KENDRIYA VIDYALAYA INS KALINGA, BHEEMUNIPATNAM

AUTUMN BREAK HOME WORK 2024-25

CLASS-III

ENGLISH:

1.write 10 action words and frame a sentence for each word

2.write 5 sentences about your favorite dish

3.write 50 opposites

HINDI:

1 एक बार वर्णमाला लिखो
2 संयुक्त अक्षर वाले 10 शब्द लिखो
3 भारत में मनाए जाने वाले त्योहारों के नाम लिखो।

MATHS:

1. Write tables from 1 to 20

2. Draw 2 D and 3D shapes

EVS:

1. Write the names of any five trees , shrubs, climbers and creepers .

2. Draw a water cycle

CLASS-IV

ENGLISH:

1. Read and learn at least two poems / short stories. Write it once in your copies. (To be read and learnt beyond the textbook)
2. Write and learn the opposite words for the following words. Write each opposite three times.

A. Plummeting B. Exaggerate C. Dishonour D. Pacify E. Abolish F. Surge G. Deterent .
And also learn and write the meanings of each word three times .
3. Using your own creativity, write a poem titled " Everybody wants peace"
HINDI:

1.अपने प्रिय खेल के बारे में पाँच वाक्य लिखो ।

2. किन्ही तीन मुहावरों का अर्थ लिखो।

3. किन्ही पाँच शब्दों के पर्यायवाची शब्द लिखो ।

MATHS:

1. Write tables from 6 to 30

2. Collect pictures of different types of wheels of the vehicles.

EVS:

1 Solve the question paper of half yearly exams in your note book homework side. (Shared in S2S app)
2 Draw or paste different steps of farming.
Making models:
1 Make a model of Water cleaning (Raman house)
2 Make models of tools of farming (Ashoka house)
3 Make a model of rainwater harvesting (Subhash house)
4 Make models of the camel cart, trolley, cycle, bullock cart. (Tagore house)

CLASS-V

ENGLISH:

1. Read at least two short stories books and write a review of the story that you have read one time in your notebook
2. Write and learn the meanings of the following words . Write each meaning three times
A. Nullify B. Derogatory C.concern D. Culminate E. Obstruction F. Sturdy
3. Write about how you have celebrated your festival in fifty to one Hundred words.

HINDI:

1 अर्धवार्षिक परीक्षा पत्र को गृहकार्य में हल करो | (S2S app में भेजा गया)

2 दस नुक्ता वाले शब्द लिखो |

चार्ट कार्य

1 बारहखड़ी का चार्ट बनाओ । (रमन सदन)

2 काल की परिभाषा लिखकर भूतकाल, वर्तमान काल और भविष्य काल के दो दो वाक्य का चार्ट बनाओ । (अशोक सदन)

3 नुक्ता वाले शब्दों का चार्ट बनाओ। (सुभाष सदन)

4 विभिन्न मुहावरों का चार्ट बनाओ । (टैगोर सदन)

MATHS:

1. WRITE THE HALF YEARLY QUESTION PAPER WITH SOLUTION ONE TIME AND WRITE MAP 1,2,3 WITH QUESTION AND ANSWERS.

EVS:

1.WRITE THE HALF YEARLY QUESTION PAPER WITH SOLUTION ONE TIME AND WRITE SUNITA IN SPACE LESSON.

CLASS-VI

ENGLISH:

1. Write a paragraph on my school 100 to 120 words.

2. Write a formal letter to your uncle has presented abook to you on your birthday. It is related with the art of living pointing out the usefulness of the book in life, write a letter in a bout 100 words thanking your uncle for sending this valuable gift. You are Navin/Nalini living at 250, Rajdhani enclave, Barada.

3. Read the lesson Species that heal us and identify hard words and write important points in your home work.

HINDI:

१.राम प्रसाद बिस्मिल का जीवन परिचय लिखें?

२. दो दिन के अवकाश हेतू प्राचार्य को पत्र लिखें?

३. अध्यापक तथा छात्र के मध्य संवाद लिखें?

४. पुस्तकालय का चित्र बनाकर वर्णन करें?

MATHS:

1.Read and write tables from 1 to 20
2.Write prime numbers up to 50
3.Write square numbers up to 10
4.Write cube numbers upto 10
5.Draw any 2-d and 3-d shapes (five)

SCIENCE:

PM SHRI KENDRIYA VIDYALAYA, INS KALINGA

CLASS-6th	Autumn break home work SUBJECT- SCIENCE
ACTIVITY - 1	**Light Travels Only in a Straight Path**
ACTIVITY - 2	**Different Sizes of Shadows**
ACTIVITY - 3	**Transportation of Water in Plants**
ACTIVITY - 4	**Oxygen is Necessary for Fire**

SOCIAL:

1. Read the following chapters :-
    Chapter 10- Governance and Chapter 11 Local Govt in Rural Areas and write 10 important points in your homework notebook from each chapter.

2.In political maps of India Mark & label states and UTs and neighbouring countries .

3.. In Physical map of World , mark and   label all continents and oceans .

4.Write expaination of all six fundamental rights in your notebook.

SANSKRIT:

विषय संवर्धन क्रिया - Subject Enrichment Activity
(TERM-2)
शरदवकाश-गृहकार्यम् (Autumn Break October-2024)
I.दत्तकार्यम् (Assignment)
i."दीपकम्" पाठ्यपुस्तके (योग्यताविस्तार:) पृष्ठसंख्या २० त: २५ पर्यन्तं प्रदत्त- वर्णानाम् षट् उच्चारणस्थानानि (चित्र सहितं) लिखत । (Write the षट् उच्चारणस्थानानि along with the pictures as mentioned from page no.20-25 in Textbook)
 ii. "दीपकम्" पाठ्यपुस्तके (योग्यताविस्तार:) ४२ एवं ४३ पृष्ठसंख्यायां प्रदत्त-अकारान्त, आकारान्त, ईकारान्त शब्दान् लिखत | (Write अकारान्त, आकारान्त, ईकारान्त शब्द as mentioned in page no.42 & 43 in Textbook)
 iii."दीपकम्" पाठ्यपुस्तके (योग्यताविस्तार:) ५७ पृष्ठसंख्यायां प्रदत्त - प्रथमपुरुष,मध्यमपुरुष,उत्तमपुरुष पदानि क्रियापदै:सह लिखत,तथा गीतम् "अहं पठामि" च लिखत|(Write प्रथमपुरुष,मध्यमपुरुष,उत्तमपुरुष words along with the verbs and also write गीतम् "अहं पठामि" as mentioned in page no.57 in Textbook)

LIBRARY: Write a biography of one of the following authors on an A4 sheet:

1. Sudha Murty
2. R.K. Narayan
3. Ruskin Bond
4. Jeff Kinney
5. J.K. Rowling

Research and gather information about the author's life, works, and achievements.
 Write a concise biography (approx. 250-300 words) on an A4 sheet.
Include relevant details, such as birthdate, notable works,awards,and contributions to literature.

CLASS-VII

ENGLISH:

1. There was a storm brewing outside and you were all alone at home . Suddenly , the lights went off...

In about 80 words, write a story. You could use some of the phrases given below:

.Jumped in fright

. disappeared in a flash

. Screamed in horror

. Scared the daylight out me

. to my relief

. touched something eerie.

2. Write paragraph writing A visit to zoo 100 to 150 words.

3. Write a informal a letter to your friend kavish thanking him for the birthday present he has sent for you. You are Raghav of Chennai.

HINDI:

१.गाँधी जी का जीवन परिचय लिखें?
२. फ़ीस माफ़ी हेतू प्राचार्य को पत्र लिखें?
३. अध्यापक तथा छात्र के मध्य संवाद लिखें?
४. विद्यालय का चित्र बनाकर वर्णन करें?

MATHS:

1.Read and write tables from 1 to 20
2.Write prime numbers up to 100
3.Write square numbers up to 20
4.Write cube numbers upto 10
5.Draw the transversal angles

SCIENCE:

1.Solve the Half yearly paper in Home work .

2.Do MDP.

SOCIAL:

1. Write glossary of Chapter- Women change the world, Understanding Media
2. Read the following chapters :-
   Women change the world,

   Tribes Nomads and Settled Communities, Understanding Media and write important points in your homework notebook.

3.In 2 political maps of India Mark state and

   UTs and neighbouring countries .

4. In 2 Physical map of World Mark and   label all continents and oceans

SANSKRIT:

१. विद्याधनम् पाठ के प्रश्न उत्तर् लिखें तथा याद करें?
२. विद्याधनम पाठ के श्लोकअर्थ लिखें तथा याद करें?
३.समवायो ही दुर्जयः पाठ का चित्र बनाकर कहानी लिखें?
४. मधु शब्द के रूप लिखें?

LIBRARY: Write a biography of one of the following authors on an A4 sheet:

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 Write a concise biography (approx. 250-300 words) on an A4 sheet.

Include relevant details, such as birthdate, notable works,awards,and contributions to literature.

ENGLISH:

Read any 5 story books and pick up 50 new difficult words and write their meenings.

Write one notice on any house wise competition going to be held in your school.

Write two biographies of

Virat kohli

Your father

Write diary on your visit to any place.

Write a letter to the editor about animal menace in your colony.

Paragraph writing on importa nce of studies.

HINDI:

1. आज के समय में श्री कृष्ण और सुदामा की दोस्ती से आपको क्या शिक्षा मिलती है ? उत्तर 8 से 10 पंक्तियों में लिखें|
2. अभि, प्र और अनु उपसर्गों का प्रयोग करके 3 - 3 नए शब्द लिखिए|
3. अगर आपको ₹250 की आवश्यकता है, अभी आपके पिता के पास पैसे नहीं है| ऐसी स्थिति में आप पैसों की व्यवस्था कैसे करेंगे लिखिए|
4. एक अच्छे नागरिक के क्या कर्तव्य हैं,विषय पर अनुच्छेद लिखिए||
5. चित्र सहित एक कविता लिखिए विषय है - " पानी की कहानी'

MATHS:

1. Slove Half yearly question paper in HW.

SCIENCE:

S NO	LIST OF QUESTIONS	NOTE BOOK
1	HALF YEARLY QUESTION PAPER SOLUTIONS	ACTIVITY NOTE BOOK
2	EXERCISE SOLUTIONS OF FROM REPRODUCTION IN PLANTS & ANIMALS FROM NCERT TEXT BOOK	ACTIVITY NOTE BOOK
3	ACTIVITIES 8.1, 8.2, 8.3 AND 8.4 FROM	ACTIVITY NOTE BOOK

NCERT TEXT BOOK	

SOCIAL:

1. Write glossary of Chapter- Confronting Marginalisation , Understanding Marginalisation
2. Read the following chapters :-
   Civilising the native education, Understanding Marginalisation , Women caste and reform and write important points in your homework notebook.

   3.In 2 political maps of India Mark state and

   UTs and neighbouring countries .

   4. In 2 Physical map of World Mark and   label all continents and oceans .

SANSKRIT

१.यत् शब्द कि रुप लिखें तीनों लिंगों में।

२. दीपावली पर्व का चित्र वर्णन करें।

सावित्री बाई फुले पाठ के प्रश्न उत्तर लिखें तथा याद करें?

LIBRARY: Write a biography of one of the following authors on an A4 sheet:

1. Sudha Murty
2. R.K. Narayan
3. Ruskin Bond
4. Jeff Kinney
5. J.K. Rowling
Research and gather information about the author's life, works, and achievements.
 Write a concise biography (approx. 250-300 words) on an A4 sheet.
Include relevant details, such as birthdate, notable works,awards,and contributions to literature.

CLASS-IX

ENGLISH:

1.Writing News paper reports

Here are some notes which you could use to   write a report.

21 August 2005 orginal handwritten manuscript of Albert Einstein unearthed by student Rowdy Boeynik in the university of the Netherlands Boeynik researching papers ......papers

belonging to an old friend of Einstein ..... fingerprints of Einstein on these papers ...16 page document dated 1924... Einstein's work on this last theroy ... behaviour of atoms at low temperature..now known as the Bose Einstein' condensation ....the manuscript to be kept at Leyden University where Einstein got the Noble prize.

Mohit grandfather died. He used to love him greatly and held himin high esteem. He feels a great loss in it and thinks of life and death rather philosophically.He then writes his diary. Write it on his behalf in about 100-120words.

3.Read and write a glossary words of No Men are Foreign poem.

4. Read Reach for the top lesson and write hard words and important points of your own.

HINDI:

1. अपने पास के पार्क में पेड़ पौधे लगाने के लिए नगर पालिका को पत्र लिखिए|
2. अर्थ की दृष्टि से ध्यान रखते हुए पांच वाक्य बनाइए|
3. दिए गए विषय में से किसी एक विषय पर अनुच्छेद लिखिए

   स्वच्छ भारत स्वस्थ भारत

   मेहनत का फल मीठा होता है

   विज्ञापनों का हमारे जीवन पर प्रभाव
4. पीटी 2 परीक्षा के प्रश्न पत्र खंड-ग से प्रश्न नंबर 5 और 6 का उत्तर लिखें।

MATHS:

1.Read and write tables from 1 to 20
2.Write prime numbers up to 100
3.Write square numbers up to 20
4.Write cube numbers up to 20
5.Draw the transversal angles
6. Read and write Euclid laws

SCIENCE:

PHYSICS:

S NO	LIST OF QUESTIONS	NOTE BOOK
1	PT 2 QUESTION PAPER SOLUTIONS	H. W. NOTE BOOK
2	GRAVITATION NCERT TEXT BOOK EXERCISE 1 – 20 QUESTIONS	H. W. NOTE BOOK

BIO:

1.Solve the PT-2 paper in the home work.
2.Do Portfolio.

3. Animals of colder regions and fishes of cold water have thicker layer of subcutaneous fat. Describe why?

4. Name the different components of xylem and draw a living component?

5. Draw and identify different elements of phloem.

6. Differentiate between voluntary and involuntary muscles. Give one example of each type.

7. Which structure protects the plant body against the invasion of parasites?

SOCIAL:

Write note on any four points given below (about 120 words each)

a. Poverty in India

b. Elections in India

C. Tropical Evergreen and Deciduous forests

d. Advantages of having healthy population

2. Map pointing

Label the following on outline map of India

i. All states and UTs

Label the following on outline map of World

    I.   All continents and oceans

3.Solve PT-2 question in your notebooks.

SANSKRIT:

निर्देश:-सभी विद्यार्थी अवकाश कार्य संस्कृत कॉपी में करेंगे।

1. दिन द्वयस्य अवकाशार्थं प्राचार्यः प्रति पत्रं लिखत।

2. खाद्, क्रीड धातुः च पञ्चलकारानां रूपं लिखत।(लट्, लृट्, लोट्,लङ्, चविधिलिङ्ग)

3.संधि विच्छेदं कुरुत –

विद्यालयं, सदैव, परोपकार, गिरीश, स्वागतम्।

4 प्रकृति प्रत्ययं विभज्य लिखत –

   विहस्य, पातुम्, पठित्वा विहाय, कर्तुम्, दृष्ट्वा।

5. "किम्" , "तत्" च ' शब्दरूपाणि लिखत।

6. कस्य द्वयोः विषयोः चित्रवर्णनं कुरुत-

   1.उद्यानस्य चित्रं   2. वनस्य चित्रं 3. रक्षाबंधनपर्वस्य चित्रं

7. अधोलिखितं अनुच्छेदं पठित्वा प्रश्नान् उत्तरत ।

    रवीन्द्रनाथठाकूर: कवीश्वर: आसीत् । स: न केवलं बङ्गदेशस्य अपि तुविश्वस्य प्रसिद्ध: कवि: आसीत् । अनेन विरचित: " गीताञ्जलि: " इतिकवितासङ्ग्रह: अतिप्रसिद्ध: । अस्य कवितासङ्ग्रहस्य कृते कविरेष:परमसंमानितं " नोबल् " पुरस्कारं प्राप्तवान् । अस्माकं राष्ट्रीयगानस्य रचयिता अपि रवीन्द्र: एव । महापुरुषोऽयं " विश्वभारती " नामकं विश्वविद्यालयं अपिअस्थापयत् । एताद्दशानां महापुरुषाणां जन्मदात्री भारतभूमि: वस्तुत: धन्याएव ॥

(I)एकपदेन उत्तरत ।

1.क: कवीश्वर: आसीत् ?

 2.स: कस्य प्रदेशस्य कवि: आसीत् ?

(II) पूर्णवाक्येन उत्तरत।

1.अनेन विरचित: " गीताञ्जलि: " इति कवितासङ्ग्रह: कीदृश: ?

2. अस्माकं राष्ट्रीयगानस्य रचयिता क: ?(III) निर्देशानुसारं उतरत ।

1." अधन्या " इति पदस्य विलोमपदं किं प्रयुक्तम् ?

2." लोकस्य " इति अर्थे किं प्रयुक्तम् ?

LIBRARY: Download the Rastriya e-Pustakalaya app (previously shared by your class teacher) and register for the Story Writing Competition. Upon participation, submit your certificates to the school library."

CLASS-X

ENGLISH:

Solving two samples papers of cbse .

HINDI:

1. रचना के आधार पर वाक्य भेद को ध्यान में रखते हुए पांच वाक्य बनाइए|
2. प्लास्टिक के प्रयोग से कैसे बचा जा सकता है अनुच्छेद लिखते हुए 5 सुझाव दीजिए|
3. आपने खेल के सामान की एक दुकान खोली है उसके प्रचार के लिए एक विज्ञापन तैयार कीजिए|
4. केस स्टडी प्रश्न आपके क्षेत्र में दशहरे का त्यौहार किस प्रकार मनाया जाता है उसकी जानकारी एकत्रित करके लिखिए|
5. व्याकरण के पी टी 2 परीक्षा के सभी प्रश्नों का उत्तर अपने नोटबुक में लिखें|

MATHS:

Dear students.

You need to solve the above two question papers of maths(basic & standard)and submit them on reopening day.

SCIENCE:

CHEMISTRY:

METALS AND NON METALS :

Q1.A non-metal A, the largest constituent of air, when heated with H2 in a 1:3 ratio in the presence of a catalyst (Fe), gives a gas B. On heating with Oz, it gives an oxide C. If this oxide is passed into the water in the presence of air, it gives an acid D which acts as a strong oxidising agent.

(a) Identify A, B, C, and D

(b) To which group of periodic tables does this non-metal belong?

Q2. Give the steps involved in extracting low and medium reactivity metals from their respective sulphide ores. Q3. Explain the following

(a) Reactivity of Al decreases if it is dipped in HNO3

(b) Carbon cannot reduce the oxides of Na or Mg

(c) NaCl is not a conductor of electricity in solid-state, whereas it does conduct electricity in aqueous solution as well as in the molten state

(d) Iron articles are galvanised.

(e) Metals like Na, K, Ca and Mg are never found in their free state in nature.

Q4. Of the three metals, X, Y and Z. X react with cold water, Y with hot water and Z with steam. Identify X, Y and Z and also arrange them in order of increasing reactivity.

Q5.An element A burns with golden flame in the air. It reacts with another element B, atomic number 17, to give a product C. An aqueous solution of product C on electrolysis gives a compound D and liberates hydrogen. Identify A, B, C and D. Also, write down the equations for the reactions involved.   ACIDS BASES AND SALTS

Q6. For making cake, baking powder is taken. If your mother uses baking soda instead of baking powder in cake at home,

(a) How will it affect the taste of the cake and why?

(b) How can baking soda be converted into baking powder?

(c) What is the role of tartaric acid added to baking soda?

Q7. A metal carbonate X reacting with acid gives a gas that gives the carbonate back when passed through a solution Y. On the other hand, a gas G obtained at the anode during electrolysis of brine is passed on dry Y, it gives a compound Z, used for disinfecting drinking water. Identity X, Y, G and Z.   Q8. A sulphate salt of Group 2 element of the Periodic Table is a white, soft substance, which can be moulded into different shapes by making its dough. When this compound is left open for some time, it becomes a solid mass and cannot be used for moulding purposes. Identify the sulphate salt and why does it show such behaviour? Give the reaction involved.

PHYSICS:

S NO	LIST OF QUESTIONS	NOTE BOOK
1	PT 2 QUESTION PAPER SOLUTIONS	H. W. NOTE BOOK
2	ELECTRICITY NCERT TEXT BOOK EXERCKSE	H. W. NOTE BOOK
3	BLUE TEXT QUESTIONS FROM ELECTRICITY	HW NOTE BOOK

BIO:

1.Solve the PT-2 paper in the home work.

2.Do Portfolio.

3. Why are budding, fragmentation and regeneration all considered as asexual types of reproduction? With neat diagrams explain the process of regeneration in Planaria.

4. Write two points of difference between asexual and sexual types of reproduction. Describe why variations are observed in the offspring formed by sexual reproduction.

5. Distinguish between pollination and fertilisation. Mention the site and product of fertilisation in a flower. Draw a neat, labelled diagram of a pistil showing pollen tube growth and its entry into the ovule.

6. Distinguish between a gamete and zygote. Explain their roles in sexual reproduction.

7. Draw the diagram of a flower and label the four whorls. Write the names of gamete producing organs in the flower.

SOCIAL:

1. Write note on any three points given below (about 120 words each)

a. Bright future of Solar Energy in India

b. Industrial Pollution and steps to be taken to minimize it

c. Role of banks in Indian Economy

d. Mahatma Gandhi and Non co-operation movement

2. Map pointing

Label the following on outline map of India

1. Coal mines – Raniganj , Bokaro, Korba, Singrauli, Singareni, Neyveli , Jharia

2. Oil fields - Digboi, Ankaleshwar, Mumbai high,

3. Nuclear Power plants -Tarapur , Kakrapara, Rawat Bhata, Naraura, kalpakkam, Kaiga.

4.Solve PT - 2 question papers

SANSKRIT:

1.गम् धातु ,पठ् धातु रूपाणि लट्लकारे ,लङ्लकारे ,लोट्लकारे ,लृट्लकारे विधिलिङ्लकारे च स्मरन्तु ।

2 सेव् धातु ,लाभ् धातु रूपाणि लट्लकारे लृट्लकारे च स्मरन्तु

3.अस्मद् ,युष्मद् मातृ ,शब्दरूपाणि स्मरन्तु ।

4.सौहार्दम प्रकृतेः शोभाः, विचित्र साक्षी, सूक्तयः पठानाम् अभ्यासकार्य स्मरन्तु ।

5.पर्यावरण/ नैतिकशिक्षा इत्यादि विषयोः कस्यापि एकं आधृत्य चित्रयुक्तं 15 वाक्यानाम् लेखनं कुर्वन्तु ।

CLASS-XI

ENGLISH:

TWO UNSEEN PASSAGES OF LATEST PATTERN
TWO NOTE MAKING PASSAGES .
TWO POSTERS COMMERCIAL AND NON COMMERCIAL
TWO CLASSIFIEDS

ONE SPEECH

IMPORTANCE OF EDUCATION

OR

EACH ONE TEACH ONE.

ONE DEBATE FOR AND AGAINST.

JOINT FAMILY SYSTEM IS BETTER FAMILY SYSTEM

HINDI:

हिंदी परियोजना कार्य पूर्ण करें | सभी विद्यार्थियों को उनके नाम के साथ परियोजना कार्य विषय दिया जा रहा है- परियोजना के विषय निम्न प्रकार हैं-

1. सुशांख - स्त्री जीवन पर शिक्षा का प्रभाव
3. प्रिया चौहान - क्षेत्रीय पर्यटन और रोजगार

MATHS:

1) Permutations and Combinations

2) Binomial theorem

CS

PHYSICS:

S NO	LIST OF IMPORTANT 5 MARK QUESTIONS FOR HALF YEARLY EXAMS
1	DEFINE EXCAPE VELOCITY AND DERIVE AN EQUATION FOR ESCAPE VELOCITY.
2	DEFINE GRAVITATIONAL POTENTIAL. DERIVE AN EQUATION FOR GRAVITATIONAL POTENTIAL.
3	WHAT IS TORQUE? DERIVE THE RELATION BETWEEN TORQUE AND ANGULAR MOMENTUM
4	DEFINE ANGULAR MOMENTUM. WRITE ITS SI UNIT... DERIVE AN EQUATION FOR ANGULAR MOMENTUM
5	STATE AND PROVE LAW OF CONSERVATION OF ANGULAR MOMENTUM. WRITE ANY TWO APPLICATIONS OF CONSERVATION OF ANGULAR MOMENTUM.
6	DEFINE ELEASTIC COLLISSIONS. WRITE ANY TWO EXAMPLES. EXPLAIN 1 D ELASTIC COLLISSIONS TO GET THE FINAL VELOCITIES OF OBJECTS.
7	DEFINE IN ELEASTIC COLLISSIONS. GIVE ANY TWO EXAMPLES. EXPLAIN 2 D ELASTIC COLLISSIONS TO GET THE FINAL VELOCITIES OF OBJECTS.
8	STATE AND PROVE WORK ENERGY THEOREM. DERIVE AN EQUATION FOR POTENTIAL ENERGY OF A COMPRESSED SPRING.
9	WHAT IS ANGLE OF BANKING? DERIVE AN EQUATION FOR SAFE SPEED OF A VEHICLE MOVING ON BANKED ROAD.
10	STATE AND PROVE LAW CONSERVATION OF LINEAR MOMENTUM WITH THE HELP OF A NEAT AND LABELLED DIAGRAM.
11	State and prove parallelogram law of vectors. The resultant of two equal velocity vectors V AND V IS V. Find the angle between the two vectors.
12.	What is projectile? Give any two examples. Show that the path of a projectile is a parabola.

13	Derive equations for total TIME OF flight, Range and maximum height in case of a projectile.
14	SOLUTIONS OF PT 1 QUESTION PAPER

CHEMISTRY:

1. An organometallic compound on analysis was found to contain, C = 64.4%, H = 5.5% and Fe = 29.9%. Determine its empirical formula (At. mass of Fe = 56 u).   **2**

2. Calculate the number of protons, neutrons and electrons in $^{80}_{35}Br$.   **2**

3. Among the second period elements, the actual ionization enthalpies are in the order   **2**
   Li < B < Be < C < O < N < F < Ne.
   Explain, why
   (i) Be has higher $\Delta_i H$ than B?
   (ii) O has lower $\Delta_i H$ than N and F?

4. Which of the following pairs of elements would have a more negative electron gain enthalpy?   **2**
   (i) O or F (ii) F or Cl

5. Draw molecular orbital energy level diagram for N_2^+. Calculate its bond order and explain its magnetic characteristics.   **2**

6. Define octet rule. Write its significance and limitations.   **2**

7. Define hybridization. Explain the structure of C_2H_2 with orbital diagram.   **2**

8. A welding fuel gas contains carbon and hydrogen only. Burning a small sample of it in oxygen   **3**
   gives 3.38 g of carbon dioxide, 0.690 g of water and no other products. A volume of 10 L (measured at STP) of this welding gas is found to weigh 11.6 g. Calculate (i) empirical formula, (ii) molar mass of the gas and (iii) molecular formula. (At. wt. of C = 12, H = 1, O = 16 u).

9. 50.0 kg of $N_2(g)$ and 10.0 kg of $H_2(g)$ are mixed to produce $NH_3(g)$. Calculate the $NH_3(g)$ formed. **3** Identify the limiting reagent in the production of NH_3 in this situation.

10. The reactant which is entirely consumed in reaction is known as limiting reagent. In the reaction   **3**
    $2A + 4B \rightarrow 3C + 4D$, when 5 moles
    of A react with 6 moles of B, then
    (i) which is the limiting reagent?
    (ii) calculate the amount of C formed.

11. (i) State Pauli's exclusion principle.   **3**
    (ii) Account for the following:
    (a) Chromium has configuration $3d^5 4s^1$ and not $3d^4 4s^2$.
    (b) Bohr's orbits are called stationary orbits or states.

12. What are the frequency and wavelength of a photon during a transition from $n = 5$ state to $n = 23$ state in the He^+ ion.

13. Yellow light emitted from a sodium lamp has a wavelength (λ) of 580 nm. Calculate the   **3**
    frequency (v) and wave number $(\bar{v})$ of the yellow light.

14. An ion with mass number 37 possesses one unit of negative charge. If the ion contains 11.1%   **3**
    more neutrons than the electrons, find the symbol of the ion.

15. The quantum numbers of six electrons are given below. Arrange them in order of increasing   **3**
    energies. If any of these combination(s) has/have the same energy lists:

(i) $n = 4$, $l = 2$, $m_l = -2$, $m_s = -\dfrac{1}{2}$

(ii) $n = 3$, $l = 2$, $m_l = 1$, $m_s = +\dfrac{1}{2}$

(iii) $n = 4$, $l = 1$, $m_l = 0$, $m_s = +\dfrac{1}{2}$

(iv) $n = 3$, $l = 2$, $m_l = -2$, $m_s = -\dfrac{1}{2}$

(v) $n = 3$, $l = 1$, $m_l = -1$, $m_s = +\dfrac{1}{2}$

(vi) $n = 4$, $l = 1$, $m_l = 0$, $m_s = +\dfrac{1}{2}$

16. Among the following pairs of orbitals, which orbital will experience the larger effective nuclear   3
     charge? (i) $2s$ and $3s$, (ii) $4d$ and $4f$ and (iii) $3d$ and $3p$.

17. (i) How many sub-shells are associated with $n = 4$?   3
    (i) How many electrons will be present in the sub-shells having ms value of $-1/2$ for $n = 4$?

18. (i) Arrange the following ions in the order of increasing ionic radii.   3
    Na^+, Mg^{2+}, F^-, O^{2-}

    (i) Explain why Be has higher ionization enthalpy than B.
    (ii) Predict the formula of compound which might be formed by silicon and bromine.

19. Give reason for the following: 3
    (i) Halogens act as good oxidising agent.
    (ii) Electron gain enthalpy of noble gas is almost zero.
    (iii) Na and Mg^+ have same number of electrons but removal of electron from Mg^+ requires more energy.

20. Give reason for the following: 3
    (iv)   Halogens act as good oxidising agent.
    (v) Electron gain enthalpy of noble gas is almost zero.
    (vi) Na and Mg^+ have same number of electrons but removal of electron from Mg^+ requires more energy.

21. Among the elements of second period Li to Ne, pick out element: 3
    (i) with the highest first ionisation energy
    (ii) with highest electronegativity
    (iii) with largest atomic radius
    (iv) that is most reactive non-metal
    (v) that is most reactive metal
    (vi) with valency equal to 4.

22. The first (IE_1) and second (IE_2) ionisation enthalpies $(kJ\ mol^{-1})$ of three elements I, II and III are   3
    given below:

Element	IE_1	IE_2

I	403	2640
II	549	1060
III	1142	2080

Identify the element which is likely to be (i) non-metal (ii) an alkali metal (iii) an alkaline earth metal.

23. The first ($\Delta_i H_1$) and the second ($\Delta_i H_2$) ionization enthalpies (in kJ mol^{-1}) and the ($\Delta_{eg}H$) electron **3** gain enthalpy (in kJ mol^{-1}) of a few elements are given below:

Element	ΔH_1	ΔH_2	$\Delta_{eg}H$
I	520	7300	− 60
II	419	3051	− 48
III	1681	3374	− 328
IV	1008	1846	− 295
V	2372	5251	+ 48
VI	738	1451	− 40

Which of the above elements is likely to be:

(i) the least reactive element.

(ii) the most reactive metal.

(iii) the most reactive non-metal.

(iv) the least reactive non-metal.

(v) the metal which can form a stable binary halide of the formula MX$_2$ (X = halogen).

(vi) the metal which can form a predominantly stable covalent halide of the formula MX (X = halogen)?

24. Draw the molecular structures of   **3**
    (i) XeF_2,   (ii) $XeOF_2$ and   (iii) XeF_4.

25. What is meant by hydrogen bond? What is bond energy of hydrogen bond? Why is HF, H$_2$O are   **3**
    liquids whereas HCl, HBr, HI and H$_2$S are gases?

26. What is the total number of sigma and pi bonds in the following molecules?   **3**
    (i) C$_2$H$_2$ (ii) C$_2$H$_4$

27. Calcium carbonate reacts with aqueous HCl to give CaCl$_2$ and CO$_2$ according to the reaction   **5**
    given below:

    $CaCO_3(s) + 2HCl(aq) \rightarrow CaCl_2(aq) + CO_2(g) + H_2O(l)$

    What mass of CaCl$_2$ will be formed when 250 ml of 0.76 M HCl reacts with 1000 g of CaCO$_3$? Name the limiting reagent. Calculate the number of moles of CaCl$_2$ formed in the reaction.

28. (i) Write outer electronic configuration of Cr atom. Why are half filled orbitals more stable?   **5**

    (ii) State Heisenberg's uncertainty principle. An electron has a velocity of 50 m s^{-1}, accurate upto 99.99%. Calculate the uncertainty in locating its position.

    (Mass of electron = 9.1×10^{-31} kg, $h = 6.6 \times 10^{-34}$ J s)

BIOLOGY:

<center>PART-I</center>

1. What are macromolecules? Give examples.

2. Illustrate a glycosidic, peptide and a phospho-diester bond.

3. What is meant by tertiary structure of proteins?

4. Find and write down structures of 10 interesting small molecular weight biomolecules. Find if there is any industry which manufactures the compounds by isolation. Find out who are the buyers. 5. Proteins have primary structure. If you are given a method to know which amino acid is at either of the two termini (ends) of a protein, can you connect this information to purity or homogeneity of a protein?

6. Find out and make a list of proteins used as therapeutic agents. Find other applications of proteins (e.g., Cosmetics etc.)

7. Explain the composition of triglyceride.

<u>PART-II</u>

8.<u>DO PROJECT ON THE SELECTED TOPIC.</u>

CLASS-XII

ENGLISH:

SOLVE LATEST TWO SAMPLE PAPERS OF CBSE.

HINDI:

<u>लिखित भाग</u>

प्रश्न 1- अभिव्यक्ति और माध्यम के पाठ 3,4,5 से पाँच-पाँच बहुविकल्पीय प्रश्न तैयार करके लाएँ।

प्रश्न 2– एक गीत, कविता के बहाने, कवितावली- इन कविताओं का काव्य-सौन्दर्य लिखिए ।

प्रश्न 3 – वितान के पढ़ाए गए पाठ से दस बहुविकल्पीय प्रश्न तैयार करें।

प्रश्न 4. विद्यालय - पत्रिका प्रकाशित हो रही है। अतः आप अपनी लिखी कोई कविता / कहानी/लेख A4 सीट में आदि विद्यालय खुलते ही मुझे जमा करेंगे।

<u>अभ्यास भाग</u>

प्रश्न 1– जनसंचार से सम्बंधित भाग का अभ्यास कीजिए ।

प्रश्न 2– वितान पुस्तक के समस्त पाठों का अभ्यास कीजिए ।

प्रश्न 3– आरोह के समस्त पाठों का अभ्यास कीजिए ।

MATHS:

Solve CBSE sample paper 2024-25

PHYSICS:

CHEMISTRY:

CHAPTER -1 (SOLUTIONS)

1 (a) Define the following terms :(i) Ideal solution (ii) Osmotic pressure
(b) Calculate the boiling point elevation for a solution prepared by adding 10 g CaCl2 to 200 g of water, assuming that CaCl2 is completely dissociated.
(Kb) for water = 0.512 K kg mol-1; Molar mass of CaCl2 = 111 g mol-1) **Ans : 0.69 K**
2 (a) What type of deviation is shown by a mixture of ethanol and acetone? Give reason.
(b) A solution of glucose (molar mass = 180 g mol-1) in water is labelled as 10% (by mass). What would be the molality and molarity of the solution? (Density of solution = 1.2 g mL-1)
3 (a)Vapour pressure of pure water at 298 K is 23.8 mm Hg. 50 g of urea NH_2CONH_2) is dissolved in 850 g of water. Calculate the vapour pressure of water for this solution and its relative lowering. **Ans: 0.0173**
(b) Explain types of azeotropes with graph.
4.(a) The depression in freezing point of water observed for the same amount of
acetic acid, trichloroacetic acid and trifluoroacetic acid increases in the order
given above. Explain briefly.
(b) Henry's law constant for the molality of methane in benzene at 298 K is 4.27×10^5 mm Hg. Calculate the solubility of methane in benzene at 298 K under 760 mm Hg. **Ans :178×10^{-5}.**

Q5.
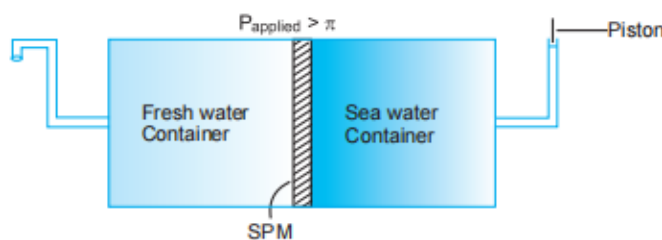
(a)Given alongside is the sketch of a plant for carrying out a process.
(*i*) Name the process occurring in the given plant.
(*ii*) To which container does the net flow of solvent take place?
(*iii*) Name one SPM which can be used in this plant.
(*iv*) Give one practical use of the plant.
b)A solution containing 15 g urea (molar mass = 60 g mol–1) per litre of solution in water has the same osmotic pressure (isotonic) as a solution of glucose (molar mass = 180 g mol–l) in water. Calculate the mass of glucose present in one litre of its solution.
Ans. b) 45 g

CHAPTER -2 (ELECTROCHEMISTRY)

1. Calculate emf and ΔG for the following cell :
 Mg(s)/Mg^{2+}(0.001M)//Cu^{2+}(0.0001M)/Cu(s);
 $E^o_{Cu2+/Cu}$ = +0.34V, $E^o_{Mg2+/Mg}$ = -2.37V
2. Calculate ΔrG^0 for the reaction at 25^0C :Au(s) +Ca^{+2} (1 M)→ Au^{3+}(1M) + Ca (s) ,

$E^o_{Ca2+/Ca}= - 2.87$ V, $E^o_{Au3+/Au}=+1.50$V. Predict whether the reaction will be spontaneous or not at 25^0C which of the above two half cells will act as an oxidizing agent and which one will be a reducing agent?

3. Calculate the emf of the cell . The following chemical reaction is occurring in an electrochemical cell.Mg(s) $+2Ag^+$ (0.0001 M)$\rightarrow$ Mg^{2+}(0.10M) + 2 Ag(s) The electrode values areMg^{2+} / Mg = – 2. 36 V Ag^+ /Ag = 0.81 V. For this cell calculate / write(a) (i) E^0 value for the electrode 2 Ag^+ / Ag(ii) Standard cellpotential E^0cell. (b) Cell potential (E)cell (c) (i) Symbolic representation of the above cell.(ii) Will theabove cellreactionbe spontaneous?

4. A voltaic cell is set up at 25^0C With the following half cells :Al(s)/Al^{3+}(0.001M) and Ni^{2+}(0.50)/Ni(s) ,Writethe equation for the cell reaction that occurs when the cell generates an electric current and determinethe cellpotential(given $E^{o2+}_{Ni/Ni}$=-0.25V,$E^{o3+}_{Al/Al(}$=-1.66V).

5.Onehalf cell in a voltaic cell is constructed from a silver wire dipped in silver nitrate solution ofunknown concentration .The other half cell consists of a zinc electrode in a 0.10M solution of Zincnitrate.Avoltageof1.48Vismeasuredforthiscell.Usethisinformationtocalculatetheconcentrationofsilv ernitratesolution.

   ($E^{o2+}_{Zn/Zn}$=$-$0.763V, $E^{o+}_{Ag/Ag}$ =$+$0.80V)

CHAPTER -3 (CHEMICAL KINECTICS)

1. The following results have been obtained duringthe kinetic studies of the reaction :
2A + B $\rightarrow$C + D
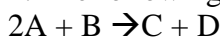
ExperimentNo.	[A] [B]	Inital rate offormation of D
i	0.1 M 0.1 M	6.0×10^{-3} M min^{-1}
ii	0.3 M 0.2 M	7.2×10^{-2} M min^{-1}
iii	0.3 M 0.4 M	2.88×10^{-1} M min^{-1}
iv	0.4 M 0.1 M	2.40×10^{-2} M min^{-1}

Calculate the rate of formation of D when[A] = 0.5 mol L^{-1} and [B] = 0.2 mol L^{-1}.
          Ans : 1 1.2×10^{-1} mol L^{-1} min^{-1}
2. For the hydrolysis of methyl acetate in aqueoussolution, the following results were obtained :

t/s	0	30	60
$[CH_3COOCH_3]$/mol L^{-1}	0.60	0.30	0.15

(i) Show that it follows pseudo first orderreaction, as the concentration of water
remains constant.
(ii) Calculate the average rate of reactionbetween the time interval 30 to 60 seconds.
Ans: (i) k = 0.0231 s^{-1} (ii) 5 X10 $^{-3}$ mol L $^{-1}$s $^{-1}$
3.(i) Define half-life of a reaction. Write theexpression of half-life for(a) zero order reaction and(b) first order reaction.
(ii) The rate constants of reaction at 500 K and700 K are 0.02 s^{-1} and 0.07 s^{-1} respectively.
Calculate the value of activation energy,Ea. **Ans: (ii) Ea = 18228.07 J mol^{-1}**
4. (i) The first order rate constant for the decomposition of ethyl iodide by the reaction :
$C_2H_5I(g) \rightarrow C_2H_4(g)$ + HI(g)at 600 K is 1.6×10^{-5} s^{-1}. Its energy of activation
is 209 kJ mol^{-1}.Calculate the rate constant of reaction at 700 K.
(ii) How does a change in temperature affect the rate of a reaction? How can this effect on
the rate constant of reaction be represented quantitatively? **Ans : (i) 6.34×10^{-3} s^{-1}**
5. (i) A first order reaction has a rate constant value of 0.00510 min^{-1}. If we begin with 0.10 Mconcentration of the reactant, how much of the reactant will remain after 3.0 hours?
(ii) Explain the difference between the average rate and instantaneous rate of chemical reaction.
Ans : (i) 0.04 M

CHAPTER -4 (D AND F BLOCK ELEMENTS)

1.What is lanthanoid contraction? Give its cause and consequences.
2.(i) Differentiate between lanthanoids and actinoids.

(ii) what is misch metal ? What are its uses?

3 (a) Write the method of preparation of potassium dichromate.

   (b) What is the effect of pH on dichromate ion?

4 . Explain giving reasons:

a. Transition metals and many of their compounds show paramagnetic behavior.

b. The enthalpies of atomization of the transition metals are high.

c. The transition metals generally form coloured compounds.

d. Transition metals and their many compounds act as good catalysts.

e. Scandium (Z = 21) is a transition element but zinc (Z = 30) is not?

5. a). What is the state of hybridization of Mn in MnO_4^- ?

 b) Write an application of potassium permanganate.

 c) What are the products formed after heating potassium permanganate?

 d) How many electrons are involved in oxidation by $KMnO_4$, in different mediums?

CHAPTER -5 (COORDINATION COMPOUNDS)

1(i) What is crystal field splitting energy? How does the magnitude of Δ_0 decide the actual configuration of d-orbitals in a coordination entity?

(ii) Explain the difference between a weak field ligand and a strong field ligand.

(iii) Predict the number of unpaired electron in $[Pt(CN)_4]^{2-}$.

2(i)Aqueous copper sulphate solution (blue in colour) gives: (i) a green precipitate with aqueous potassium fluoride and(ii)a bright green solution with aqueous potassium chloride. Explain these experimental results.

(ii)Give evidence that $[Co(NH_3)_5Cl]SO_4$ and $[Co(NH_3)_5SO_4]Cl$ are ionisable isomers.

(iii) Why are low spin tetrahedral complexes not formed ?

3(i)How many geometrical isomers are possible in the following coordination entities?

(a) $[Cr(C_2O_4)_3]^{3-}$ (b) $[CoCl_3(NH_3)_3]$ (c) $[Pt(en)_2Cl_2]$

(ii). Using IUPAC norms, write the formulae for the following :

(a) tetrahydroxozincate(II)

(b) hexaammineplatinum (IV)

4(a)Explain with two examples each of the following: coordination entity, ligand, coordination number, coordination polyhedron, homoleptic and heteroleptic.

(a) Draw the figure to show the splitting of d-orbital in an octahedral crystal field.

(b) Calculate the spin only magnetic moment of the complex $[FeF_6]^{3-}$.

5(a)Explain the bonding in coordination compounds in terms of Werner's postulates.

(a) what is mean by chelate effect? Give an example.

CHAPTER -6 (HALOALKANES AND HALOARENES)

1.   (a)Write the formula of freon.

         (b) Give two uses of chloroflourocarbons.

         (c) How does freon-12 deplete ozone layer?

         (d) Do you think the use of CFCs should be banned? Give reason.

2.   (a)What are ambident nucleophiles? Explain with an example.

         (b)Write the structure of the major organic product for the reaction:

                 $(CH_3)_3CBr + KOH \rightarrow$

         (c)n- butyl bromide has higher boiling point than tert.- butyl bromide?

         (d)Butan-1-ol optically inactive but Butan-2-ol is optically active.

          (e)Benzyl chloride undergoes S_N1 reaction faster than cyclohexyl methyl chloride.

3.   (a) Arrange each set of compounds in order of increasing boiling points

          Bromomethane, bromoform, chloromethane, dibromomethane.

(b) Which of the compounds will react faster in S_N1 reaction with the OH ion?

      CH_3—CH_2—Cl or C_6H_5—CH_2—Cl
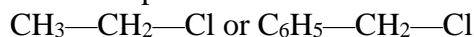
(c) Name the reaction: $C_6H_5ONa + C_2H_5Cl \rightarrow C_6H_5$-O-$C_2H_5$

(d) Complete the following analogy

      Same molecular formula but different structures: A

      Non super imposable mirror images: B

(e) Why iodoform has appreciable antiseptic properties?

4.   (a) What is the direction of the polarity of a Carbon Halogen bond?

     (b) Fluorine is the most electronegative of the Halogens, yet Chloromethane has the largest dipole moment of the halomethanes. How is this possible?

     (c) Ethane and Bromomethane have widely different boiling points. Explain.

     (d) What is the stereochemistry of the SN 2 reaction?

     (e) What is the order of stability of carbocations?

5.   (a) How would you convert: (i) Benzene to Biphenyl (ii) Aniline to Chlorobenzene.

     (b) Arrange in order of property indicated:

     (i) $CH_3CH_2CH_2CH_2Br$, $(CH3)_3Br$, $(CH_3)_3CHCH_2Br$ (Increasing boiling point)

     (ii) CH_3F, CH_3I, CH_3Cl, CH_3Br (nucleophilic substitution).

     (c) p-Dichlorbenzene has higher melting point and lower solubility than those of

       o- and m- isomers. Discuss.

CHAPTER -7 (ALCOHOLS ,PHENOLS AND ETHERS)

1. (a) Write the IUPAC names of the following compounds:
       i. CH_3 - $C(CH_3)_2$ $CH(OH)$ CH_3
      ii. CH_3 $CH=CH$ $CH(Br)$ CH_2OH
     iii. CH_3 - O- CH $C(CH_3)_3$

  (b) Give simple chemical test to distinguish between the following pairs of compounds:
       i. Ethanol and phenol
      ii. Propanol and 2-methyl propan-2-ol

2. (a) Arrange the following compounds in increasing order of acidic strength
      P-nitrophenol, ethanol, phenol

(b) Arrange the following in increasing order of boiling point
     Butanol, 2-methyl propanol, 2,2-dimethyl propanol, propanol

  (c) Write the equations involved in following reactions:
       i.   Oxidation reaction of Phenol
      ii.   Williamson synthesis
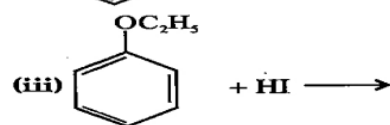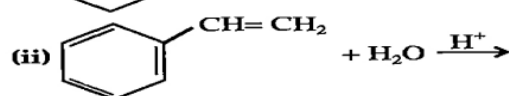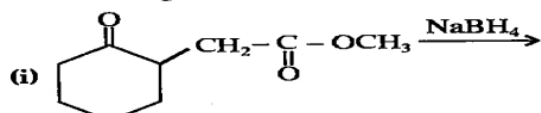   iii.   Friedal crafts alkylation of phenol

3. (a) Account for the following:
       i.   Alcohols are soluble in water as compared to hydrocarbons.
      ii.   Which of the following is more volatile: o-nitrophenol, p-nitrophenol?

(b) Write Lucas test for primary, secondary and tertiary alcohol.

4. (a) Complete the following equations:

(i) $CH_2-\underset{\overset{\parallel}{O}}{C}-OCH_3 \xrightarrow{NaBH_4}$

(ii) $CH=CH_2$ $+ H_2O \xrightarrow{H^+}$

(iii) OC_2H_5 $+ HI \longrightarrow$

(b) Why phenol undergoes electrophilic substitution reactions?

5. (a) Predict the reagent for carrying out the following conversions:
     i.   Phenol to benzoquinone
     ii.   Anisole to p-bromoanisole
     iii.   Phenol to 2, 4, 6-tribromophenol
(b) Write equation for the following reactions:
     (a)Kolbe's reaction   (b) Reimer-Teimann reaction

CHAPTER -8 (ALDEHYDES ,KETONES AND CARBOXYLIC ACIDS)

1. Which of the following compounds would undergo Aldol condensation, which the Cannizzaro reaction and which neither? Write the structures of the expected products of Aldol condensation and Cannizzaro reaction.

  (a) Methanal (b) 2-Methypentanal © Benzaldehyde (d) Benzophenone (e) Cyclohexanone

  (f)1-Phenylpropanone (g)Phenylacetaldehyde (h) Butan-1-ol (i) 2,2-Dimethylbutanal.

2. Give reasons for the following :

       (i) C_6H_5COOH is weaker than formic acid.

       (ii)   HCOOH and CH_3COOH are differentiated by Tollen's reagent.

       (iii)   R – COOH do not give characteristic reaction of $> C = O$ (Carbonyl group)

       (iv)   Carboxylic acids are stronger acids than phenols.

       (v)   Ethanoic acid does not show Cannizaro reaction

3. (i) Arrange the following in the property indicated:

    a. Acetaldehyde, Acetone, di-tert-butyl ketone, Methyl tert-butyl ketone in

                   (increasing reactivity towards HCN)

   (b) $CH_3CH_2CHBrCOOH$, $CH_3CHBrCH_2COOH$, $(CH_3)_2CHCOOH$, $CH_3CH_2CH_2COOH$
                   (in increasing order of acid strength)

  (ii) An aliphatic compound 'A' with a molecular formula of C_3H_6O reacts with phenylhydrazine to give compound 'B'. Reaction of 'A' with I_2 in alkaline medium on warming, gives yellow precipitate 'C'. Identify the compounds A,B and C.

4. What is meant by the following terms? Give an example in each case.
  (i)Cyanohydrin (ii) Semicarbazone (iii) Schiff base (iv) Ketal (v)Oxime

BIOLOGY:

1. List the attributes that populations possess but not individuals.

2. If a population growing exponentially double in size in 3 years, what is the intrinsic rate of increase (r) of the population?

3. Name important defence mechanisms in plants against herbivory.

4. An orchid plant is growing on the branch of mango tree. How do you describe this interaction between the orchid and the mango tree?

5. What is the ecological principle behind the biological control method of managing with pest insects?

6. Define population and community.

7. Define the following terms and give one example for each: (a) Commensalism (b) Parasitism (c) Camouflage (d) Mutualism (e) Interspecific competition

8. With the help of suitable diagram describe the logistic population growth curve.

9. Select the statement which explains best parasitism. (a) One organism is benefited. (b) Both the organisms are benefited. (c) One organism is benefited, other is not affected. (d) One organism is benefited, other is affected.

10. List any three important characteristics of a population and explain.

PART-II

11.SOLVE THE MONTHLY TEST PAPER IN HOME WORK,