

ST. MARY'S ACADEMY

CLASS 8

CLASS 8

Pak. Studies

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CLASS 8

Q. 4 Write the short answers.

(6)

i. What is the saying of the Holy Prophet (PBUH) about brotherhood?

Ans: _____

ii. Why the implementation of Islamic System is necessary in an Islamic society?

Ans:- _____

iii. Why did the Muslims of the sub- continent got freedom?

Ans: _____

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CLASS 8

Name: _____

Section: _____

Subject: Pak. Studies

Worksheet No.4

Week No. 7

Day - I

Mark the correct option with the help of the text book and the options given below:

1. When did the Hindi Urdu controversy start?

- (a) 1861 (b) 1863 (c) 1865 (d) 1867

2. The first pillar of Islam is:

- (a) Toheed and Prophethood (b) Namaz (c) Keeping Fast (d) Zakaat

3. When was the war of independence fought?

- (a) 1855 (b) 1857 (c) 1859 (d) 1861

4. Who has Supreme authority in Islam?

- (a) Allah Almighty (b) Parliament (c) President-of the state (d) People

5. Who gave the presidential address in the Lahore Resolution (23rd March, 1940)?

- (a) Quaid-e-Azam (b) A.K. Fazl-ul-Haque (c) Moulana M. Ali Johar
(d) Allama Muhammad Iqbal

6. Who gave the idea of a separate state for the Muslims in 1930?

- (a) Sir Syed Ahmed Khan (b) Chaudhry Rehmat Ali (c) Sir Agha Khan
(d) Allama Muhammad Iqbal

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Day - II

Mark the correct option with the help of the text book and the options given below:

1. **State Bank of Pakistan was inaugurated on:**

- (a) 1st July, 1948 (b) 5th May, 1948 (c) 14 August, 1949
(d) 1st October, 1949

2. **The ideology of Pakistan is based on:**

- (a) Collective System (b) Programme (c) Progressivism (d) Islamic ideology

3. **The word "Pakistan" was coined by:**

- (a) Allama Muhammad Iqbal (b) Sir Agha Khan (c) Chaudhry Rehmat Ali
(d) Sir Syed Ahmed Khan

4. **When did Allama Iqbal address at Allahabad?**

- (a) 1929 (b) 1930 (c) 1933 (d) 1940

5. **The third pillar of Islam is:**

- (a) Namaz (b) Zakaat (c) Keeping Fast (d) Hajj

6. **The basis of Ideology of Pakistan is:**

- (a) Ideology of Islam (b) Zakaat (c) Keeping Fast (d) Hajj

Day - III

Mark the correct option with the help of the text book and the options given below:

1. **The Ideology of Pakistan is the name of creating a society based on the principles of:**

- (a) Qura'an and Sunnah (b) Jihad (c) Discipline (d) Unity

2. **he Ideology of Pakistan is the name of creating a society based on the principles of:**

- (a) Qura'an and Sunnah (b) Jihad (c) Discipline (d) Unity

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3. **The Ideology of Pakistan is the name of welfare state where the of the people is considered.**
(a) Prayers (b) Welfare (c) Wealth (d) Property
4. **The basis of Islamic State and Society is:**
(a) Prayer. (b) Consultation (c) Law (d) Orders
5. **Sense to provide security to was also included in the background of the demand for Pakistan:**
(a) Muslims (b) Animals (c) Minorities (d) Refugees
6. **Sir Syed Ahmed Khan was the first person who used the term for Muslims in 1867.**
(a) Religious (b) Mujahid (c) Nation (d) Ruler.

Day - IV

Mark the correct option with the help of the text book and the options given below:

1. **The Lahore Resolution was passed on:**
(a) 23rd March 1940 (b) 23rd March 1945 (c) 23rd March 1946
(d) 23rd March 1948
2. **Quaid-e-Azam was a firm advocate of:**
(a) Theory of Jihad (b) Theory of State (c) Two-Nation Theory
(d) Theory of Needs
3. **A nation endangers its existence if it ignores its:**
(a) Ideology (b) Culture (c) Politics (d) Economy
4. **Ideology is a set of political and cultural principles on which is based:**
(a) Social value (b) Prayer (c) Tradition (d) Nation
5. **Who presented the idea of a separate state for Muslims in famous Allahabad**

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Address?

(a) Sir Syed Ahmed Khan
(c) Allama Iqbal

(b) Dr. Wasti
(d) Abdul-Rab Nishtar

6. Who said, "Any programme of common life based upon thinking and philosophy is called Ideology."

(a) Dr. George Brass
(c) Sharif Kunjahi

(b) Najmi Barias
(d) George Handel

Week No. 8

Day - I

(Note: Read thrice, understand and rewrite the following questions)

Q 1. What is meant by Touheed?

Ans: Oneness of God (Touheed) means that Allah is the Creator and Master of the entire universe. No one is His partner and nothing is beyond His knowledge and His power.

Q 2. What do you mean by the faith in Prophet hood?

Ans: Faith in Prophet hood means to believe that Allah sent messengers for guidance of mankind. It is compulsory for a Muslim to have a staunch belief in Prophet hood without having any kind of doubt. This belief demands that the Holy Qura'an and the noble life of the Holy Prophet (S.A.W) must be acknowledged as the source of guidance.

Day - II

(Note: Read thrice, understand and rewrite the following questions)

1. What is meant by the ideology of Pakistan?

Ans: Pakistan is an ideological state. The ideology of Pakistan is the name of creating a society based on the principles of Qura' an and Sunnah. Its basis is the religion of Islam. The ideology of Pakistan means ideology of Islam. No doubt, the Islamic ideology is the foundation of the ideology of Pakistan.

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Q2. While inaugurating the State Bank, what did Quaid-e-Azam say?

Ans: On 1st July, 1948, Quaid-e-Azam inaugurated the State Bank of Pakistan. On this occasion, he said: "The economic system of the West has created almost insoluble problems for the humanity. It has failed to do justice between man and man. We must present to the world an economic system based on true Islamic concept of equality of manhood and social justice."

Day - III

(Note: Read thrice, understand and rewrite the following questions)

Q1. What is the saying of the Holy Prophet (PBUH) about brotherhood?

Ans: About brotherhood, the Holy Prophet (S.A.W) said; "Each Muslim is a brother to every other Muslim. He should not commit breach of trust. He taught to refrain from maliciousness, malignance and enviousness."

Q 2. What did Quaid-e-Azam say about nationalism?

Ans: About nationalism, Quaid-e-Azam said:

"Musalmans are a nation according to any definition of a nation, and they must have their homeland, their territory and their state."

Day - IV

(Note: Read thrice, understand and rewrite the following questions)

Q 1. What is meant by Two-Nation Theory in ~the historical perspective of the Sub-continent?

Ans: In the perspective of the Sub-continent, Two-Nation Theory means that two major nations, the Muslims and the Hindus, were settled there. The two nations were entirely different from each other in their religious ideas, the way of living and collective thinking. Their basic principles and the way of living are so different that despite living together for centuries, they could not intermingle with each other.

Q 2. What did Quaid-e-Azam say about the security of minorities?

Ans: Sense to provide security to the minorities was also included in the background of the demand for Pakistan. Quaid-e-Azam (R.A) said very clearly that the right of the minorities will be fully protected in Pakistan. Islam does not allow that life, property, dignity and religious traditions of the minorities in Pakistan go unprotected.

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CLASS 8

Chemistry

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Name: _____ Section: _____

Subject: Chemistry **Assessment No.3** Total Marks: 25

Q 1. Give brief answer of the following Questions. 3x5= (15)

- i. At high temperature hydrogen sulphide (H_2S) gas given off by a volcano is oxidized by air to sulphur dioxide (SO_2). Sulphur dioxide reacts with water to form acid rain. How many molecules are there in 0.25 moles of SO_2 ?
- ii. Write down the conclusions of Rutherford from his experiment.
- iii. Draw Bohr's Model for the following atoms
 - a. Carbon Atomic no. 6, Mass no. 12
 - b. Fluorine Atomic no. 9 Mass no. 19
- iv. Define Atomic number and mass number? Give examples of each. Identify Empirical and molecular formula for Glucose.
 - a) $\text{C}_6\text{H}_{12}\text{O}_6$
 - b) CH_2O .
- v. A molecule contains four phosphorus atoms and ten oxygen atoms. Write the empirical formula for this compound. Also determine the molar mass of this molecule.

Q 2. Fill in the blanks. (5)

- i. _____ Isotope is used as a tracer in diagnosing thyroid problem.
- ii. Rutherford used _____ particles in his experiments.
- iii. The value of h (Planck's constant) is _____.
- iv. Magnesium ion has _____ charge.
- v. An impure substance that contains two or more pure substances that retain their individual chemical characteristics is called _____.

Q 3. Write down the postulates of Bohr's atomic theory. (5)

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CLASS 8

Name: _____

Section: _____

Subject: Chemistry

Worksheet No: 4

NOTE FOR THE STUDENTS:

Learn all the work given in the worksheet and practice daily.

DAY 1:

Answer the following questions.

Q 1. Explain Why an Oxide has -2 charge and Mg^{+2} has +2 charge.

Q 2. Pottasium Chlorate ($KClO_3$) is used commonly for the laboratory preparation of oxygen gas. Calculate its formula mass.

Q 3. Differentiate between Compound and Mixture?

DAY 2:

Answer the following questions.

Q 1. Identify ions, molecular ions and free radicals from the following species.

CN^- , $.CN$, He^{+2} , N^{-3} ,

Q 2. A spoon of table salt, NaCl contains 12.5 grams of this salt. Calculate the number of moles it contains.

Q 3. Define ion, molecular ion, formula unit, free radical, atomic number, mass number, atomic mass unit with suitable examples.

DAY 3:

Answer the following questions.

1. Calculate the number of moles of each substance in samples with the following masses:

a. 250 mg of Carbon

b. 1.5 Kg of MgO

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2. Why the term molecular mass used for molecular compounds. Whereas, the term formula mass is used for ionic compounds?
3. a. Define Avogadro's number. How does it relate to the masses of chemical substances?
b. What is the concept of mole? Explain it?

DAY 4:

Answer the following questions.

1. Why all the ionic compounds are represented by their empirical formulas?
2. Calculate the mass of ozone if 9.05 moles of ozone is formed in a storm?
3. What are various branches of chemistry? Give brief description of each.

WEEK 8

DAY 1:

Answer the following questions.

Q 1. Vinegar is 5% acetic acid. This contains 2 carbon atoms, four hydrogen atoms and 2 oxygen atoms. Write its empirical and molecular formulas.

Q 2. Following compounds are used as fertilizers. Determine their formula masses.

- i. Urea, $(\text{NH}_2)_2\text{CO}$
- ii. Ammonium nitrate, NH_4NO_3

Q 3. Define Atomic Number, Mass Number, Relative atomic mass and Atomic Mass Unit.

Chapter # 2

STRUCTURE OF ATOMS

DAY 2:

Answer the following questions

Q 1. Write down all the Isotopes of Hydrogen.

Q 2. Differentiate between shells and sub shells.

Q 3. Write down the uses of Isotopes.

DAY 3:

Answer the following questions

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Q 1. An atom is electrically neutral, why?

Q 2. M- 24 is a radioactive isotope used to diagnose restricted blood circulation, for example in legs. How many electrons, protons and neutrons are there in this isotope. Valence shell electronic of M is $3s^1$.

Q 3. What is Electronic Configuration?

DAY 4:

Answer the following questions

Q 1. How many electrons can be placed in all of the sub-shells in the $n=2$ shells?

Q 2. How many sub- shells are there in N shell.

Q 3. Write down the electronic configuration of first five elements of the Periodic table.

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CLASS 8

Computer

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Name: _____ Section: _____

Subject: Computer Assessment No: 3 Total Marks: 25

Q # 1: Encircle the correct option. (5)

I. Which one is the output device?

- A) Scanner B) Microphone
- C) Printer D) Barcode reader

II. Device used to input sound in to the computer.

- A) Keyboard B) Mouse
- C) Scanner D) Microphone

III. Optical storage device used to store data.

- A) Compact Disk B) Hard Disk
- C) Memory Card D) USB Flash Memory

IV. A person who is responsible for the design, implementation and maintenance of a database in an organization.

- A) Network Administrator B) Database Administrator
- C) Software Engineer D) Hardware Engineer

V. A person who is responsible for installation, configuration and maintenance of computer networks in organizations.

- A) Network Administrator B) Database Administrator
- C) Software Engineer D) Hardware Engineer

Q # 2: Give short answers of the following questions. (3x4=12)

1. Define Computer Hardware.
2. What is Scanner?
3. What is Microprocessor?
4. What are registers?

Q # 3: What are storage devices? (8)

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CLASS 8

Name: _____

Section: _____

Subject: Computer

Worksheet No: 4

Week 7 & 8

Q#1: What are output devices?

Q#2: What is Monitor?

Q#3: What is Printer? Describe its types.

Printer

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❖ *Impact printer*

❖ *Non-Impact printer*

Q#4: What is Plotter?

Plotter

Q#5: What is Speaker?

Speaker

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Q#6: What is Computer Memory? Describe its types.

MEMORY

❖ ROM (Read Only Memory)

RAM (Random Access Memory)

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Q#7: What is Cache Memory?

1.3.2 PORTS, EXPANSION SLOTS AND EXPANSION CARDS

Q#8: What are ports?

PORTS

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On Motherboard ports

Q#9: What are Expansion Slots and Expansion Cards?

EXPANSION SLOTS AND EXPANSION CARDS

1.4 BASIC OPERATIONS OF A COMPUTER

Q#10: Describe the basic operations of computer.

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❖ Input Operation

❖ Processing Operation

❖ Storage Operation

❖ Output Operation

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1.5 COMPUTER SOFTWARE

Q#11: Define computer software.

1.5.1 SYSTEM SOFTWARE

Q#12: Define system software.

The types of system software.

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Q#13: What is operating system?

Operating System

The following tasks are performed by the operating system.

Q#14: What are Device Drivers?

Device Drivers

Q#15: What are Utility Programs?

Utility Programs

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The following are some commonly used utility programs that perform specific tasks.

- Windows Explorer: _____
- Backup utility: _____
- WinZip utility: _____
- Diagnostic utility: _____
- Antivirus software: _____

Q#16: What are Language Processors?

Language Processors

1.5.2 APPLICATION SOFTWARE

Q#17: Define Application Software.

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Q#18: What is Productivity Software?

Productivity Software

Q#19: What is Business Software?

Business Software

Q#20: What is Entertainment Software?

Entertainment Software

Q#21: What is Education Software?

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Education Software

1.5.3 OPEN SOURCE SOFTWARE, SHAREWARE AND FREeware

Q#22: What is Open Source Software?

Open Source Software

Q#23: What is Shareware?

Shareware

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Q#24: What is Freeware?

Freeware

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CLASS 8

URDU

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Name: _____ Section: _____

Subject: Urdu Assessment No.3 Total Marks: 25

(10)

- سوال نمبر 1: درج ذیل سوالوں کے مختصر جوابات دیں۔
- 1- حضرت محمدؐ کوئی ایسا نام سہانے کے لیے چھوڑ دیا؟
 - 2- سندھ کی سطح سے عید وادی کی بلندی کتنی ہے؟
 - 3- ”وہ نظم نعت“ کے شاعر کون ہیں؟
 - 4- کون سے عمل کے ہوتے پر لوگ وہم کرتے ہیں؟
 - 5- ہمیں ایک دوسرے کی مدد کیوں کرنی چاہیے؟

(5)

سوال نمبر 2: دیے گئے ہنسی چھڑا کر لیں اور ساتھ میں نظم اور شاعر کا نام لکھیں۔

فوط کرا آسمان سے مارے
شب کو گرتے ہیں جسے لٹا مارے
وہم کرتے ہیں لوگ بے جا مارے
میں نہ گھبراؤں خوف کے مارے
کیونکہ میرا خدا ہے میرے ساتھ

سوال نمبر 3: 1- دو دوستوں کے درمیان موبائل فون کی اہمیت پر مکالمہ تحریر کریں۔

2- چچا کے مہا لکڑہ پر لٹے والے چچے کا شکر پیکاری لکھیں۔

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Name: _____

Section: _____

Subject: Urdu

Worksheet No: 4

ساتواں ہفتہ: (سبق: ہجرت نبوی) کتاب برائے نیم

پہلا دن: مختصر جواب دیں:

الف: ہجرت نبوی سے کیا مراد ہے؟

ب: رسول پاکؐ نے نبوت کے کون سے سال ہجرت فرمائی؟

ج: حضرت امیرؓ سے کون سی شخصیت مراد ہے؟

د: رسول پاکؐ نے حضرت علیؓ سے کیا ارشاد فرمایا؟

ہ: حضرت اسماء کون تھیں؟

و: قریش نے رسول پاکؐ اور حضرت ابوبکرؓ کو گرفتار کرنے کا کیا انعام مقرر کیا؟

ز: سراقہ بن جشم کیسے تائب ہوا؟

دوسرا دن: متن کو مد نظر رکھتے ہوئے موزوں الفاظ کی مدد سے خالی جگہ پُر کریں۔

الف: حافظِ عالم نے مسلمانوں کو دارالامان ----- کی طرف رخ کرنے کا حکم دیا۔ (مکہ، مدینہ، طائف، یمن)

ب: نبوت کا ----- سال شروع ہوا اور اکثر صحابہؓ مدینہ پہنچ چکے، تو وحی الہی کے مطابق آنحضرتؐ نے بھی مدینہ کا عزم فرمایا

۔ (بارہواں، دسواں، تیرہواں، پندرہواں)

ج: اس وقت بھی آپؐ کے پاس بہت سی ----- موجود تھیں۔ (ملواریں، امانتیں، کھجوریں، نعمتیں)

د: ----- کو معلوم ہو چکا تھا کہ قریش آپؐ کے قتل کا ارادہ کر چکے ہیں۔ (جناب ابوبکرؓ، جناب عمرؓ، جناب عثمانؓ)

ہ: ----- سے پہلے قرارداد ہو چکی تھی۔ (حضرت عمرؓ، حضرت زیدؓ، حضرت علیؓ، حضرت ابوبکرؓ)

و: اسی طرح ----- راتیں غار میں گزاریں۔ (تین، چار، پانچ، سات)

تیسرا دن: درج ذیل بیانات میں سے درست کی نشاندہی () اور غلط کی نشاندہی (x) سے کریں۔

الف: دعوتِ حق کے جواب میں ہر طرف سے تلوار کی جھنکاریں سنائی دے رہی تھیں۔

ب: حافظِ عالم نے مسلمانوں کو دارالامان حبشہ کی طرف رخ کرنے کا حکم دیا۔

ج: نبوت کے تیرہویں سال اکثر صحابہؓ مدینہ پہنچ چکے تھے۔

د: سب لوگوں نے ایک ہی رائے پیش کی۔

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و: اہل عرب زمانہ مکان کے اندر گھسنا معیوب سمجھتے تھے۔

و: فاتح خیبر کے لیے قتل گاہ فرش گل تھے۔

ز: حضرت ابوبکرؓ کا غلام رات گئے، بکریاں چرا کر لاتا۔

ح: حضرت عائشہؓ گھر سے کھانا پکا کر غار میں پہنچا آتی تھیں۔

ط: صبح قریش کی آنکھیں کھلیں تو پلنگ پر آنحضرتؐ کے بجائے جناب امیرؓ تھے۔

ی: نبی کریمؐ کی تشریف آوری کی خبر مدینے میں پہلے پہنچ چکی تھی۔

سوال: اپنے دوست کے نام اس کی سالگرہ کے موقع پر مبارکباد کا خط لکھیے اور سالگرہ میں شریعت کی دعوت نہ ملنے پر اپنی ولی کیفیت کا اظہار کریں۔

چوتھا دن: درج ذیل کے معانی لکھیں اور جملوں میں استعمال کریں۔

دعوت حق - ہدف - معیوب - ترش - خون بہا

پانچواں دن: جمع کے واحد اور واحد کی جمع لکھیں۔

اہداف - جھنکاریں - رائیں - زنجیر - قبیلہ

آٹھواں ہفتہ:

پہلا دن: درج ذیل تراکیب کے معنی لکھیں۔

آستانہ مبارک - بوسہ گاہ خلاق - فرش گل - سراں بہا - ہمدن چشم انتظار

سوال: دو دوستوں کے درمیان نماز کی اہمیت پر پیش آنے والا مکالمہ تحریر کریں۔

دوسرا دن: نظم حمد کے پہلے تین اشعار کی تشریحات یاد کریں۔

تیسرا دن: نظم حمد کے بقیہ اشعار کی تشریحات یاد کریں۔

چوتھا دن: نظم نعت کے پہلے چار اشعار کی تشریحات یاد کریں۔

پانچواں دن: نظم نعت کے بقیہ اشعار کی تشریحات یاد کریں۔

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ETHICS

Q.1) What is the relationship between religion and psychology? Give two examples. (6)

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Q. 2) Give short answers of the following questions.

3 x 3 = (9)

i) What effects the Human conscience the most?

ii) Write two important aspects of morality?

iii) What are the common beliefs of Jainism and Hinduism?

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Q. 3) Write True or False against the given statements. (5)

- i) The personality of an individual is based upon religion and psychology. _____
- ii) The system of morality of a nation comprises of its traditions, habits and beliefs. _____
- iii) Religion and wisdom are interconnected. _____
- iv) Jainism gives importance to five non spirits. _____
- v) In the 1980's the Jain community divided into two major sects. _____

Q. 4: Fill in the blanks with the given words appropriately. (5)
(conscience, nature, last, human character, beliefs)

- 1) Religion is included in man's _____.
- 2) _____ decides between right and wrong.
- 3) Economic development is based on _____.
- 4) Common elements in Jainism and Hinduism are _____.
- 5) In Jainism the most important Trithankara is _____.

WITH BEST WISHES!!

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Q.II) Write a note on Jainism./What do you know about Jainism?
Chapter3)

CLASS 8

Q.III) What are the beliefs of Jainism about soul and matter?

NOTE: Give short answers after going through Chapter No. 2 and 3
Q - 2) (I) What aspects are included in the betterment of a society?

Q - 2) (I) What aspects are included in the betterment of a society?

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Q. Give short answers of the following questions.

ii) In religion who is given more importance the individual or the society?

Q. (III) What are the important sources of morality?

Q(IV) Write the names of four virtues (good works) and four vices (bad deeds) mentioned in the perspective of morality.

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CLASS 8

Q. (V) What are the common values of various religion? (Page No. 8)

Q.(VI) What is the basic right of every human being? (Page 8, Last para)

Q. (VII) What is disliked by every society? (see page 8, 2nd last para)

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Q. (VIII) What prevents human beings from committing crimes?

Q3) Write in short how can you be good to your neighbours? (5 to 7 lines)

Q. 4) Write True or False against the given statements.

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1) Jain believers believe that their religion is imperishable. (everlasting)

2) The Digimbars influence helped Jainism to flourish in Karnatak

3) Pershunath was the 24th Trithankara
(in fact Mahavira is the 24th Trithinkara)

4) In the 1980's the Jain community divided into two major sects.

5) Jainism gives importance to five non Spirits.

6) The three major religions are Christianity, Judaism and

7) However psychology places emphasis on the habits of

8) Approximately 2500 years ago the study of self started from Germany.

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CLASS 8

ISLAMIIYAT

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CLASS 8

Name: _____ Section: _____

Subject: Islamiyat Assessment No: 3 Total Marks: 15

(حصہ اول)

سوال نمبر ۱۔ خالی جگہ پُر کریں۔ (۵)

۱۔ روزہ ارکان اسلام میں سے _____ رکن ہے۔

ب۔ روزہ گناہوں سے _____ کا ذریعہ ہے۔

ج۔ روزے مسلمانوں پر _____ میں فرض کیے گئے

د۔ رمضان المبارک میں دوسروں کے لیے ہمدردی اور _____ کا جذبہ پیدا ہوتا ہے۔

ه۔ روزہ دار کے لیے _____ خوشیاں ہیں۔

(حصہ دوم)

سوال نمبر ۳۔ درج ذیل سوالات کے مختصر جوابات تحریر کریں۔ (۱۰)

۱۔ روزے کے اصطلاحی معنی کیا ہیں؟

۲۔ روزہ اور دوسری عبادات میں کیا فرق ہے؟

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۳۔ روزہ دار کے لیے کتنی خوشیاں ہیں؟

۴۔ رمضان میں دوسرے لوگوں کے لیے کیا جزبہ پیدا ہوتا ہے؟

۵۔ شہر المواساة کسے کہا جاتا ہے؟

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Name: _____

Section: _____

Subject: Islamiyat

Worksheet No: 4

(حصہ اول)

سوال نمبر ۱۔ خالی جگہ پُر کریں۔

۱۔ کسی سے جو _____ یا قول و قرار کیا جائے۔

ب۔ اور جب وعدہ کرتے ہیں تو اسے _____ کرتے ہیں۔

ج۔ جو اپنی امانتوں اور اپنے عہد و پیمان کی _____ کرتے ہیں۔

د۔ اے مومنوں اپنے _____ کو پورا کرو۔

ہ۔ عقد کے لفظی معنی _____ لگانے کے ہیں۔

سوال ۲۔ درست جواب کا انتخاب کریں۔

۱۔ جو اپنے قول و قرار کا خیال نہیں رکھتے اس میں نہیں ہے؟

۱۔ حیا ب۔ دین ج۔ رواداری د۔ ہمدردی

۲۔ وعدے کی خلاف ورزی کرنا دین کی کمزوری کی ہے؟

۱۔ نشانی ب۔ علامت ج۔ گواہی د۔ مرضی

۳۔ حقوق کی اس ادائیگی کا نام ہے؟

۱۔ دین ب۔ مذہب ج۔ اصول د۔ قربانی

۴۔ اپنے ملنے جلنے والوں سے یکساں سلوک کرنا ایمان کی ہے؟

۱۔ علامت ب۔ نشانی ج۔ رسم د۔ تہذیب

۵۔ وعدے کی پابندی کہلاتا ہے؟

۱۔ فکر مندی ب۔ صبر و تحمل ج۔ نیکی د۔ ایفاء عہد

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(حصہ دوم)

سوال نمبر ۳۔ درج ذیل سوالات کے مختصر جوابات تحریر کریں۔

۱۔ ایفاء عہد سے کیا مراد ہے؟

۲۔ لا تخلف اللہ المیعاد سے کیا مراد ہے؟

۳۔ واوفوا بالعہد ان العہد کان مسئولا۔ کا ترجمہ لکھیے۔

۴۔ عقد کے لفظی معنی کیا ہیں؟

۵۔ حدیث مبارکہ میں دین داری کی علامت کسے قرار دیا گیا ہے؟

(حصہ سوم)

نوٹ۔ مندرجہ ذیل سوالات کے تفصیلی جوابات تحریر کریں۔

۱۔ ایفاء عہد دین داری کی علامت ہے سے کیا مراد ہے؟

۲۔ قسم اور قول کی پابندی کے بارے میں قرآنی احکامات تحریر کریں۔

۳۔ وعدہ پورا کرنے کے بارے میں اسلامی تعلیمات کیا ہیں؟

نوٹ۔ یہ ورک شیٹ سبق (ایفاء عہد) سے تیار کی گئی ہے۔

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CLASS 8

ENGLISH

ST. MARY'S ACADEMY

CLASS 8

Name: _____ Section: _____

Subject: English **Assessment No.3** Total Marks: 25

Q.1) Complete the given below sentences with the conjunctions, 'since' or 'for' (5)

- 1) My mother has been sewing a shirt _____ 2 o' clock.
- 2) I have been waiting for my friend _____ one hour.
- 3) We have been studying in Saint Mary's Academy _____ eight years.
- 4) He has been living in Pakistan _____ birth.
- 5) The soldiers have been doing their duty _____ early morning.

Q. 2) Make sentences with the given homophones (same sound and different meaning words). (6)

1) Affect:(Verb)

Effect (Noun)

2) Alter

Altar

3) Angels

Angle

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Q. 3) Fill in the blanks with suitable words.

(5)

1. _____ means to bear pain or hardships with patience.
(tolerate/tolerance)

2. The Rasool (S.A.W) is a _____ of tolerance. (model/great)

3. We _____ an exciting football match today. (watch/ watched)

4. He _____ two books this year. (ride) a bike when he (meet) an accident.
(reads / read)

5. Have you ever _____ in the river? (swim, swum)

Q. 4) Give short answers of the following questions.

(9)

Q- i) Who is a magician ?

(3)

Q. ii) What is an exhibition?

(3)

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Q (iii) What did Mr. Qazi ask Akbar?

(3)

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CLASS 8

Name: _____

Section: _____

Subject: English

Worksheet No: 4

Week 7

Q.1) Put the suitable Conjunction in the given sentences (Remember the Rule for making Present Prefect Continuous tense. Page No. 22 from PTB - 8 Book)

Example: He (work) since morning.

Correct: He has been working since morning.

- 1) My mother has been sewing clothes _____ 8 o' clock.
- 2) Nosheen has been going to school _____ four years.
- 3) My friend has been reading _____ three hours.
- 4) I have been sitting at this table _____ early morning.
- 5) My father has been telling stories _____ two hours.
- 6) She has been doing her homework _____ 4 o' clock in the afternoon.

Q. 2) Put the APPROPRIATE ARTICLE, 'A', 'An', 'The' etc.(PTB-8 Page No. 23)

Examples: The English book is very interesting.

The wrist watch I got on my birthday is very special.

A boy should be brave.

- 1) My grandmother likes _____ flowers very much.
- 2) Their car does 150 miles | _____ hour.
- 3) I always listen to _____ radio in the morning.
- 4) Is your mother working in _____ old office building?

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5) Where is _____ USB drive I lent you last week?

Q. 3) HOPE YOU HAVE LEARNT THE GIVEN FIVE RULES FOR MAKING PASSIVE VOICE. Now please read the examples from Page No. 167 or 168, and make Passive Voice: - (CONTINUATION OF THE VOICE)

Rule No. 1: Identify and circle the 'Subject' and 'Object' in the Active Voice Sentences.

Rule No. 2: The Subject and Object are interchanged. (The Subject becomes Object and the Object becomes Subject)

Rule No. 3: The helping verbs, 'is', 'am', 'are', 'was', 'were' are used with the 3rd form of the Verb according to the Present or Past Tense.

Rule No. 4: The Preposition 'by' is placed before the Object.

Rule No. 5: In Present or Past Continuous Tense, Use is being, are being, was being or were being according to the type of the tense. In Present Perfect Tense change has/have into has been with the third form of the verb.

Example: Active Voice: I have completed my English work.

Passive Voice: My English work has been completed by me.

Make the Passive Voice of the following Active Voice sentences:-

Active Voice No. 1: My brother reads a poem.

Passive Voice: _____

Active Voice No. 2: My sister loves dolls.

Passive Voice: _____

Active Voice No. 3: Junaid helps Ajmal.

Passive Voice: _____

Active Voice No. 4: The drier opens the door of the car.

Passive Voice: _____

Active Voice No. 5: My uncle paints a picture.

Passive Voice: _____

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Active Voice No. 6: A rich man helps the poor boys.

Passive Voice: _____

Active Voice No. 7: Our parents love us.

Passive Voice: _____

Q. 4) Please recall the page No. 170 and 171 from ENGLISH Grammar Book and change the Narration: -

1) She said, "I am doing my home task now".

2) She said, "I am not a florist".

3) Uncle said, "I am working hard in Dubai now?"

4) My friend said, "I have returned the book now".

5) David said, "I will go to New York".

Q. 5) Use the given homophones (similar sound words with different meanings) in your own Sentences. (Grammar Book Page No. 175 or 176)

1) Alter: (to change)

Altar: (a place to sacrifice animals)

2) Angel: (heavenly beings worshipping God Almighty day and night)

Angle: (a figure formed by two lines)

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3) Bale (large Bundle)

Bail (security that guarantees the appearance of a prisoner in a court when legally required.)

4) Altogether (completely)

All together:(joining all the others)

5) Birth:

Berth:(long seat in a ship or a train)

6) Beside (close by)

Besides (apart from)

7) Brake (the brakes of a car etc)

Break :(to damaging something)

Week 8

Q. 1 Read carefully Chapter No. 4 and 5 from the English Book PTB 8 and answer the following questions:-

Q i) Who is a magician?

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Q. ii) What is the first trick that the magician performs?

Q iii) How many tricks did the magician show?

Q.(iv) What trick would you perform if you were a magician?

Q. No. 2) (i) What is an exhibition?

(ii) Why exhibitions are important?

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Q. No. 3. Write an essay on, "Why do I love My School"? Make 5 or six outline point and write in about 150 to 200 words)

CLASS 8

CLASS 8

Q.No.4) Please follow the pattern given in Grammar Book Page No. 16 and 17 and write down the letter to your father asking him about the health of your mother.

**Examination Hall,
A. B. C. ROAD,
City X.Y.Z**

Date:

Dear Father!!

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Anxiously waiting for your reply.

Yours affectionately,
X.Y.Z

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CLASS 8

MATHS

ST. MARY'S ACADEMY

CLASS 8

Name: _____ Section: _____

Subject: Mathematics **Assessment No.3** Total Marks: 25

Q-1) Find the product of the following: (5)

i) $\begin{bmatrix} 6 & -0 \end{bmatrix} \begin{bmatrix} 4 \\ 0 \end{bmatrix}$

ii) $\begin{bmatrix} 1 & 2 \end{bmatrix} \begin{bmatrix} 5 \\ -4 \end{bmatrix}$

iii) $\begin{bmatrix} 1 & 2 \\ -3 & 0 \\ 6 & -1 \end{bmatrix} \begin{bmatrix} 4 & 5 \\ 0 & -4 \end{bmatrix}$

Q-2) Let $A = \begin{bmatrix} -1 & 3 \\ 2 & 0 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 \\ -3 & -5 \end{bmatrix}$, $C = \begin{bmatrix} 2 & 1 \\ 1 & 3 \end{bmatrix}$. Verify whether (5)

i) $A(B+C) = AB + AC$

Q-3a) Which of the following product of matrices is comfortable for multiplication. (2.5)

i) $\begin{bmatrix} 1 \\ -1 \end{bmatrix} \begin{bmatrix} 0 & 1 \\ -1 & 2 \end{bmatrix}$

ii) $\begin{bmatrix} 3 & 2 & 1 \\ 0 & 1 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 \\ 0 & 2 \\ -2 & 3 \end{bmatrix}$

b) If $A = \begin{bmatrix} 3 & 0 \\ -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 6 \\ 5 \end{bmatrix}$, then find ; (2.5)

i) AB

Q-4) For the matrices $A = \begin{bmatrix} 1 & 2 \\ -3 & -5 \end{bmatrix}$ and $B = \begin{bmatrix} -2 & 6 \\ 3 & -9 \end{bmatrix}$, prove that; (5)

i) $(AB)^t = B^t A^t$

Q-5) Multiply the following matrices. (2.5x2=5)

(a) $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ -1 & 1 \end{bmatrix}$

(b) $\begin{bmatrix} 8 & 5 \\ 6 & 4 \end{bmatrix} \begin{bmatrix} 2 & -5/2 \\ -4 & 4 \end{bmatrix}$

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CLASS 8

Name: _____ Section: _____

Subject: Mathematics

Worksheet No: 4

Q) Fill in the blanks:

- $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$ is called _____ matrix.
- Matrix $A+B$ can be found, if the order of A and B is _____.
- Order of transpose of $\begin{bmatrix} 2 & 1 \\ 0 & 1 \\ 3 & 2 \end{bmatrix}$ is _____.
- A matrix is called _____ matrix, if number of rows and columns are equal.
- Product of $\begin{bmatrix} x & y \end{bmatrix} \begin{bmatrix} 2 \\ -1 \end{bmatrix}$ is _____.
- Additive inverse of $\begin{bmatrix} 1 & -2 \\ 0 & -1 \end{bmatrix}$ is _____.
- In matrix multiplication, in general, AB _____ BA .
- Transpose of $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ is _____.
- The condition of skew-symmetric is $A-A^t =$ _____.
- $\begin{bmatrix} 0 & 7 \\ 7 & 0 \end{bmatrix}$ is called _____ matrix.

Q1) Which if the following product of matrices is comfortable for multiplication.

- $\begin{bmatrix} 1 & -1 \\ 1 & 0 \end{bmatrix}$ and $\begin{bmatrix} 2 & -1 \\ 1 & 3 \end{bmatrix}$
- $\begin{bmatrix} 3 & 2 & 1 \\ 0 & 1 & -1 \end{bmatrix}$ and $\begin{bmatrix} 1 & -1 \\ 0 & 2 \\ -2 & 3 \end{bmatrix}$

Q2) Multiply the following matrices:

- $\begin{bmatrix} 8 & 5 \\ 6 & 4 \end{bmatrix}$ and $\begin{bmatrix} 2 & -5/2 \\ -4 & 4 \end{bmatrix}$
- $\begin{bmatrix} -1 & 2 \\ 1 & 3 \end{bmatrix}$ and $\begin{bmatrix} 6 & 0 \\ 0 & 0 \end{bmatrix}$

Q3) Let $A = \begin{bmatrix} -1 & 3 \\ 2 & 0 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 \\ -3 & -5 \end{bmatrix}$ and $C = \begin{bmatrix} 2 & 1 \\ 1 & 3 \end{bmatrix}$ then verify that:

- $A(BC) = (AB)C$
- $A(B-C) = AB - AC$

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Q4) Solve the following questions.

- i. $A = \begin{bmatrix} 1 & -2 \\ 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & 7 \\ -3 & 8 \end{bmatrix}$ then find $2A^t - 3B^t$
- ii. If $2\begin{bmatrix} 2 & 4 \\ -3 & a \end{bmatrix} + 3\begin{bmatrix} 1 & b \\ 8 & -4 \end{bmatrix} = \begin{bmatrix} 7 & 10 \\ 18 & 1 \end{bmatrix}$, then find a and b.
- iii. If $A = \begin{bmatrix} 3 & 0 \\ -1 & 2 \end{bmatrix}$, $B = \begin{bmatrix} 6 \\ 5 \end{bmatrix}$ then find;
a) $A.B$ b) $B.A$ (if possible)
- iv. Find $(B.C)^t = C^t . B^t$ when $B = \begin{bmatrix} 1 & 2 \\ -3 & -5 \end{bmatrix}$ and $C = \begin{bmatrix} -2 & 6 \\ 3 & -9 \end{bmatrix}$

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Physics

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CLASS 8

Name: _____ Section: _____

Subject: *Physics*

Assessment No.3

Total Marks: 25

Chapter 1

1. Which of the following is the study of fourth state of matter?

- A: Quantum physics
- B: Nuclear physics
- C: Nanophysics
- D: Plasma physics

2. You are not able to understand or do a part of experiment, what should you do?

- A: Ask the teacher about it
- B: Do it again and again, until you find its solution
- C: Figure it out by trial and error method
- D: Leave it and turn to next part

3. Which is the most common instrument used in laboratories to measure length?

- A: Meter ruler
- B: Both meter rule and half meter rule
- C: Half meter ruler
- D: Measuring tape

Write short answers of the following questions:

1. What is the difference between base quantities and derived quantities? Give three examples in each case.
2. Pick out the base units in the following:

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Joule, Newton, Kilogram, Hertz, Mole, Ampere, Metre, Kelvin, Coulomb and Watt.

3. Estimate your age in seconds. (MN 13-I) (LHR, FB, DG 14 I-II)

Ans: My age is 17 years old. So,

4. Find the base quantities involved in each of the following derived quantities.

(a) Speed (b) Volume (c) Force (d) Work

5. Why is the use of zero error necessary in a measuring instrument?

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Name: _____

Section: _____

Subject: *Physics*

Worksheet No: 4

1. Estimate your age in seconds?

2. What is meant by Vernier constant?

3. What do you understand by the zero error of a measuring instrument?

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4. What is meant by zero error and zero correction?

5. What do you know about metre rule?

6. What is meant by Base Quantities?

7. . What is meant by derived quantities? Give two examples.

What is meant by prefixes?

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8. Write down two rules to find the significant digits in a measurement?

9. Why there is a need of some standard quantities?

10. How do we use stopwatch?

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CLASS 8

11. Define atomic physics and nuclear physics?

12. Define mechanics and geophysics?

13. What is meant by International System of Units?

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14. Define Heat and Light?

15. Round of 1.35 and 1.45?

16. What is meant by significant figures and how many significant figures are there in 0.01784?

17. Define least count of screw gauge?

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18. Write the names of four derived units?

19. Write the scientific Notation: (i) 100.8 sec (ii) 0.00580 km

20. . What is the use of prefixes?

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CLASS 8

BIOLOGY

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CLASS 8

Name: _____ Section: _____

Subject: *Biology*

Assessment No.3

Total Marks: 25

Q 1. Give brief answer of the following Questions.

(3x5=15)

- vi. Write down the steps of Biological Method?
- vii. Quantitative observations are always better than Qualitative ones. Why?
- viii. How different organ and organ system performs the function of an individual? Explain with example.
- ix. Differentiate between population and community.
- x. Write a note on cellular organization.

Q 2. Encircle the correct option.

(5)

- 1. Which one of the following is a correct sequence in biological method?
 - a. Observations, Hypothesis, Law, Theory
 - b. Hypothesis, Observations, Deduction, Experimentation
 - c. Observations, Hypothesis, Deduction, Experimentation
 - d. Law, Theory, Deduction, Observations
- 2. At which point is a biologist most likely to use reasoning?
 - a. While taking observations
 - b. During hypothesis formulation
 - c. During data organization
 - d. None of the above
- 3. If a scientist is studying the methods of inserting human insulin gene in bacteria, which branch of biology may this be?
 - a. Anatomy
 - b. Physiology
 - c. Biotechnology
 - d. Pharmacology
- 4. When we study the feeding relations among different animal species of a forest, at what level of organization we are studying?
 - a. Individual
 - b. Population
 - c. Community
 - d. Biosphere
- 5. Which of these tissues also makes the glandular tissue in animals?
 - a. Epithelial tissue
 - b. Muscle tissue
 - c. Connective tissue
 - d. Nervous tissue

Q 3. Describe the organ and organ system level in detail.

(5)

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CLASS 8

Name: _____

Section: _____

Subject: *Biology*

Worksheet No: 4

NOTE FOR THE STUDENTS:

Learn all the work given in the worksheet and practice daily.

WEEK 7

Chap # 1

INTRODUCTION TO BIOLOGY

DAY 1:

Learn the Answers of the following questions.

Q 1. Describe the Contribution of Muslim Scientists in the field of Science.

Muslim scientists have made great contributions to the study of science.

Jabir Bin Hayan (721 - 815 AD): He was born in Iran and practiced medicine in Iraq. He introduced experimental investigation in chemistry and also wrote a number of books on plants and animals. His famous books are "Al-Nabatat" and "Al-Haywan".

Abdul Malik Asmai (740 - 828 AD): He is considered the first Muslim scientist who studied animals in detail. His famous writings include "Al-Abil (camel)", "Al-Khail (horse)", "Al-Wahoosh (animal)", and "Kalq al-ansan".

Bu Ali Sina (980 - 1037 AD): He is honoured as the founder of medicine and called as Avicenna in the West. He was a physician, philosopher, astronomer and poet. One of his books "Al-Qanun-fi al-Tib" is known as the canon of medicine in West.

Q. 2 Write down different levels of Organization.

In order to understand the various phenomena of life, biologists study biological organization at different levels, which are as follows.

1. Subatomic and Atomic level

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i) Atom:

All types of matter are made up of elements and each element contains a single kind of atoms ('a': not, 'tom': cut).

ii) Subatomic Particles :

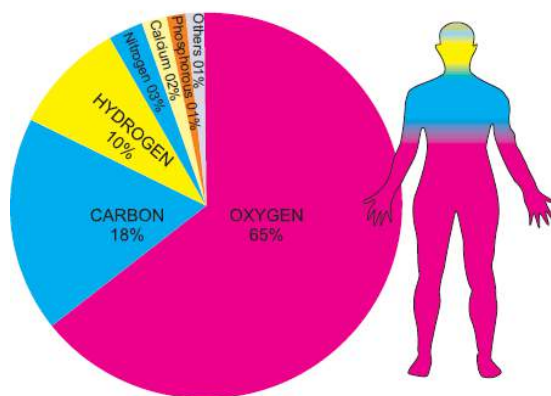
The atoms are actually made up of many subatomic particles.

The most stable subatomic particles are electrons, protons and neutrons.

iii) Bio Elements:

Out of the 92 kinds of elements that occur in nature, 16 are called bioelements. These take part in making the body mass of a living organism (Figure 1.2). Out of these bioelements;

Only six (O, C, H, N, Ca, & P) make 99% of the total mass. Other ten (K, S, Cl, Na, Mg, Fe, Cu, Mn, Zn, & I) collectively make 01% of the total mass.



DAY 2:

2. Molecular level

i) Bio Molecule:

In organisms, bio elements usually do not occur in isolated forms rather they combine through ionic or covalent bonding. The stable particle formed by such bonding is called as molecule or biomolecule.

An organism is formed by enormous number of biomolecules of hundreds of different types. These molecules are the building material and are themselves constructed in great variety and complexity due to specific bonding arrangements.

ii) Classification of Biomolecules:

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Biomolecules are classified as i. Micromolecules ii. Macromolecules.

Micromolecules are with low molecular weight e.g. glucose, water etc.

Macromolecules are with high molecular weights e.g. starch, proteins, lipids etc.

3. Organelle and Cell level:

i) Organelles:

Biomolecules assemble in a particular way and form organelles.

ii) Cells:

The organelles are actually sub-cellular structures and when they assemble together, units of life i.e. cells are formed.

iii) Division of Labour:

Each type of organelle is specialized to perform a specific function. For example; mitochondria are specialized for cellular respiration and ribosomes are specialized for protein synthesis. In this way, functions of the cell are accomplished by these specialized structures. It is an example of the **division of labour** within the cell.

DAY 3:

4. Tissue level:

i) Definition:

In multicellular organisms, similar cells (performing similar functions) are organized into groups, called tissues. We can define **a tissue as a group of similar cells specialized for the performance of a common function.**

ii) Function:

Each cell in a tissue carries on its own life processes (like cellular respiration, protein synthesis), but it also carries on some special processes related to the function of the tissue.

iii) Types:

There are different types of **plant tissues** e.g. epidermal tissue, ground tissue, xylem tissue etc. **Animal tissues** are also of different type e.g. nervous tissue, muscular tissues, epithelial tissues etc.

5. Organ and Organ system level:

i) Organ:

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In higher multicellular organisms more than one type of tissue having related functions are organized together and make a unit, called organ. Different tissues of an organ perform their specific functions and these functions collectively become the function/s of that organ.

Example

For example stomach is an organ specialized for the digestion of proteins and for storing food. Two major types of tissue are present in its structure. Epithelial (glandular) tissue secretes gastric juice for the digestion of proteins. Muscular tissue performs contractions of stomach walls for grinding of food and moving food to posterior end. So two tissues perform their specific functions, which collectively become the function of stomach.

ii) Organ System Level:

Different organs performing related functions are organized together in the form of an organ system.

In an organ system, each organ carries out its specific function and the functions of all organs appear as the function of the organ system.

Example

For example, digestive system is an organ system that carries out the process of digestion. Major organs in its framework are oral cavity, stomach, small intestine, large intestine, liver, and pancreas. All these organs help in the process of digestion.

Organ System in Plants:

The organ system level is less complex in plants (e.g. root system) as compared to animals. This is due to a greater range of functions and activities in animals than in plants.

DAY 4:

6. Individual level:

Definition:

Different organs and organ systems are organized together to form an individual or organism. In organism, the functions, processes and activities of various organs and organ systems are coordinated.

Example

For example, when a man is engaged in continuous and hard exercise, not only his muscles are working but also there is an increase in the rate of respiration and heartbeat. This

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accelerated rate of respiration and heart beat supplies more oxygen and food to the muscles which they need for continuous work.

7. Population level:

Definition:

A population is defined as a group of organisms of the same species located at the same place, in the same time.

Example

For example, human population in Pakistan in 2010 comprises of 173.5 million individuals (according to the Ministry of Population Welfare, Government of Pakistan).

8. Community level:

i) Definition:

A community is an assemblage of different populations, interacting with one another within the same environment. Communities are collections of organisms, in which one population may increase and others may decrease.

ii) Types:

a. Complex:

Some communities are complex e.g. a forest community, a pond community etc.

b. Simple:

Some communities may be simple e.g. a fallen log with various populations under it. In simple community number and size of populations is limited. So any change in biotic or abiotic factors may have drastic and long lasting effects

Example

A forest may be considered as a community. It includes different plant, microorganisms, fungi and animal species.

9. Biosphere level:

The part of the Earth inhabited by organisms' communities is known as biosphere. It constitutes all ecosystems (areas where living organisms interact with the nonliving components of the environment) and is also called the zone of life on Earth.

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WEEK 8

Chap # 1

INTRODUCTION TO BIOLOGY

DAY 1:

Learn the Answers of the following questions.

Q 1. How many Cellular organizations are there?

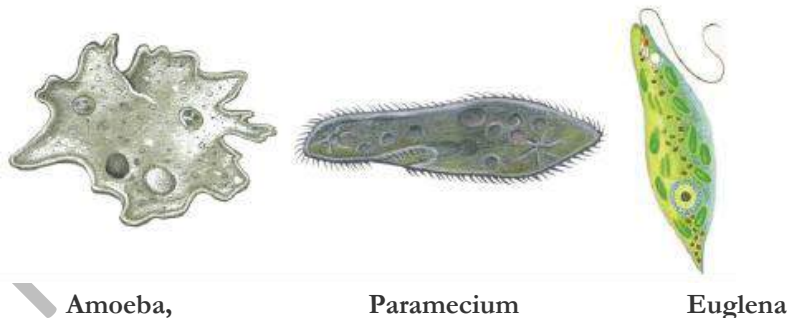
There are three types of cellular organization.

- Unicellular,
- Colonial and
- Multicellular organizations

The organisms formed through these organizations are unicellular organisms, colonial organisms and multicellular organisms.

Q.2 what do u know about Unicellular Organization?

In unicellular organisms, only one cell makes the life of an organism. All the life activities are carried out by the only cell. Amoeba, Paramecium, and Euglena are common examples



Q. 3 Write a note on colonial organization.

In colonial type of cellular organization, many unicellular organisms live together but do not have any division of labour among them.

Each unicellular organism in a colony lives its own life and does not depend on other cells for its vital requirements.

Example

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Volvox is a green alga found in water that shows colonial organization. Hundreds of Volvox cells make a colony.

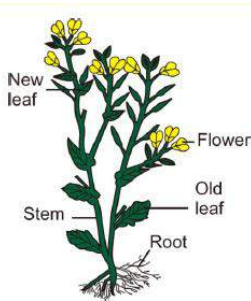
Q. 4 Give some examples of Multicellular organization.

Cells are organized in the form of tissues, organs and organ systems. Frog and mustard and Human are the familiar examples of multicellular organization.

Q. 5 What is the scientific name of Mustard plant and Frog?

Scientific name of Mustard plant Mustard plant is **Brassica campestris**.

And scientific name of Frog is **Rana tigrina**.



DAY 2:

Chapter # 2

SOLVING A BIOLOGICAL PROBLEM

Learn the Answers of the following questions.

Q 1. What is a Biological Method?

The scientific method, in which biological problems are solved, is termed as biological method. It comprises the steps a biologist adopts in order to solve a biological problem.

Q 2. What is a biological problem?

Biological problem is a question related to life that is asked by someone or it comes in biologist's mind.

Q 3. What are the steps of Biological Method?

In solving a biological problem, biologist takes following steps;

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- Recognition of biological problem
- Observations
- Hypothesis formulation
- Deductions
- Experimentation
- Summarization of results (create tables, graphics etc)
- Reporting the results

DAY 3:

Q 4. Differentiate between Quantitative and Qualitative Observations. Also give examples.
OR

Quantitative observations are always better than Qualitative ones. Why?

Observations may be both qualitative and quantitative.

Quantitative Observation:

Quantitative observations are considered more accurate than qualitative ones because they are invariable and measurable and can be recorded in terms of numbers. Examples are

- The freezing point of water 0°C and the boiling point is 100°C .
- A liter of water weighs 1000 grams and a liter of ethanol weighs 789 grams.

Qualitative observations

- The freezing point of water is colder than the boiling point.
- A liter of water is heavier than a liter of ethanol.

Q 5. Define Hypothesis. What are the characteristics of a good Hypothesis?

Definition:

The tentative explanation of observations is called a hypothesis. It may be defined as a proposition that might be true.

Characteristics:

A hypothesis should have the following characteristics:

- It should be a general statement.

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- It should be a tentative idea.
- It should agree with available observations.
- It should be kept as simple as possible.
- It should be testable and potentially falsifiable. In other words, there should be a way to show the hypothesis is false; a way to disprove the hypothesis.

A great deal of careful and creative thinking is necessary for the formulation of a hypothesis. Biologists use reasoning to formulate a hypothesis.

Q 6. What are Deductions? Explain with example

Deductions are the logical consequences of hypotheses. For this purpose, a hypothesis is taken as true and expected results (deductions) are drawn from it.

Generally in biological method, if a particular hypothesis is true then one should expect (deduction) a certain result. This involves the use of "if-then" logic.

"If Plasmodium is the cause of Malaria then every person ill with malaria should have plasmodium in their blood".

DAY 4:

Q 7. Experimentation is the Basic step of a biological method. How?

The most basic step of biological method is experimentation. Biologist performs experiments to see if hypotheses are true or not. The deductions, which are drawn from hypotheses, are subjected to rigorous testing. Through experimentations, biologist learns which hypothesis is correct.

The incorrect hypotheses are rejected and the one which proves correct is accepted. An accepted hypothesis makes further predictions that provide an important way to further test its validity.

Q 8. What is the difference between "Control" group and "Experimental" group?

In science when doing the experiment, it must be a controlled experiment. The scientist must contrast an "experimental group" with a "control group". The two groups are treated exactly alike except for the one variable being tested.

Control group: Is the one in which all experimental conditions are provided.

Experimental group: A group in which all conditions are same as that of control group except one factor being tested or checked.

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Example

In an experiment to test the necessity of carbon dioxide for photosynthesis, one can contrast the control group (a plant with freely available carbon dioxide) with an experimental group (a plant with no carbon dioxide available). The necessity of carbon dioxide will be proved when photosynthesis occurs in the control group and does not occur in the experimental group

Q 9. Define the following:

i. THEORY:-

Definition:

The hypotheses that stand the test of time (often tested and never rejected), are called theories. A theory is supported by a great deal of evidence.

Explanation:

When a hypothesis is given a repeated exposure to experimentation and is not falsified, it increases biologists' confidence in hypothesis. Such well-supported hypothesis may be used as the basis for formulating further hypotheses which are again proved by experimental results.

ii. LAW OR PRINCIPLE:-

Definition:

If a theory survives such doubtful approach and continues to be supported by experimental evidence, it becomes a law or principle. A scientific law is a uniform or constant fact of nature. It is an irrefutable theory.

Example

Examples of biological laws are Hardy-Weinberg law and Mendel's laws of inheritance.