some wants competitive?
10. Differentiate between value-in-use and value-in-exchange.
11. Why does an economic problem arise?
12. Describe three stages of industrial life.
13. How and why barter system was created?
14. Why are some wants complementary?
15. What do you know about freedom of enterprise?
16. Write any three characteristics of wants.
17. What do you know about the tribal concept of occupational division of labor in the evolution of economic life?
18. What is meant by Capitalism?
19. What is meant by wealth in Economics?
20. Write three important features of Robbin's definition of Economics.



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: ENGLISH
CLASS: IX

***Prepare all covered syllabus for First Term Exams.**

FOLLOWING CREATIVE WRITING TASKS TO BE DONE ON LOOSE SHEETS:

APPLICATION:

1. Write an application to the principal for two days leave for attending your brother's wedding.
2. Write an application to the principal for seeking permission for a visit to a historical place.

EMAIL:

1. Write an email to your sister congratulating her on her success in the speech competition.
2. Write an email to your mother asking her about her health issues.

PARAGRAPH:

Write paragraphs of about 80-100 words on the following topics:

1. Good Manners
2. Green Pakistan
3. Pollution

DIALOGUE:

1. Write a dialogue between two friends on the use of mobile phones.
2. Write a dialogue between a customer and shopkeeper on prices of daily consumer items highlighting the issue of inflation.(high prices)



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER HOMEWORK TASK, 2022
SUBJECT: GENERAL MATHEMATICS
CLASS: IX

WEEK 1 : CHAPTER 1

TOPIC: PERCENTAGE

Exercise 1.1: Q1 (v) , (viii) , (x) part. Q2 (iv) , (vii) , (xi) part. Q3 (iii) , (ix) , (xii) part.

Q4 (xi) , (x) , (xii) part

Exercise 1.2 : Q3 , Q6 , Q8 , Q9

TOPIC: RATIO

Exercise 1.3 : Q1 (ii) and (v) part. Q2 (ii) , (v) , (vii) , (ix) part.

Exercise 1.4 : Q2 , Q4 , Q6 , Q8 , Q10

WEEK 2 : TOPIC : PROPORTION

Exercise 1.5 : Q1 , Q2 , Q4 , Q5 , Q6 , Q7 , Q9 , Q10 , Q11 , Q13.

CHAPTER 1 : OBJECTIVE

Q1: Prepare MCQs

Q2: Fill in the blanks.

1. 40% of 1600 ----- .
2. Fraction of 54% is ----- .
3. $\frac{31}{25}$ in terms of percentage is ----- .
4. In a proportion $a:b :: c:d$, the product of extremes is equal to the product of -----.
5. In a ratio $a:b$ 'a' is called ----- and 'b' is called ----- .

Q3: Azeem spends 25% of his income on house rent , 60% of the remaining on household expenditures. If he saves Rs. 2100, what is his total income?

Q4: The stay of 18 students for 36 days in a hostel costs Rs.58320. Find the cost for the stay
Of 9 students for 12 days.

NOTE : Attempt examples on page 22 , 23, 24, 25.

WEEK 3 : CHAPTER 2

TOPIC : ZAKAT ,USHR AND INHERITANCE

Exercise 2.1 : Q2 , Q4 , Q6, Q8, Q10, Q11, Q12.

CHAPTER 2 : OBJECTIVE

Q1: Prepare MCQs.

Q2: Fill in the blanks.

- 1.Zakat is deducted at the rate of -----.
2. On a crop produced on artificial resources Ushr is deducted at the rate of -----.
- 3.In an inherited property the share of widow is ----- and share of widow with a child is -----.
- 4.The share of son and daughter in an inherited property is in the ratio -----.
- 5.Zakat is paid from two types of wealth ----- and -----.
6. Exposed wealth includes -----, -----, ----- and ----- .
7. Unexposed wealth includes -----, -----, ----- and ----- .
8. Zakat is a ----- which Sahib-e-Nisab Muslims pay at given rate by themselves.
9. When a person dies , then the left by that person are called -----.
10. -----, ----- and ----- amounts are paid before distributing inheritance among heirs.

NOTE :Attempt examples on page 33,36 and 37.

WEEK 4: CHAPTER 8

TOPIC: SETS AND OPERATIONS ON SETS (union , intersection and complement)

Exercise 8.1 : Q1 (i) , (iii) ,(iv) , (vi) part. Q3 , Q4 , Q6 and Q7.

TOPIC : PROPERTIES OF UNION OF SETS (COMMUTATIVE LAW AND ASSOCIATIVE LAW)

SOLVE RELATED EXAMPLES ON PAGE 202.

TOPIC: PROPERTIES OF INTERSECTION OF SETS (COMMUTATIVE LAW AND ASSOCIATIVE LAW) ON PAGE 203 AND DE MORGAN'S LAWS ON PAGE 207,208 SOLVE RELATED EXAMPLES.

WEEK 5: TOPIC: BINARY RELATION AND FUNCTION

EXERCISE 8.2 : Q1 , Q2 , Q3 , Q5 ,Q7 , Q8.

SOLVE EXAMPLES RELATED TO FUNCTIONS ON PAGE 211 TO 216.

TOPIC : OBJECTIVE

Q1. Prepare MCQs

Q2. Fill in the blanks.

1. $A \cup (B \cap C) = (A \cup B) \cap C$ is called -----.
2. $(A \cup B)' =$ -----.
3. $A \cap (B \cap C) =$ -----.
4. $(A \cap B)' =$ -----.
5. If A and B are two non-empty overlapping sets, then $A \cap B =$ -----.
6. If $R_1 = \{ (1,2) , (3,4) , (5,6) \}$, then the domain of $R_1 =$ -----.
7. If $R_1 = \{ (4,5) ,(5,4) , (5,6), (6,4) \}$ then the range of $R_1 =$ -----.
8. If A and B be the two non-empty sets , then $A \cap B = B \cap A$ is called the -----.
9. If the $U = \{ 1,2,3 \}$, $A = \{1\}$, then $U - A =$ -----.
10. If $f : A \rightarrow B$, then every element of a set A has its image in -----.

WEEK 6: REVIEW EXERCISES

CHAPTER 1: Q3 , Q6 and Q7.

CHAPTER 2: Q3 , Q4 and Q6

CHAPTER 8: Q4 , Q5 and Q6

NOTE: Do all work on narrow lines sheets. Prepare yourself for 1st term examination.



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: GENERAL SCIENCE
CLASS: IX

Note: Do complete your summer task on loose sheets.

Q1. Prepare 20 MCQs from the following units.

- Unit # 1 Introduction and Role of Science
- Unit # 2 Our Life and Chemistry

Q2. Learn and write short answers of each part which should not exceed 3 to 4 lines.

- Describe astronomy as a branch of physical science.
- Give the percentage composition of air by volume.
- What is the role of science in the field of medicine?
- What are the contributions of Dr. Abdul Qadeer Khan as atomic scientist?
- Why iodine is important for maintenance of our health?
- Describe some compounds of calcium in daily life?
- Briefly explain development in science during Muslim period.
- Write down the role of science and technology in agriculture.
- Difference in density of water and ice is the reason of survival of aquatic life. Briefly explain.
- Briefly write down the contribution of Ibn-ul-Haithm in science as father of optics.
- Write down the importance of three basic elements needed for life.
- What are organic compounds? Write any four things in which they are found.
- Write down the uses of sodium and chlorine in daily life.
- Compare the allotropic forms of carbon.
- Write down the role of science in the field of engineering.
- What do you know about biological science?
- Why is phosphorous necessary for the maintenance of our health.
- Write a note on Geology.
- Describe the contribution of modern period for the growth of scientific process.
- Name three important compounds of potassium and their use in daily life.
- Why ice has lower density than water?
- Write down the uses of baking soda and washing soda?
- What is the role of ozone in air?
- Write down the contribution of Dr.Samar Mubarak Mand? What is his field of specialization?
- Define Chemistry and Physics.
- Write down the contribution of Ibn-e-Nafees in science.

Q2. Learn and write detail answers of the following questions.

- Justify the statement “Water as a universal solvent”
- Draw and label the photosynthesis process and write a detail note on it.
- Define allotropy. Describe the properties and uses of Diamond and Graphite.
- Define and explain Respiration in detail. How is it different from photosynthesis?
- Describe the role and uses of Nitrogen, Oxygen and Carbon dioxide in air.
- Explain the limitations of science.
- Describe the role of science and technology for the betterment of mankind.
- Write down the contribution of the following scientist in the field of science.(Al-Razi, Al-Bairuni, Bu Ali sina, Jabar Bin Hayan)



DR. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: ISLAMIYAT
CLASS: IX

Answer the following questions on loose sheets.

- i. Highlight the causes and circumstances of battle of Badr.
- ii. Write down translation of Ayat 1 to 29 and also write words and compounds.
- iii. Write translation of first five ahadith given in book.

Answer the following short questions.

- i. What is meant by katib-e- wahi?
- ii. How many katib-e- wahi are there?
- iii. Why is Hazrat Usman(RA) called 'Jami ul Quran'?
- iv. Mention characteristics of Makki and Madni Surahs.
- v. What is meant by 'spoils of war' and how is it distributed?
- vi. Write the translation of a Quranic verse about protection of Holy Quran.
- vii. In the time of Holy Prophet (PBUH), who had memorized Quran?
- viii. Write down the translation of one hadith regarding learning and teaching of the Holy Quran.
- ix. Describe the role of Hazrat Abu Bakr (RA) regarding compilation and protection of Holy Quran?
- x. Why is Quran called 'Muhaiman' for previous books?

Answer the following questions in detail.

- i. Write a brief introduction of Quran.
- ii. Write in detail about preservation and compilation of Holy Quran.
- iii. Write a note on the distinct characteristics of Holy Quran.



، کیو خان سکول اینڈ کالج بحریہ ٹاؤن فیض ۸

کام برائے تعطیلات گرما
مضمون: اسلامیات

جماعت نہم

- i. غزوہ بدر کے اسباب اور حالات جنگ پر روشنی ڈالیں۔
- ii. سورة الانفال آیات ۱ تا ۲۹ کا ترجمہ اور الکلمات و الترتیب لکھیں اور یاد کریں۔
- iii. کتاب میں دی گئی پہلی پانچ احادیث کا ترجمہ لکھیں اور یاد کریں۔
مندرجہ ذیل سوالات کے مختصر جوابات تحریر کریں۔
 - i. کاتبین وحی سے کیا مراد ہے؟
 - ii. کاتبین وحی کی تعداد کیا ہے؟
 - iii. حضرت عثمان رضی اللہ عنہ کو "جامع القرآن" کیوں کہا جاتا ہے؟
 - iv. مکی اور مدنی سورتوں کی خصوصیات تحریر کریں۔
 - v. مال غنیمت کسے کہتے ہیں اور اس کی تقسیم کا کیا طریقہ کار بتایا گیا ہے؟
 - vi. قرآن مجید کو سیکھنے اور سکھانے کے متعلق کسی حدیث کا ترجمہ لکھیں؟
 - vii. قرآن مجید کو پچھلی کتابوں کے لیے "مہیمن" کہنے کا کیا مطلب ہے؟
 - viii. نبی کریم صلی اللہ علیہ وسلم کے دور میں قرآن مجید کن حضرات کو یاد ہو چکا تھا؟
 - ix. قرآن مجید کی حفاظت کے بارے میں ایک قرآنی آیت کا ترجمہ لکھیں۔
 - x. تدوین قرآن مجید کے لیے حضرت ابوبکر رضی اللہ عنہ نے کیا خدمات سرانجام دیں؟
مندرجہ ذیل سوالات کے تفصیلاً جوابات تحریر کریں۔
 - i. قرآن پاک کی خصوصیات پر نوٹ لکھیں۔
 - ii. قرآن کریم کی حفاظت کے بارے میں آپ کیا جانتے ہیں؟ تفصیل سے بیان کیجئے۔
 - iii. قرآن مجید کا مختصر تعارف بیان کریں۔



Dr. A. Q. KHAN SCHOOL & COLLEGE, BAHRIA TOWN, PHASE-8, ISLAMABAD

SUMMER VACATION HOMEWORK TASK, 2022

SUBJECT: MATHEMATICS

CLASS: IX (UNIT #1, 8 and 10)

NOTE:-ATTEMPT ALL THE QUESTIONS OF SUMMER TASK ON LOOSE SHEETS.

Activity #1

- Unit #1 Matrices and the determinants
- EX#1.1 (Q # 2 and 3)
- EX#1.2 (Q # 4,5 and 6)
- EX # 1.3(Q # 4,5,6,7 and 8)
- Learn and write Theorem #10.1.1

Activity #2

- EX#1.4(Q # 4,5 and 6)
- EX#1.5 (Q# 4,5 and 6)
- EX#1.6 (Q# 2,3,4 and 5)
- Learn and write Theorem # 10.1.2 and 10.1.3

Activity #3

Q1.

If

$$\begin{bmatrix} x+3 & z+4 & 2y-7 \\ -6 & a-1 & 0 \\ b-3 & -21 & 0 \end{bmatrix} = \begin{bmatrix} 0 & 6 & 3y-2 \\ -6 & -3 & 2c+2 \\ 2b+4 & -21 & 0 \end{bmatrix}$$

find the values of a, b, c, x, y and z.

Q2.

Solve the following equation for a, b, c, d.

$$\begin{bmatrix} a+b & b+2c \\ 2c+d & 2a-d \end{bmatrix} = \begin{bmatrix} -1 & 4 \\ 8 & 0 \end{bmatrix}$$

Q3. Which of the followings are symmetric.

(i) $A = \begin{bmatrix} 5 & -7 \\ -1 & 5 \end{bmatrix}$

(ii) $B = \begin{bmatrix} -1 & 2 \\ 2 & 3 \end{bmatrix}$

(iii) $C = \begin{bmatrix} 2 & 3 \\ -1 & 4 \end{bmatrix}$

Q4. If $A = \begin{bmatrix} 0 & -1 \\ 2 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 3 \\ 1 & 0 \end{bmatrix}$, then show that

$$(AB)^{-1} = B^{-1} \cdot A^{-1}$$

Q5. Verify that $A \cdot A^{-1} = A^{-1} \cdot A = I$, where

$$A = \begin{bmatrix} 1 & 1 \\ 2 & 5 \end{bmatrix}$$

Q6. Learn and write Theorem 10.1.4

Activity # 4

Q1. Solve the following system of linear equation and word problems by using Inversion Method and Cramer's rule (both the methods):

i. $x + 2y = -13$, $3x + 6y = 11$

ii. $2x + 3y = -1$, $x - y = 2$

Q2. Qasim and Farzana are selling fruits for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Qasim sold 3 small boxes of oranges and 14 large boxes of oranges for a total of Rs. 203. Farzana sold 11 small boxes of oranges and 11 large boxes of oranges for a total of Rs. 220. Find the cost of one small box of oranges and one large box of oranges.

Q3. 3 bags and 4 pens together cost 257 rupees whereas 4 bags and 3 pens together cost 324 rupees. Find the cost of a bag and 10 pens.

Q4. Amjad thought of two numbers whose sum is 12 and whose difference is 4. Find the numbers.

Q5. The length of a rectangular playground is twice its width. The perimeter is 30. Find its dimensions

Activity #5

EX#8.2(Q#1,3and 4)

EX#8.3(Q#1 and 5)

DO complete REVIEW EX #8

Activity #6

Q1. Draw the following conversion graphs

i. 1 foot = 12 inches

ii. 1 kg = 2.2 pounds

Q2. Solve the following equations graphically:

$$3x + 5y = 2, 2x - 3y = 8$$

Q3. Do complete REVIEW EX #1



DR. A. Q. Khan School & College, Bahria Town, Phase-8, Islamabad
SUMMER VACATION HOMEWORK TASK, 2022
SUBJECT: PAKISTAN STUDIES
CLASS: IX

NOTE: Thoroughly read chapter 1 and chapter 2 for solving SLO (Student Learning Outcomes) based questions. The questions should be solved on loose sheets.

Note: Week 1 and Week 2: Learn Chapter 1 and solve its 'SLO' based questions.

Chapter 1: The Ideological Basis of Pakistan

1. Why is it important for a country to have an ideology?
2. Define Ideology of Pakistan according to your general understanding.
3. What is meant by two nation theory?
4. How was the Two Nation Theory originated?
5. What is the importance of Two Nation Theory in the history of Pakistan?
6. Discuss the importance of 'equality and brotherhood' as the basis of Pakistan's Ideology.
7. Explain the concept of sovereignty in Islam.
8. How would you explain the concept of ijtehad?
9. Identify the major sources of Pakistan Ideology.
10. Why are equity and justice important pillars in Islamic Ideology?
11. Explain the reasons for the social collapse of Muslims during the British Rule.
12. How Ideology is significant in the history of Pakistan Movement?
13. India was termed as a 'Golden Sparrow/Bird ' by the British. Justify the given statement by mentioning reasons.
14. "Ijtehad is a pre-requisite of Progress" in the opinion of Allama Iqbal. Comment, briefly.
15. What was the reaction of Sir Syed Ahmad Khan when the British rulers introduced the British system of Democracy in India?
16. Why Allama Muhammad Iqbal believed in Muslim independence as the only solution of Indian's problems?
17. Why Quaid-e-Azam did not look at the Indian problems as communal? Explain the reasons.
18. Why Quaid-e-Azam considered an independent state as a pre-requisite of the Muslim progress?
19. How were the Muslims, taken by an economic setback after the occupation of British?
20. How an Islamic constitution should be framed? Elaborate in the light of Quaid-e-Azam's pronouncements.

Note: Week 3,4,5,6 .Learn chapter 2 (till Lahore Resolution) but read full chapter for solving all questions.

Chapter 2: The Making of Pakistan

1. What was the purpose of the Congress in the start of its formation?
2. Why Bengal was divided into two provinces?
3. In which two provinces Bengal was divided?
4. What was India Government Act 1909?
5. Who is the founder of the All India Muslim League?
6. What do you know about the concept of 'khilafat'?
7. Why Italy occupied Tripoli?
8. Elaborate the principle of 'Indians right of self-determination'.
9. Why fourteen points were given by Quaid?
10. Write 4 points of fourteen points.
11. Define Communal Award.
12. Why Simon Commission was sent to the Subcontinent?
13. When and why World War II started?
14. Why congress observed the 'Observance Day'?
15. What different names were given to the Pakistan Resolution' by Hindus?
16. Why Quit India Movement was initiated by Congress?
17. Why Jinnah-Gandhi talks couldn't get successful?
18. Write down any three important points of the comparison between the Cripps Offer and Cabinet Mission Plan
19. How did the results of elections of 1945-46 prove Muslim League, the only representative party of Muslims of India?
20. What was the fate of Siraj-ud-Dolaha, Sultan Fateh Ali Tipu and Bahadur Shah Zafar in the reign of British?
21. Why Rowlatt Act is known as a "Black Law"? What was Quaid-e-Azam's reaction on it?
22. Why Pakistan Resolution is considered "the most important milestone in the creation of Pakistan"? State at least two main points to justify your answer.
23. Who was Cyril Radcliffe? Which injustices he did to Pakistan.
24. Elaborate three points of 'Cabinet Mission Plan'.
25. When and why East India Company got demolished?



ڈاکٹر اے کیو خان سکول اینڈ کالج بحریہ ٹاؤن فیئر ۸

موسم گرما کی تعطیلات کا کام

مضمون: اردو

جماعت نہم

سبق: (سیرت سرورِ عالم، قومی اتفاق، غالب کا اچھوتا پن، شاعروں کی باتیں)، نظم (رب کائنات)، غزل (میر تقی میر)، گرامر: مرکب تام، مرکب ناقص، مرکب تام کے حصے، مرکب تام کی اقسام، شعری اصطلاحات کی دہرائی کی جائے۔

خطوط: اپنی بہن کو اپنے ساتھ موسم سرما کی تعطیلات گزارنے کی دعوت دیں۔

چھوٹے بھائی کو بری صحبت چھوڑنے اور پڑھائی کی طرف راغب ہونے کی نصیحت کریں۔

اپنے والد صاحب کے نام جس میں انہیں اپنے نتیجے کے بارے میں آگاہ کریں۔

روداد: یوم آزادی کی تقریب کی روداد، سکول کی الوداعی تقریب کی روداد لکھیں۔

کالج میگزین کے لئے بھی اپنی تخلیقی کاوشوں کو جاری رکھئے اور اپنا تخلیقی کام کالج میگزین میں چھپنے کے لئے دیجئے۔