KENDRIYA VIDYALAYA AFS RAJOKARI SUMMER VACATION– HOLIDAYS HOMEWORK
Secondary & Senior Secondary
SESSION-2022-23

ग्रीष्मकालीन अवकाश कार्य MAY 2022

विषय - हिन्दी कक्षा - छठी 'अ, ब'

1. संज्ञा व उसके भेद उदाहरण सहित लिखिए ।
2. सर्वनाम व उसके भेद उदाहरण सहित लिखिए ।
3. विशेषण व उसके भेद उदाहरण सहित लिखिए ।
4. निम्नलिखित प्रश्नों के उत्तर पाठ्यपुस्तक के आधार पर लिखिए ।
   - क) चिड़िया को किन किन चीजों से प्यार है ?
   - ख) कविता के आधार पर चिड़िया की विशेषताएँ बताईए ?
   - ग) लेखिका बचपन में इतवार की सुबह क्या-क्या काम करती थी ?
   - घ) पुराने समय व नये समय दूरी बताने के लिए लेखिका क्या-क्या उदाहरण देती है ?
   - ङ.) लेखिका के चश्मा लगाने पर उसके चचेरे भाई उसे क्या कहकर चिढ़ाते थे ?
   - च) अंड़ो के बारे में केशव और श्यामा के मन में किस तरह के सवाल उठते थे ?
5. प्रार्थना पत्र
   - क) मित्र की शादी में जाने के लिए प्राचार्य को दो दिन के लिए प्रार्थना पत्र लिखिए ।
   - ख) घर पर जरूरी कार्य होने के कारण प्राचार्य को एक दिन के लिए प्रार्थना पत्र लिखिए ।
6. निबंध लेखन-
   - क) मेरा बचपन
   - ख) मेरा विद्यालय
7. दस शब्दों के चार-चार पर्यायवाची शब्द लिखिए
8. दस शब्दों के विलोम शब्द लिखिए ।
9. छुट्टियाँ बिताने से संबंधित एक अनुच्छेद लिखिए ।

सभी अभोभावकों से अनुरोध है कि वे छात्रों को छुट्टियों में पढने के साथ साथ लिखकर कार्य करने के लिए प्रेरित करें । पाठों से संबंधित प्रश्नों को याद करने के लिए कहें । भाषा में व्याकरण का बहुत महत्त्व है इसलिए पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी शब्द , मुहावरे , लोकोक्ति आदि याद करने के लिए कहें ।

केंद्रीय विद्यालय राजोकरी

ग्रीष्मावकाशकालीन गृहकार्य

कक्षा 7 हिंदी

1.संज्ञा, सर्वनाम, विशेषण की परिभाषा व भेद लिखो तथा प्रत्येक के तीन तीन उदाहरण लिखो।

2. समास किसे कहते हैं? समास के भेद लिखो व याद करो।

3.बाल महाभारत पुस्तक का प्रतिदिन अध्ययन करो व 20 पृष्ठ सुलेख लिखो।

4. प्रतिदिन 5 कठिन शब्द लिखो।

5.अपनी पाठ्यपुस्तक वसंत की कोई दो कविताएं याद करो।

6. उचित कारण बताते हुए अपने विद्यालय के प्राचार्य को दो दिन के अवकाश के लिए पत्र लिखो।

7. कोरोना महामारी के बाद विद्यालय जाने के अपने अनुभव बताते हुए अपने बड़े भाई को पत्र लिखो।

8. मेरा प्रिय पक्षी और मेरी दादी मां विषय पर 150 शब्दों में अनुच्छेद लिखो।

9.सिक्किम की भाषा व संस्कृति विषय पर एक प्रोजेक्ट बनाओ।

10. कॉपी में कराया गया सम्पूर्ण कार्य याद करो।

11. प्रतिदिन हिंदी का अखबार पढ़ो और दो समाचार लिखो।

नोट : संपूर्ण कार्य एक अलग नोटबुक में करो।

ग्रीष्मकालीन अवकाश कार्य MAY 2022

विषय - हिन्दी कक्षा - आठवीं ब

1. पुनरुक्त शब्द की परिभाषा एवं उदाहरण लिखते हुए, उदाहरणों का वाक्यप्रयोग करें ।
2. द्वन्द्व समास को परिभाषित करते हुए दस उदाहरण लिखिए ।
3. संज्ञा व उसके भेद उदाहरण सहित लिखिए ।
4. विशेषण व उसके भेद उदाहरण सहित लिखिए ।
5. निम्नलिखित प्रश्नों के उत्तर पाठ्यपुस्तक के आधार पर लिखिए ।

बसंत-3

क) कवि को ऐसा विश्वास क्यों है कि उसका अंत अभी नहीं होगा?

ख) फूलों को अनंत तक विकसित करने के लिए कवि कौन-कौन-सा प्रयास करता है?

ग) कवि पुष्पों की तंद्रा और आलस्य दूर हटाने के लिए क्या करना चाहता है?

घ) बसंत को ऋतुराज क्यों कहा जाता है?

ङ.) "ऋतु परिवर्तन का जीवन पर गहरा प्रभाव पड़ता है"- इस कथन की पुष्टि आप किन-किन बातों से कर सकते हैं? लिखिए।

च) बचपन में लेखक अपने मामा के गाँव चाव से क्यों जाता था और बदलू को 'बदलू मामा' न कहकर 'बदलू काका' क्यों कहता था?

छ बदलू के मन में ऐसी कौन-सी व्यथा थी जो लेखक से छिपी न रह सकी।

ज वस्तु-विनिमय क्या है? विनिमय की प्रचलित पद्धति क्या है?

झ 'मशीनी युग ने कितने हाथ काट दिए हैं।'- इस पंक्ति में लेखक ने किस व्यथा की ओर संकेत किया है?

ञ "मैंने उस कंपनी के हिस्सेदार की तरफ पहली बार श्रद्धाभाव से देखा|" लेखक के मन में हिस्सेदार साहब के लिए श्रद्धा क्यों जग गई ?

ट "लोगों ने सलाह दी कि समझदार आदमी इस शाम वाली बस से सफ़र नहीं करते|" लोगों ने यह सलाह क्यों दी ?

ठ "ऐसा जैसे सारी बस ही इंजन है और हम इंजन के भीतर बैठे हैं|" लेखक को ऐसा क्यों लगा ?

ड़ "मैं हर पेड़ को अपना दुश्मन समझ रहा था|" लेखक पेड़ों को अपना दुश्मन क्यों समझ था ?

ढ सविनय अवज्ञा का उपयोग व्यंग्यकार ने किस रूप में किया है ? लिखिये।

भारत की खोज अहमद नगर का किला पाठ को पढकर 5 प्रश्न बनाकर उनके उत्तर लिखें
सिन्धु घाटी सभ्यता पाठ को पढकर 15 प्रश्न बनाकर उनके उत्तर लिखें

6. प्रार्थना पत्र

क) पुस्तकालय में हिन्दी की पत्रिकाएँ मगवाने के लिए प्राचार्य को पत्र लिखिए ।

ख) आपके घर के आसपास गाने बजाने का कार्य बहुत होता है और आपके शिकायत करने पर भी उसे रोका नहीं जाता , इसलिए आप पुलिस थाना अध्यक्ष को शिकायत पत्र लिखिए ।

7. निबंध लेखन-
   क) प्रिय ऋतु (वसन्त)
   ख) प्रिय त्योहार (रक्षा-बन्धन)
   ग) आतंकवाद - एक समस्या

8. बीस शब्दों के चार-चार पर्यायवाची शब्द लिखिए ।
9. बीस शब्दों के विलोम शब्द लिखिए ।
10. छुट्टियाँ बिताने से संबंधित एक अनुच्छेद लिखिए ।
11. छुट्टियों के दौरान की गई यात्रा का यात्रा विवरण एक पृष्ठ में लिखिए ।

सभी अभोभावकों से अनुरोध है कि वे छात्रों को छुट्टियों में पढने के साथ साथ लिखकर कार्य करने के लिए प्रेरित करें । पाठों से संबंधित प्रश्नों को याद करने के लिए कहें । भाषा में व्याकरण का बहुत महत्त्व है इसलिए पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी शब्द , मुहावरे , लोकोक्ति आदि याद करने के लिए कहें ।

ग्रीष्म अवकाश गृह कार्य

कक्षा- आठवीं

विषय- हिंदी

प्रश्न-1 निम्नलिखित विषयों पर अनुच्छेद लिखिए।

क-मेरी पहली यात्रा

ख-बसंत ऋतु

ग-प्रिय खेल

घ-मेरा पुस्तकालय

च-कोविड-19 एक महामारी

प्रश्न-2 विभिन्न ऋतुओं के बारे में लिखिए और चित्र लगाइए।

प्रश्न-3 लाख से बनने वाली वस्तुओं की एक सूची बनाइए।

प्रश्न-4 भारत की खोज में तलाश और सिंधु घाटी की सभ्यता पाठ को पढ़िए और उससे 20-20 प्रश्न बनाकर उत्तर लिखिए।

प्रश्न 5 निम्नलिखित शब्दों के पर्यायवाची शब्द लिखिए और याद कीजिए।

घर, हवा, हाथी, नदी, पहाड़, मित्र, फूल, राजा, दिन, रात , समुद्र ,तालाब

ग्रीष्म अवकाश गृह कार्य

कक्षा- नवीं

विषय- हिंदी

प्रश्न-1 भक्तिकाल के चार कवियों का चित्र लगाकर/बनाकर जीवन परिचय, रचनाएं एवं भाषा शैली लिखकर परियोजना कार्य बनाइए।

प्रश्न -2 निम्नलिखित विषयों पर अनुच्छेद लिखिए।

*परिश्रम का महत्व

*अविस्मरणीय यात्रा

*प्रातःकाल की सैर

*स्वस्थ भारत स्वच्छ भारत

*जीवन में खेलों का महत्व

प्रश्न-3 कृतिका में मेरे संग की औरतें और रीढ़ की हड्डी पाठ को पढ़िए और प्रश्न-उत्तर लिखिए।

प्रश्न-4 निम्नलिखित अलंकारों के 10-10 उदाहरण लिखिए।

अनुप्रास, यमक, उपमा, रूपक

प्रश्न-5 निम्नलिखित उपसर्ग से पांच-पांच शब्द बनाइए।

बिला

हम

गैर

प्र

कु

6-निम्नलिखित प्रत्ययो से पांच -पांच शब्द बनाइए

आस

इया

पन

ई

7-प्राकृतिक आपदाओं के बारे में सचित्र जानकारी दीजिए।

ग्रीष्म अवकाश गृह कार्य

कक्षा- दसवीं

विषय- हिंदी

प्रश्न-1 भक्तिकालीन चार कवियों का चित्र लगाकर/बनाकर जीवन परिचय, रचनाएं एवं भाषा शैली लिखकर परियोजना कार्य बनाइए।

प्रश्न-2 श्लेष ,उत्प्रेक्षा मानवीकरण और अतिशयोक्ति अलंकार की परिभाषा लिखते हुए 10 -10 उदाहरण लिखिए।

प्रश्न-3 सरल संयुक्त और मिश्र वाक्य के 10 -10 उदाहरण लिखिए।

प्रश्न- 4 माता का आंचल और साना-साना हाथ जोड़ि पाठ को पढ़िए और प्रश्नों को हल कीजिए।

प्रश्न- 5 निम्नलिखित विषयों पर अनुच्छेद लिखिए।

क-करोना: एक महामारी

ख-मेरी अविस्मरणीय यात्रा

ग-ऑनलाइन शिक्षा

घ-मेरे सपनों का भारत

च-मेरे जीवन का लक्ष्य

6-माता का अंचल पाठ के आधार पर आज के खेलो और पहले की खेलों की सूची बनाइए।

ग्रीष्मकालीन अवकाश कार्यम् MAY 2022

कक्षा - षष्ठी

शब्दरूपाणि

1. स्मरणार्थं शब्दरूपाणि- (अकारान्तपुलिङ्ग आकारान्तस्त्रीलिङ्ग-)

अकारान्त-पुलिङ्ग: (बालक)

एकवचनम्	द्विवचनम्	बहुवचनम्

प्रथमा	बालक:	बालकौ	बालका:
द्वितीया	बालकम्	बालकौ	बालकान्
तृतीया	बालकेन	बालकाभ्याम्	बालकै:
चतुर्थी	बालकाय	बालकाभ्याम्	बालकेभ्य:
पञ्चमी	बालकात्	बालकाभ्याम्	बालकेभ्य:
षष्ठी	बालकस्य	बालकयो:	बालकानाम्
सप्तमी	बालके	बालकयो:	बालकेषु
अष्टमी	हे बालक !	हे बालकौ !	हे बालका: !

अकारान्त-पुलिङ्ग: (नायक)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	नायक:	नायकौ	नायका:
द्वितीया	नायकम्	नायकौ	नायकान्
तृतीया	नायकेन	नायकाभ्याम्	नायकै:
चतुर्थी	नायकाय	नायकाभ्याम्	नायकेभ्य:
पञ्चमी	नायकात्	नायकाभ्याम्	नायकेभ्य:
षष्ठी	नायकस्य	नायकयो:	नायकानाम्
सप्तमी	नायके	नायकयो:	नायकेषु
अष्टमी	हे नायक !	हे नायकौ !	हे नायका: !

धातुरूपाणि

2. स्मरणार्थं धातुरूपाणि- (लट् , लृट् , लोट्)

हस् धातु:, लट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	हसति	हसत:	हसन्ति
मध्यमपुरुष:	हससि	हसथ:	हसथ
उत्तमपुरुष:	हसामि	हसाव:	हसाम:

हस् धातु:, लोट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्

प्रथमपुरुष:	हसतु	हसताम्	हसन्तु
मध्यमपुरुष:	हस	हसतम्	हसत
उत्तमपुरुष:	हसानि	हसाव	हसाम

हस् धातु:, लृट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	हसिष्यति	हसिष्यत:	हसिष्यन्ति
मध्यमपुरुष:	हसिष्यसि	हसिष्यथ:	हसिष्यथ
उत्तमपुरुष:	हसिष्यामि	हसिष्याव:	हसिष्याम:

खाद् धातु:, लट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादति	खादत:	खादन्ति
मध्यमपुरुष:	खादसि	खादत:	खादथ
उत्तमपुरुष:	खादामि	खादाव:	खादाम:

खाद् धातु:, लोट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादतु	खादताम्	खादन्तु
मध्यमपुरुष:	खाद	खादतम्	खादत
उत्तमपुरुष:	खादानि	खादाव	खादाम

खाद् धातु:, लृट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादिष्यति	खादिष्यत:	खादिष्यन्ति
मध्यमपुरुष:	खादिष्यसि	खादिष्यथ:	खादिष्यथ
उत्तमपुरुष:	खादिष्यामि	खादिष्याव:	खादिष्याम:

संख्यालेखनम्

3. अभ्यासार्थं संख्या-

1	एक:, एका, एकम्	11	एकादश	21	एकविंशति:
2	द्वौ, द्वे, द्वे	12	द्वादश	22	द्वाविंशति:
3	त्रय:, तिस्र:, त्रीणि	13	त्रयोदश	23	त्रयोविंशति:

4	चत्वार:, चतस्र:, चत्वारि	14	चतुर्दश	24	चतुर्विंशति:
5	पञ्च	15	पञ्चदश	25	पञ्चविंशति:
6	षट्	16	षोडश	26	षड्विंशति:
7	सप्त	17	सप्तदश	27	सप्तविंशति:
8	अष्ट	18	अष्टादश	28	अष्टाविंशति:
9	नव	19	नवदश	29	नवविंशति:
10	दश	20	विंशति:	30	त्रिंशत्

4 10 पुलिङ्ग शब्द के चित्र, 10 स्त्रीलिङ्ग शब्द के चित्र, 10 नपुंसकलिङ्ग के चित्र बनाकर उनके नाम लिखिए ।

5 पाठ एक और दो के सभी पाठों के अभ्यासों को पुन: लिखें ।

नोट: सम्पूर्ण कार्य को याद करें

अध्याय 1 - शब्द परिचयः 1

Question 1:

(क) उच्चारणं कुरुत।

छात्रः	गजः	घटः
शिक्षकः	मकरः	दीपकः
मयूरः	बिडालः	अश्वः
शुकः	मूषकः	चन्द्रः
बालकः	चालकः	गायकः

(खचित्राणि दृष्ट्वा पदानि उच्चारयत। (

कृषकः

वृषभः

भल्लूकः

मण्डूकः

कपोतः

पर्यङ्कः

दूरभाषः

काकः

सौचिकः

Question 2:

(क) वर्णसंयोजनेन पदं लिखत-

यथा-

च् अ + ष् + अ + क् + अः +	=	**चषकः**
स् औ + च् + इ + क् + अः +	=	**सौचिकः**
श् उ + न् + अ + क् + औ +	=	**शुनकौ**
ध् आ + व् + अ + त् + अः +	=	**धावतः**
व् ऋ + द् + ध् + आः +	=	**वृद्धाः**
ग् आ + य्+ अ + न् + त् + इ +	=	**गायन्ति**

(ख-पदानां वर्णविच्छेदं प्रदर्शयत (

यथाल्+अ+घ्+उः - = लघु:

सीव्यति	=	स् + ई + व् + य् + अ + त् इ +
वर्णाः	=	व् अ + र् + ण् + आः +
कुक्कुरौ	=	क् उ + क् + क् + उ + र् + औ +
मयूराः	=	म् अ + य् + ऊ + र् + आः +
बालकः	=	ब् + आ + ल् + अ + क् अः +

Question 3:

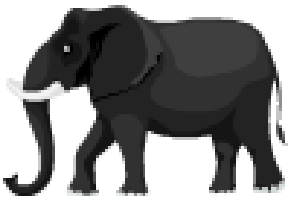
उदाहरणं दृष्ट्वा रिक्तस्थानानि पूरयत-

यथा-

चषकः	चषकौ	चषकाः
बलीवर्दः	बलीवर्दौ	बलीवर्दाः
शुनकः	शुनकौ	शुनकाः
मृगः	मृगौ	मृगाः
सौचिकः	सौचिकौ	सौचिकाः
मयूरः	मयूरौ	मयूराः

Question 4:

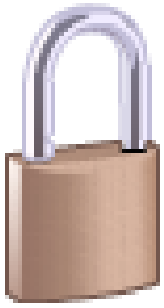
चित्राणि दृष्ट्वा संस्कृतपदानि लिखत-



गजः

काकः.

चन्द्रः



तालः

भल्लुकः

बिडालः

Question 5:

चित्रं दृष्टवा उत्तरं लिखत-

यथाबालकः - किं करोति? बालकः पठति।	
अश्वौ किं कुरुतः? अश्वौ धावतः।	
कुक्कुराः किं कुर्वन्ति? कुक्कुराः बुक्कन्ति।	
छात्रौ किं कुरुतः? छात्रौ गायतः।	
कृषकः किं करोति ? कृषकः क्षेत्र कर्षति।	
गजौ किं कुरुतः? गजौ चलतः	

Question 6:

पदानि संयोज्य वाक्यानि रचयत-

गजाः	-	नृत्यन्ति
सिंहौ	-	गायति
गायकः	-	पठतः
बालकौ	-	चलन्ति
मयूराः	-	गर्जतः

ANSWER:

गजाः	-	चलन्ति
सिंहौ	-	गर्जतः
गायकः	-	गायति
बालकौ	-	पठतः
मयूराः	-	नृत्यन्ति

Question 7:

मञ्जूषातः पदं चित्वा रिक्तस्थानानि पूरयत-

नृत्यन्ति	गर्जतः	धावति	चलतः	फलन्ति	खादति

(क(मयूराः नृत्यन्ति। (घ(सिंहौ गर्जतः।

(ख(गजौ चलतः। (ङ(वानरः खादति।

(ग(वृक्षाः फलन्ति। (च(अश्वः धावति।

Question 8:

सः, तौ, ते इत्येतेभ्यः उचितं सर्वनामपदं चित्वा रिक्तस्थानानि पूरयत-

(क(गजाः चलन्ति। – ते चलन्तिः।

(ख(छात्रौ पठतः। – तौ पठतः।

(ग(वानराः क्रीडन्ति। – ते क्रीडन्ति।

(घ(गायकः गायति। – सः गायति।

(ङ(मयूराः नृत्यन्ति। – ते नृत्यन्ति।

. अध्याय 2 - शब्द परिचयः 2

Question 1:

(क) उच्चारणं कुरुत ।

छात्रा	लता	प्रयोगशाला	लेखिका
शिक्षिका	पेटिका	माला	सेविका
नौका	छुरिका	कलिका	गायिका

(खचित्राणि दृष्ट्वा पदानि उच्चारयत। (

सूचिका

पिपीलिका

कुञ्चिका

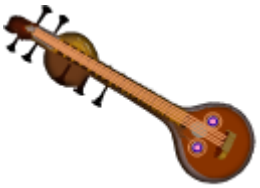
द्विचक्रिका

उत्पीठिका

मक्षिका

अग्निपेटिका

मापिका



वीणा

Question 2:

(क) वर्णसंयोजनं कृत्वा पदं कोष्ठके लिखत-

यथा-

वर्णसंयोजनं कृत्वा पदं कोष्ठके लिखत-

क् उ + र् + उ + त् + अः + = करुतः

उ द् + य् + आ + न् + ए +	=	उद्याने
स्थ् + आ + ल् + इ + क् + आ +	=	स्थालिका
घ् अ + ट् + इ + क् + आ +	=	घटिका
स् त् + र् + ई + ल् + इ + ङ् + ग् + अः +	=	स्त्रीलिंगः
म् आ + प् + इ + क् + आ +	=	मापिका

(ख-पदानां वर्णविच्छेदं प्रदर्शयत (

यथाकोकिले= क् + ओ + क् + इ + ल् + ए -

चटके	=	च् अ + ट् + अ + क् + ए +
धाविकाः	=	ध आ + व् + इ + क् + आः +
कुञ्चिका	=	क् उ + ञ् + च् + इ + क् + आ +
खट्वा	=	ख् अ + ट् + व् + आ +
छुरिका	=	छ् उ + र् + इ + क् + आ +

Question 3:

चित्रं दृष्ट्वा संस्कृतपदं लिखत-

उत्पीठिका

पेटिका

नौका

चटका

महिला

मापिका

Question 4:

वचनानुसारं रिक्तस्थानानि पूरयत-

एकवचनम्	**द्विचनम्**	**बहुवचनम्**
यथालता -	लते	लताः
गीता	गीते	गीताः
पेटिका	पेटिके	पेटिकाः
खट्वा	खट्वे	खट्वाः
सा	ते	ताः
रोटिका	रोटिके	रोटिकाः

Question 5:

कोष्ठकात् उचितं शब्दं चित्वा वाक्यं पूरयत-

यथा- **बालिका** पठित। (बालिका/बालिकाः)

(क) अजेः चरतः। (अजाः/अजे)

(ख) द्विचक्रिका सन्ति। (द्विचक्रिके/द्विचक्रिकाः)

(ग) नौका चलति। (नौके/नौका)

(घ) सूचिका अस्ति। (सूचिके/सूचिका)

(ङ) मक्षिकाः उत्पतन्ति। (मक्षिकाः/मक्षिके)

Question 6:

सा, ते, ताः इत्येतेभ्यः उचितं सर्वनामपदं चित्वा रिक्तस्थानानि पूरयत-

यथा-	अश्वः धावति।	–	**सा** अस्ति।
(क(	महिलाः धावन्ति।	–	ताः धावन्ति।
(ख(	सुधा वदति।	–	सा वदति।
(ग(	जवनिके दोलतः।	–	ते दोलतः।
(घ(	पिपीलिकाः चलन्ति।	–	ताः चलन्ति।
(ङ(	चटके कूजतः।	–	ते कूजतः।

Question 7:

मञ्जूषातः कर्तृपदं चित्वा रिक्तस्थानानि पूरयत-

लेखिका	बालकः	सिंहाः	त्रिचक्रिका	पुष्पमालाः

(क(पुष्पमालाः सन्ति।

(ख(बालकः पश्यति।

(ग(लेखिका लिखति।

(घ(सिंहाः गर्जन्ति।

(ङ(त्रिचक्रिका चलति।

Question 8:

मञ्जूषातः कर्तृपदानुसारं क्रियापदं चित्वा रिक्तस्थानानि पूरयत-

गायतः	नृत्यति	लिखन्ति	पश्यन्ति	विहरतः

(क) सौम्या नृत्यति ।

(ख) चटके विहरतः ।

(ग) बालिके गायतः ।

(घ) छात्राः लिखन्ति ।

(ङ) जनाः पश्यन्ति ।

ग्रीष्मकालीन अवकाश कार्यम् MAY 2022

कक्षा - सप्तमी

शब्दरूपाणि

1. स्मरणार्थं शब्दरूपाणि- (अकारान्तपुलिङ्ग -उकारान्तपुलिङ्गआकारान्तस्त्रीलिङ्ग-)

अकारान्त-पुलिङ्ग: (बालक)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	बालक:	बालकौ	बालका:

द्वितीया	बालकम्	बालकौ	बालकान्
तृतीया	बालकेन	बालकाभ्याम्	बालकै:
चतुर्थी	बालकाय	बालकाभ्याम्	बालकेभ्य:
पञ्चमी	बालकात्	बालकाभ्याम्	बालकेभ्य:
षष्ठी	बालकस्य	बालकयो:	बालकानाम्
सप्तमी	बालके	बालकयो:	बालकेषु
अष्टमी	हे बालक !	हे बालकौ !	हे बालका: !

अकारान्त-पुलिङ्ग: (नायक)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	नायक:	नायकौ	नायका:
द्वितीया	नायकम्	नायकौ	नायकान्
तृतीया	नायकेन	नायकाभ्याम्	नायकै:
चतुर्थी	नायकाय	नायकाभ्याम्	नायकेभ्य:
पञ्चमी	नायकात्	नायकाभ्याम्	नायकेभ्य:
षष्ठी	नायकस्य	नायकयो:	नायकानाम्
सप्तमी	नायके	नायकयो:	नायकेषु
अष्टमी	हे नायक !	हे नायकौ !	हे नायका: !

उकारान्त-पुलिङ्ग: (भानु)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	भानु:	भानू	भानव:
द्वितीया	भानुम्	भानू	भानून्
तृतीया	भानुना	भानुभ्याम्	भानुभि:
चतुर्थी	भानवे	भानुभ्याम्	भानुभ्य:
पञ्चमी	भानो:	भानुभ्याम्	भानुभ्य:
षष्ठी	भानो:	भान्वो:	भानूनाम्
सप्तमी	भानौ	भान्वो:	भानुषु
अष्टमी	हे भानो !	हे भानू !	हे भानव: !

उकारान्त-पुलिङ्ग: (साधु)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	साधु:	साधू	साधव:
द्वितीया	साधुम्	साधू	साधून्
तृतीया	साधुना	साधुभ्याम्	साधुभि:
चतुर्थी	साधवे	साधुभ्याम्	साधुभ्य:
पञ्चमी	साधो:	भानुभ्याम्	भानुभ्य:
षष्ठी	साधो:	साध्वो:	साधूनाम्
सप्तमी	साधौ	साध्वो:	साधुषु
अष्टमी	हे साधो !	हे साधू !	हे साधव: !

आकारन्त-स्त्रीलिङ्ग: (बालिका)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	बालिका	बालिके	बालिका:
द्वितीया	बालिकाम्	बालिके	बालिका:
तृतीया	बालिकया	बालिकाभ्याम्	बालिकाभि:
चतुर्थी	बालिकायै	बालिकाभ्याम्	बालिकाभ्य:
पञ्चमी	बालिकाया:	बालिकाभ्याम्	बालिकाभ्य:
षष्ठी	बालिकाया:	बालिकयो:	बालिकानाम्
सप्तमी	बालिकायाम्	बालिकयो:	बालिकासु
अष्टमी	हे बालिके !	हे बालिके !	हे बालिका: !

आकारन्त-स्त्रीलिङ्ग: (लता)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	लता	लते	लता:
द्वितीया	लताम्	लते	लता:
तृतीया	लतया	लताभ्याम्	लताभि:
चतुर्थी	लतायै	लताभ्याम्	लताभ्य:
पञ्चमी	लताया:	लताभ्याम्	लताभ्य:
षष्ठी	लताया:	लतयो:	लतानाम्
सप्तमी	लतायाम्	लतयो:	लतासु
अष्टमी	हे लते !	हे लते !	हे लता: !

धातुरूपाणि

2. स्मरणार्थं धातुरूपाणि- (लट् , लृट् , लोट्)

हस् धातुः, लट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	हसति	हसतः	हसन्ति
मध्यमपुरुषः	हससि	हसथः	हसथ
उत्तमपुरुषः	हसामि	हसावः	हसामः

हस् धातुः, लोट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	हसतु	हसताम्	हसन्तु
मध्यमपुरुषः	हस	हसतम्	हसत
उत्तमपुरुषः	हसानि	हसाव	हसाम

हस् धातुः, लृट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	हसिष्यति	हसिष्यतः	हसिष्यन्ति
मध्यमपुरुषः	हसिष्यसि	हसिष्यथः	हसिष्यथ
उत्तमपुरुषः	हसिष्यामि	हसिष्यावः	हसिष्यामः

खाद् धातुः, लट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	खादति	खादतः	खादन्ति
मध्यमपुरुषः	खादसि	खादतः	खादथ
उत्तमपुरुषः	खादामि	खादावः	खादामः

खाद् धातुः, लोट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	खादतु	खादताम्	खादन्तु
मध्यमपुरुषः	खाद	खादतम्	खादत
उत्तमपुरुषः	खादानि	खादाव	खादाम

खाद् धातुः, लृट् लकारः

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुषः	खादिष्यति	खादिष्यतः	खादिष्यन्ति
मध्यमपुरुषः	खादिष्यसि	खादिष्यथः	खादिष्यथ
उत्तमपुरुषः	खादिष्यामि	खादिष्यावः	खादिष्यामः

संख्यालेखनम्

3. अभ्यासार्थं संख्या-

1	एकः, एका, एकम्	18	अष्टादश	35	पञ्चत्रिंशत्
2	द्वौ, द्वे, द्वे	19	नवदश	36	षड्त्रिंशत्
3	त्रयः, तिस्रः, त्रीणि	20	विंशतिः	37	सप्तत्रिंशत्
4	चत्वारः, चतस्रः, चत्वारि	21	एकविंशतिः	38	अष्टात्रिंशत्
5	पञ्च	22	द्वाविंशतिः	39	नवत्रिंशत्
6	षट्	23	त्रयोविंशतिः	40	चत्वारिंशत्
7	सप्त	24	चतुर्विंशतिः	41	एकचत्वारिंशत्
8	अष्ट	25	पञ्चविंशतिः	42	द्विचत्वारिंशत्
9	नव	26	षड्विंशतिः	43	त्रिचत्वारिंशत्
10	दश	27	सप्तविंशतिः	44	चतुश्चत्वारिंशत्
11	एकादश	28	अष्टाविंशतिः	45	पञ्चचत्वारिंशत्
12	द्वादश	29	नवविंशतिः	46	षड्चत्वारिंशत्
13	त्रयोदश	30	त्रिंशत्	47	सप्तचत्वारिंशत्
14	चतुर्दश	31	एकत्रिंशत्	48	अष्टाचत्वारिंशत्
15	पञ्चदश	32	द्वात्रिंशत्	49	नवचत्वारिंशत्
16	षोडश	33	त्रयस्त्रिंशत्	50	पञ्चाशत्
17	सप्तदश	34	चतुस्त्रिंशत्	51	एकपञ्चाशत्

पर्यायविलोमपदानां मेलनम्

4. स्मरणार्थं पर्याय-विलोम-पदानि

पर्यायपदानि

रवि:	=	सूर्य:, दिवाकर:	कथनम्	=	वचनम्
चन्द्र:	=	शशि:, रकेश:	स्वावलम्बनम्	=	आत्मनिर्भरता
वह्नि:	=	अग्नि:	भृत्य:	=	कर्मकर:
वसुन्धरा	=	पृथ्वी	प्राप्य	=	लब्ध्वा
सत्यम्	=	ऋतम्	कुशला:	=	दक्षा:
मूढ:	=	मूर्ख:	हर्षस्य	=	प्रसन्नताया:
वायु:	=	पवन:	वक्र:	=	कुटिल:
दुर्बुद्धि:	=	दुष्टबुद्धि:	वैद्यम्	=	चिकित्सकम्
कूर्म:	=	कच्छप:	वने	=	कानने, अरण्ये
ह्रदम्	=	तडागम्	पशव:	=	जन्तव:
जननी	=	माता	नयनानि	=	नेत्राणि
विलोक्य	=	दृष्ट्वा	गगने	=	आकाशे
विमले	=	निर्मले	चन्द्र:	=	निशाकर:
सूर्य:	=	दिवाकर:	अम्बुद:	=	जलद:
स्वकीयम्	=	आत्मानम्	अवरुद्ध:	=	बाधित:
कुटुम्बम्	=	परिवार:	अन्यस्य	=	परस्य
अपहाय	=	त्यक्त्वा	समृद्धम्	=	सम्पन्नम्
कष्टम्	=	दुखम्	निखिले	=	सम्पूर्णे
धरणी	=	पृथ्वी	करालम्	=	भयङ्करम्
सलिले	=	जले	विपिने	=	वने
हरिण:	=	मृग:	मन्दिर्	=	देवालये
हस्ते	=	करे	सद्य:	=	शीघ्रम्
सहसा	=	अकस्मात्	धनम्	=	द्रविणम्
धराम्	=	पृथ्वी	वसनानि	=	वस्त्राणि
तृषा	=	पिपासा	जीर्णम्	=	जर्जरम्
विपुलम्	=	अधिकम्	धरित्री	=	पृथ्वी
वैनतेय:	=	गरुड:	पुस्तके	=	ग्रन्थे
पिक:	=	कोकिल:	सलिलम्	=	जलम्
गृहम्	=	भवनम्	द्रुतम्	=	शीघ्रम्
घट:	=	कुम्भ:	बालम्	=	शिशुम्
करेण	=	हस्तेन	कुसुमम्	=	पुष्पम्

यच्छसि	=	ददासि	स्थापयित्वा	=	संस्थाप्य
वदति	=	कथयति	साम्प्रतम्	=	अधुना
शरीरम्	=	देहम्	पार्श्वे	=	निकटे
विद्यालय:	=	पाठशाला		=	

विलोमपदानि

अध:	X	उपरि	उच्चै:	X	नीचै:
अन्त:	X	बहि:	दुर्बुद्धे:	X	सुबुद्धे:
दुर्लभम्	X	सुलभम्	गगने	X	पृथिव्याम्
सुन्दर:	X	असुन्दर:	चित्वा	X	विकीर्य
दुखी	X	सुखी	सुखम्	X	दुखम्
हर्ष:	X	शोक:	बुद्धिमान्	X	मूर्ख:
गमनम्	X	आगमनम्	शत्रुताया:	X	मित्रताया:
पुरा	X	अधुना	आधुनिकम्	X	प्राचीनम्
नूतनम्	X	पुरातनम्	मानव:	X	दानव:
उदारचरितानाम्	X	लघुचेतसाम्	सुखिन:	X	दुखिन:
अपहाय	X	गृहीत्वा	मन्दम्	X	क्षिप्रम्
कठोर:	X	स्निग्धम्	अपर्याप्तम्	X	पर्याप्तम्
उन्नति:	X	अवनति:	रोदनम्	X	हसनम्
स्वीकार:	X	त्याग:	चतुर:	X	मूर्ख:
आनेतुम्	X	नेतुम्	निर्गच्छति	X	प्रविशति
स्वामी	X	सेवक:	प्रसन्न:	X	अप्रसन्न:
दुरे	X	निकटे, पार्श्वे	निर्धनम्	X	धनिकम्
क्षमम्	X	अक्षमम्	ग्रीष्मे	X	शीते
सरसा	X	नीरसा	सार्थक:	X	निर्थक:
कृष्ण:	X	श्वेत:	अनुक्तम्	X	उक्तम्
गच्छति	X	आगच्छति	प्रदीपस्य	X	दीपकस्य
शत्रुता	X	मित्रता	दुर्व्यवहार:	X	सद्व्यवहार:
सायम्	X	प्रात:	समर्थ:	X	असमर्थ:
उदय:	X	अस्तम्	चल:, गतिमान्	X	अचल:
अन्धकार:	X	प्रकाश:	स्थिर:	X	अस्थिर:
समादर:	X	अनादर:	आदानम्	X	प्रदानम्

परकीयम्	X	स्वीकयम्	समता	X	विषमता
व्यक्तिगतम्	X	सार्वजनिक	आरोह:	X	अवरोह:

5 पाठ एक और दो पाठों के अभ्यासों को पुन: लिखें

नोट: सम्पूर्ण कार्य को याद करें

अध्याय 1 - सुभाषितानि

Question 2:

यथायोग्यं श्लोकांशान् मेलयत-

क	ख
धनधान्यप्रयोगेषु	नासद्भिः किञ्चिदाचरेत्।
विस्मयो न हि कर्त्तव्यः	त्यक्तलज्जः सुखी भवेत्।
सत्येन धार्यते पृथ्वी	बहुरत्ना वसुन्धरा।
सद्भिर्विवादं मैत्रीं च	विद्यायाः संग्रहेषु च।
आहारे व्यवहारे च	सत्येन तपते रविः।

ANSWER:

क	ख
धनधान्यप्रयोगेषु	विद्यायाः संग्रहेषु च।
विस्मयो न हि कर्त्तव्यः	बहुरत्ना वसुन्धरा।
सत्येन धार्यते पृथ्वी	सत्येन तपते रविः।
सद्भिर्विवादं मैत्रीं च	नासद्भिः किञ्चिदाचरेत्।
आहारे व्यवहारे च	त्यक्तलज्जः सुखी भवेत्।

Question 3:

एकपदेन उत्तरत-

(क) पृथिव्यां कति रत्नानि ?
(ख) मूढैः कुत्र रत्नसंज्ञा विधीयते ?
(ग) पृथिवी केन धार्यते ?
(घ) कैः सङ्गितं कुर्वीत ?
(ङ) लोके वशीकृतिः का ?

ANSWER:
(क) पृथिव्यां त्रीणि रत्नानि ।
(ख) मूढैः पाषाणखण्डेषु रत्नसंज्ञा विधीयते ।
(ग) पृथिवी सत्येन धार्यते ।
(घ) सद्भिः सङ्गितं कुर्वीत ।
(ङ) लोके वशीकृतिः क्षमा ।

Question 4:
रेखाङ्गितपदानि अधिकृत्य प्रश्ननिर्माणं कुरुत-

(क) सत्येन वाति वायुः।
(ख) सद्भिः एव सहासीत।
(ग) वसुन्धरा बहुरत्ना भवति।
(घ) विद्यायाः संग्रहेषु त्यक्तलज्जः सुखी भवेत्।
(ङ) सद्भिः मैत्रीं कुर्वीत।

ANSWER:
(क) केन वाति वायु: ?
(ख) काभि: एव सहासीत ?
(ग) का बहुरत्ना भवति ?
(घ) कस्या: संग्रहेषु त्यक्तलज्ज: सुखी भवेत् ?
(ङ) काभिः मैत्रीं कुर्वीत ?

Question 5:

प्रश्नानामुत्तराणि लिखत-

(क) कुत्रः विस्मयः न कर्त्तव्यः?

(ख) पृथिव्यां त्रीणि रत्नानि कानि?

(ग) त्यक्तलज्जः कुत्र सुखी भवेत्?

ANSWER:

(क) बहुरत्ना वसुन्धरा इति विस्मयः न कर्त्तव्यः।

(ख) पृथिव्यां त्रीणि रत्नानि जलमन्नं सुभाषितम् सन्ति।

(ग) त्यक्तलज्जः आहारे व्यवहारे च सुखी भवेत्।

Question 6:

मञ्जूषातः पदानि चित्वा लिङ्गानुसारं लिखत-

रत्नानि	वसुन्धरा	सत्येन	सुखी	अन्नम्	वह्निः	रविः	पृथ्वी	सङ्गतिम्

पुँल्लिङ्गम्	स्त्रीलिङ्गम्	नपुसंकलिङ्गम्
.....	.....	.....
.....	.....	.....
.....	.....	.....

ANSWER:

पुँल्लिङ्गम्	स्त्रीलिङ्गम्	नपुंसकलिङ्गम्
सत्येन	वसुन्धरा	रत्नानि
रवि	पृथ्वी	सुखी
अन्नम्	वह्निः	सङ्गतिम्

Question 7:

अधोलिखितपदेषु धातवः के सन्ति?

पदम्	**धातुः**
करोति	.....
पश्य	.....
भवेत्	.....
तिष्ठति	.....

ANSWER:

पदम्	**धातुः**
कर्त्तव्य:	कृ
पश्य	दृश्
भवेत्	भू
स्थित:	स्था

अध्याय 2 - दुर्बुद्धि विनश्यति

Question 2:

एकपदेन उत्तरत-

(क) कूर्मस्य किं नाम आसीत्?

(ख) सरस्तीरे के आगच्छन्?

(ग) कूर्मः केन मार्गेण अन्यत्र गन्तुम् इच्छति?

(घ) लम्बमानं कूर्मं दृष्ट्वा के अधावन्?

ANSWER:

(क) कूर्मस्य कम्बुग्रीवः नाम आसीत् ।

(ख) सरस्तीरे धीवराः आगच्छन्।

(ग) कूर्मः आकाशमार्गेण मार्गेण अन्यत्र गन्तुम् इच्छति।

(घ) लम्बमानं कूर्मं दृष्ट्वा पौराः अधावन्।

Question 3:

अधोलिखितवाक्यानि कः कं प्रति कथयति इति लिखत-

	कः कथयति	कं प्रति कथयति
यथा- **प्रातः यद् उचितं तत्कर्त्तव्यम्**	**हंसौ**	**कूर्मं प्रति**
(क) अहं भवद्भ्यां सह आकाशमार्गेण गन्तुम् इच्छामि।	कूर्मः	हंसौ प्रति
(ख) अत्र कः उपायः?	हंसौ	कूर्मम् प्रति
(ग) अहम् उत्तरं न दास्यामि।	कूर्मः	हंसौ प्रति
(घ) यूयं भस्म खादत।	कूर्मः	पौरान् प्रति

Question 4:

मञ्जूषातः क्रियापदं चित्वा वाक्यानि पूरयत-

अभिनन्दति भक्षयिष्यामः इच्छामि वदिष्यामि उड्डीयते प्रतिवसित स्म

(क) हंसाभ्यां सह कूर्मोऽपि ..... **उड्डीयते**..... ।

(ख) अहं किञ्चिदपि न ..... **वदिष्यामि**..... ।

(ग) यः हितकामानां सुहृदां वाक्यं न ..... **अभिनन्दति**..... ।

(घ) एकः कूर्मः अपि तत्रैव ..... **प्रतिवसित स्म**..... ।

(ङ) अहम् आकाशमार्गेण अन्यत्र गन्तुम् ..... **इच्छामि**..... ।

(च) वयं गृहं नीत्वा कूर्मं ..... **भक्षयिष्यामः**..... ।

Question 5:

पूर्णवाक्येन उत्तरत-

(क) कच्छपः कुत्र गन्तुम् इच्छति?

(ख) कच्छपः कम् उपायं वदति?

(ग) लम्बमानं कूर्मं दृष्ट्वा गोपालकाः किम् अवदन्?

(घ) कूर्मः मित्रयोः वचनं विस्मृत्य किम् अवदत्?

ANSWER:

(क) कच्छप: हंसाभ्यां सह आकाशमार्गेण अन्यत्र स्थाने गन्तुम् इच्छति।

(ख) कच्छप: उपायं वदति "युवां काष्ठदण्डम् एकं चञ्चवा धारयतम्। अहं काष्ठदण्डमध्ये अवलंम्ब्य युवयोः पक्षबलेन सुखेन गमिष्यामि।"

(ग) लम्बमानं कूर्मं दृष्ट्वा पौरा: अवदन् "हं हो! महदाश्चर्यम्। हंसाभ्यां सह कूर्मोऽपि उड्डीयते।"

(घ) कूर्म: मित्रयो: वचनं विस्मृत्य अवदत् "यूयं भस्म खादत"।

Question 6:

घटनाक्रमानुसारं वाक्यानि लिखत-

(क) कूर्मः हंसयोः सहायता आकाशमार्गेण अगच्छत्।

(ख) पौरा: अकथयन्-वयं पतितं कूर्मं खादिष्यामः।

(ग) कूर्मः हंसौ च एकस्मिन् सरसि निवसन्ति स्म।

(घ) केचित् धीवराः सरस्तीरे आगच्छन्।

(ङ) कूर्मः अन्यत्र गन्तुम् इच्छति स्म।

(च) लम्बमानं कूर्मं दृष्ट्वा पौरा: अधावन्।

(छ) कूर्मः आकाशात् पतितः पौरैः मारितश्च।

(ज) 'वयं श्वः मत्स्यकूर्मादीन् मारयिष्यामः' इति धीवराः अकथयन्।

ANSWER:

(ग) कूर्मः हंसौ च एकस्मिन् सरसि निवसन्ति स्म।

(घ) केचित् धीवराः सरस्तीरे आगच्छन्।

(ज) 'वयं श्वः मत्स्यकूर्मादीन् मारयिष्यामः' इति धीवराः अकथयन्।

(ङ) कूर्मः अन्यत्र गन्तुम् इच्छति स्म।

(क) कूर्मः हंसयोः सहायतया आकाशमार्गेण अगच्छत्।

(च) लम्बमानं कूर्मं दृष्ट्वा पौराः अधावन्।

(ख) पौराः अकथयन् – वयं पतितं कूर्मं खादिष्यामः।

(छ). कूर्मः आकाशात् पतितः पोरैः मारितश्च।

Question 7:

मञ्जूषातः पदानि चित्वा रिक्तस्थानानि पूरयत-

जलाशयम्	अचिन्तयत्	वृद्धः	दुःखिताः	कोटरे
वृक्षस्य	सर्पः	आदाय	समीपे	

एकस्य वृक्षस्य शाखासु अनेके काकाः वसन्ति स्म। तस्य वृक्षस्य कोटरे एकः सर्पः अपि अवसत्। काकानाम् अनुपस्थितौ सर्पः काकानां शिशून् खादति स्म। काकाः दुःखिताः आसन्। तेषु एकः वृद्धः काकः उपायम् अचिन्तयत्। वृक्षस्य समीपे जलाशयः आसीत्। तत्र एका राजकुमारी स्नातुं जलाशयम् आगच्छति स्म। शिलायां स्थितं तस्याः आभरणम् आदाय एकः काकः वृक्षस्य उपरि अस्थापयत्। राजसेवकाः काकम् अनुसृत्य वृक्षस्य समीपम् अगच्छन्। तत्र ते तं सर्पं च अमारयन् । अतः एवोक्तम्-उपायेन सर्वं सिद्धयति।

ग्रीष्मकालीन अवकाश कार्यम् MAY 2022

कक्षा -अष्टमी

शब्दरूपाणि

1. स्मरणार्थं शब्दरूपाणि- (अकारान्तपुलिङ्ग -उकारान्तपुलिङ्गआकारान्तस्त्रीलिङ्ग-)

अकारान्त-पुलिङ्ग: (बालक)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	बालक:	बालकौ	बालका:
द्वितीया	बालकम्	बालकौ	बालकान्
तृतीया	बालकेन	बालकाभ्याम्	बालकै:
चतुर्थी	बालकाय	बालकाभ्याम्	बालकेभ्य:
पञ्चमी	बालकात्	बालकाभ्याम्	बालकेभ्य:
षष्ठी	बालकस्य	बालकयो:	बालकानाम्
सप्तमी	बालके	बालकयो:	बालकेषु
अष्टमी	हे बालक !	हे बालकौ !	हे बालका: !

अकारान्त-पुलिङ्ग: (नायक)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	नायक:	नायकौ	नायका:
द्वितीया	नायकम्	नायकौ	नायकान्
तृतीया	नायकेन	नायकाभ्याम्	नायकै:
चतुर्थी	नायकाय	नायकाभ्याम्	नायकेभ्य:
पञ्चमी	नायकात्	नायकाभ्याम्	नायकेभ्य:
षष्ठी	नायकस्य	नायकयो:	नायकानाम्
सप्तमी	नायके	नायकयो:	नायकेषु
अष्टमी	हे नायक !	हे नायकौ !	हे नायका: !

तत्-पुलिङ्ग:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	स:	तौ	ते
द्वितीया	तम्	तौ	तान्
तृतीया	तेन	ताभ्याम्	तै:
चतुर्थी	तस्मै	ताभ्याम्	तेभ्य:
पञ्चमी	तस्मात्	ताभ्याम्	तेभ्य:
षष्ठी	तस्य	तयो:	तेषाम्
सप्तमी	तस्मिन्	तयो:	तेषु

तत्-स्त्रीलिङ्ग:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	सा	ते	ता:
द्वितीया	ताम्	ते	ता:
तृतीया	तया	ताभ्याम्	ताभि:
चतुर्थी	तस्यै	ताभ्याम्	ताभ्य:
पञ्चमी	तस्या:	ताभ्याम्	ताभ्य:
षष्ठी	तस्या:	तयो:	तासाम्
सप्तमी	तस्याम्	तयो:	तासु

तत्-नपुंसकलिङ्ग:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	तत्	ते	तानि
द्वितीया	तत्	ते	तानि
तृतीया	तेन	ताभ्याम्	तै:
चतुर्थी	तस्मै	ताभ्याम्	तेभ्य:
पञ्चमी	तस्मात्	ताभ्याम्	तेभ्य:
षष्ठी	तस्य	तयो:	तेषाम्
सप्तमी	तस्मिन्	तयो:	तेषु

आकारन्त-स्त्रीलिङ्ग: (बालिका)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	बालिका	बालिके	बालिका:
द्वितीया	बालिकाम्	बालिके	बालिका:
तृतीया	बालिकया	बालिकाभ्याम्	बालिकाभि:
चतुर्थी	बालिकायै	बालिकाभ्याम्	बालिकाभ्य:
पञ्चमी	बालिकाया:	बालिकाभ्याम्	बालिकाभ्य:
षष्ठी	बालिकाया:	बालिकयो:	बालिकानाम्
सप्तमी	बालिकायाम्	बालिकयो:	बालिकासु
अष्टमी	हे बालिके !	हे बालिके !	हे बालिका: !

आकारन्त-स्त्रीलिङ्ग: (लता)

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमा	लता	लते	लता:
द्वितीया	लताम्	लते	लता:
तृतीया	लतया	लताभ्याम्	लताभि:
चतुर्थी	लतायै	लताभ्याम्	लताभ्य:
पञ्चमी	लताया:	लताभ्याम्	लताभ्य:
षष्ठी	लताया:	लतयो:	लतानाम्
सप्तमी	लतायाम्	लतयो:	लतासु
अष्टमी	हे लते !	हे लते !	हे लता: !

धातुरूपाणि

2. स्मरणार्थं धातुरूपाणि- (लट् , लृट् , लोट् , लङ्)

हस् धातु:, लट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	हसति	हसत:	हसन्ति
मध्यमपुरुष:	हससि	हसथ:	हसथ
उत्तमपुरुष:	हसामि	हसाव:	हसाम:

हस् धातु:, लोट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्

प्रथमपुरुष:	हसतु	हसताम्	हसन्तु
मध्यमपुरुष:	हस	हसतम्	हसत
उत्तमपुरुष:	हसानि	हसाव	हसाम

हस् धातु:, लृट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	हसिष्यति	हसिष्यत:	हसिष्यन्ति
मध्यमपुरुष:	हसिष्यसि	हसिष्यथ:	हसिष्यथ
उत्तमपुरुष:	हसिष्यामि	हसिष्याव:	हसिष्याम:

हस् धातु:, लङ् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	अहसत्	अहसताम्	अहसन्
मध्यमपुरुष:	अहस:	अहसतम्	अहसत
उत्तमपुरुष:	अहसम्	अहसाव:	अहसाम:

खाद् धातु:, लट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादति	खादत:	खादन्ति
मध्यमपुरुष:	खादसि	खादत:	खादथ
उत्तमपुरुष:	खादामि	खादाव:	खादाम:

खाद् धातु:, लोट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादतु	खादताम्	खादन्तु
मध्यमपुरुष:	खाद	खादतम्	खादत
उत्तमपुरुष:	खादानि	खादाव	खादाम

खाद् धातु:, लृट् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	खादिष्यति	खादिष्यत:	खादिष्यन्ति
मध्यमपुरुष:	खादिष्यसि	खादिष्यथ:	खादिष्यथ
उत्तमपुरुष:	खादिष्यामि	खादिष्याव:	खादिष्याम:

खाद् धातु:, लङ् लकार:

	एकवचनम्	द्विवचनम्	बहुवचनम्
प्रथमपुरुष:	अखादत्	अखादताम्	अखादन्
मध्यमपुरुष:	अखाद:	अखादतम्	अखादत
उत्तमपुरुष:	अखादम्	अखादाव:	अखादाम:

संख्यालेखनम्

3. अभ्यासार्थं संख्या-

1	एक:, एका, एकम्	18	अष्टादश	35	पञ्चत्रिंशत्
2	द्वौ, द्वे, द्वे	19	नवदश	36	षड्त्रिंशत्
3	त्रय:, तिस्र:, त्रीणि	20	विंशति:	37	सप्तत्रिंशत्
4	चत्वार:, चतस्र:, चत्वारि	21	एकविंशति:	38	अष्टात्रिंशत्
5	पञ्च	22	द्वाविंशति:	39	नवत्रिंशत्
6	षट्	23	त्रयोविंशति:	40	चत्वारिंशत्
7	सप्त	24	चतुर्विंशति:	41	एकचत्वारिंशत्
8	अष्ट	25	पञ्चविंशति:	42	द्विचत्वारिंशत्
9	नव	26	षड्विंशति:	43	त्रिचत्वारिंशत्
10	दश	27	सप्तविंशति:	44	चतुश्चत्वारिंशत्
11	एकादश	28	अष्टाविंशति:	45	पञ्चचत्वारिंशत्
12	द्वादश	29	नवविंशति:	46	षड्चत्वारिंशत्
13	त्रयोदश	30	त्रिंशत्	47	सप्तचत्वारिंशत्
14	चतुर्दश	31	एकत्रिंशत्	48	अष्टाचत्वारिंशत्
15	पञ्चदश	32	द्वात्रिंशत्	49	नवचत्वारिंशत्
16	षोडश	33	त्रयस्त्रिंशत्	50	पञ्चाशत्
17	सप्तदश	34	चतुस्त्रिंशत्	51	एकपञ्चाशत्

अपनी पाठ्य पुस्तक के पीछे के पेजों से देखकर संख्याओं को 100 तक पूर्ण करें ।

पर्यायविलोमपदानां मेलनम्/

4. स्मरणार्थं पर्याय-विलोम-पदानि

पर्यायपदानि

रवि:	=	सूर्य:, दिवाकर:	कथनम्	=	वचनम्
चन्द्र:	=	शशि:, रकेश:	स्वावलम्बनम्	=	आत्मनिर्भरता
वह्नि:	=	अग्नि:	भृत्य:	=	कर्मकर:
वसुन्धरा	=	पृथ्वी	प्राप्य	=	लब्ध्वा
सत्यम्	=	ऋतम्	कुशला:	=	दक्षा:
मूढ:	=	मूर्ख:	हर्षस्य	=	प्रसन्नताया:
वायु:	=	पवन:	वक्र:	=	कुटिल:
दुर्बुद्धि:	=	दुष्टबुद्धि:	वैद्यम्	=	चिकित्सकम्
कूर्म:	=	कच्छप:	वने	=	कानने, अरण्ये
ह्रदम्	=	तडागम्	पशव:	=	जन्तव:
जननी	=	माता	नयनानि	=	नेत्राणि
विलोक्य	=	दृष्ट्वा	गगने	=	आकाशे
विमले	=	निर्मले	चन्द्र:	=	निशाकर:
सूर्य:	=	दिवाकर:	अम्बुद:	=	जलद:
स्वकीयम्	=	आत्मानम्	अवरुद्ध:	=	बाधित:
कुटुम्बम्	=	परिवार:	अन्यस्य	=	परस्य
अपहाय	=	त्यक्त्वा	समृद्धम्	=	सम्पन्नम्
कष्टम्	=	दुखम्	निखिले	=	सम्पूर्णे
धरणी	=	पृथ्वी	करालम्	=	भयङ्करम्
सलिले	=	जले	विपिने	=	वने
हरिण:	=	मृग:	मन्दिर्	=	देवालये
हस्ते	=	करे	सद्य:	=	शीघ्रम्
सहसा	=	अकस्मात्	धनम्	=	द्रविणम्
धराम्	=	पृथ्वी	वसनानि	=	वस्त्राणि
तृषा	=	पिपासा	जीर्णम्	=	जर्जरम्
विपुलम्	=	अधिकम्	धरित्री	=	पृथ्वी
वैनतेय:	=	गरुड:	पुस्तके	=	ग्रन्थे
पिक:	=	कोकिल:	सलिलम्	=	जलम्
गृहम्	=	भवनम्	द्रुतम्	=	शीघ्रम्
घट:	=	कुम्भ:	बालम्	=	शिशुम्
करेण	=	हस्तेन	कुसुमम्	=	पुष्पम्

यच्छसि	=	ददासि	स्थापयित्वा	=	संस्थाप्य
वदति	=	कथयति	साम्प्रतम्	=	अधुना
शरीरम्	=	देहम्	पार्श्वे	=	निकटे
विद्यालय:	=	पाठशाला			

विलोमपदानि

अध:	X	उपरि	उच्चै:	X	नीचै:
अन्त:	X	बहि:	दुर्बुद्धे:	X	सुबुद्धे:
दुर्लभम्	X	सुलभम्	गगने	X	पृथिव्याम्
सुन्दर:	X	असुन्दर:	चित्वा	X	विकीर्य
दुखी	X	सुखी	सुखम्	X	दुखम्
हर्ष:	X	शोक:	बुद्धिमान्	X	मूर्ख:
गमनम्	X	आगमनम्	शत्रुताया:	X	मित्रताया:
पुरा	X	अधुना	आधुनिकम्	X	प्राचीनम्
नूतनम्	X	पुरातनम्	मानव:	X	दानव:
उदारचरितानाम्	X	लघुचेतसाम्	सुखिन:	X	दुखिन:
अपहाय	X	गृहीत्वा	मन्दम्	X	क्षिप्रम्
कठोर:	X	स्निग्धम्	अपर्याप्तम्	X	पर्याप्तम्
उन्नति:	X	अवनति:	रोदनम्	X	हसनम्
स्वीकार:	X	त्याग:	चतुर:	X	मूर्ख:
आनेतुम्	X	नेतुम्	निर्गच्छति	X	प्रविशति
स्वामी	X	सेवक:	प्रसन्न:	X	अप्रसन्न:
दुरे	X	निकटे, पार्श्वे	निर्धनम्	X	धनिकम्
क्षमम्	X	अक्षमम्	ग्रीष्मे	X	शीते
सरसा	X	नीरसा	सार्थक:	X	निर्थक:
कृष्ण:	X	श्वेत:	अनुक्तम्	X	उक्तम्
गच्छति	X	आगच्छति	प्रदीपस्य	X	दीपकस्य
शत्रुता	X	मित्रता	दुर्व्यवहार:	X	सद्व्यवहार:
सायम्	X	प्रात:	समर्थ:	X	असमर्थ:
उदय:	X	अस्तम्	चल:, गतिमान्	X	अचल:
अन्धकार:	X	प्रकाश:	स्थिर:	X	अस्थिर:

समादर:	X	अनादर:	आदानम्	X	प्रदानम्
परकीयम्	X	स्वीकयम्	समता	X	विषमता
व्यक्तिगतम्	X	सार्वजनिक	आरोह:	X	अवरोह:

5 पाठ एक और दो सभी पाठों के अभ्यासों को पुन: लिखें

नोट: सम्पूर्ण कार्य को याद करें

अध्याय 1 – सुभाषितानि

Question 2:

श्लोकांशेषु रिक्तस्थानानि पूरयत-

(क) समुद्रमासाद्य ----------।

(ख) ---------- वचः मधुरसूक्तरसं सृजन्ति।

(ग) तद्भभागधेयं ---------- पशूनाम्।

(घ) विद्याफलं ---------- कृपणस्य सौख्यम्।

(ङ) पौरुषं विहाय यः ..... अवलम्बते।

(च) चिन्तनीया हि विपदाम् .....प्रतिक्रियाः।

ANSWER:

(क) समुद्रमासाद्य **भवन्त्यपेया**:।

(ख) **श्रुत्वा** वचः मधुरसूक्तरसं सृजन्ति।

(ग) तद्भागधेयं **परमं** पशूनाम्।

(घ) विद्याफलं **व्यसनिनं** कृपणस्य सौख्यम्।

(ङ) पौरषं विहाय यः **दैवम्** अवलम्बते।

(च) चिन्तनीया हि विपदाम् **आदौ** प्रतिक्रियाः।

Question 3:

प्रश्नानाम् उत्तराणि एकपदेन लिखत-

(क) व्यसनिनः किं नश्यति?

(ख) कस्य यशः नश्यति?

(ग) मधुमक्षिका किं जनयति?

(घ) मधुरसूक्तरसं के सृजन्ति?

(ङ) अर्थिनः केभ्यः विमुखा न यान्ति?

ANSWER:

(क) विद्याफलम्।

(ख) लुब्धस्य

(ग) माधुर्यम्

(घ) सन्तः

(ङ) महीरुहेभ्यः

Question 4:

अधोलिखित-तद्भव-शब्दानां कृते पाठात् चित्वा संस्कृतपदानि लिखत-

यथा-कंजूस	कृपण:
कड़वा	कटुकम्
पूँछ	पुच्छ
लोभी	लुब्ध
मधुमक्खी	मधुमक्षिका
तिनका	तृणम्

Question 5:

अधोलिखितेषु वाक्येषु कर्तृपदं क्रियापदं च चित्वा लिखत-

	वाक्यानि	**कर्ता**	**क्रिया**
यथा	सन्तः मधुरसूक्तरसं सृजन्ति।	सन्तः	सृजन्ति
(क)	निर्गुणं प्राप्य भवन्ति दोषाः।	दोषाः	भवन्ति
(ख)	गुणज्ञेषु गुणाः भवन्ति।	गुणाः	भवन्ति
(ग)	मधुमक्षिका माधुर्यं जनयेत्।	मधुमक्षिका	जनयेत्
(घ)	पिशुनस्य मैत्री यशः नाशयति।	मैत्री	नाशयति
(ङ)	नद्यः समुद्रमासाद्य अपेयाः भवन्ति।	नद्यः	भवन्ति

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Question 6:

रेखाङ्कितानि पदानि आधृत्य प्रश्ननिर्माणं कुरुत–

(क) गुणाः गुणज्ञेषु गुणाः भवन्ति।

(ख) नद्यः सुस्वादुतोयाः भवन्ति।

(ग) लुब्धस्य यशः नश्यति।

(घ) मधुमक्षिका माधुर्यमेव जनयति।

(ङ) तस्य मूर्ध्नि तिष्ठन्ति वायसाः।

ANSWER:

(क) गुणज्ञेषु किं गुणाः भवन्ति?
(ख) सुस्वादुतोयाः कासां भवन्ति?
(ग) कस्य यशः नश्यति?
(घ) का माधुर्यमेव जनयति?
(ङ) तस्य कुत्र तिष्ठन्ति वायसाः?

Question 7:

उदाहरणानुसारं पदानि पृथक् कुरुत–

यथा-समुद्रमासाद्य	–	समुद्रम्	+	आसाद्य
माधुर्यमेव	–	----------	+	----------
अल्पमेव	–	----------	+	----------
सर्वमेव	–	----------	+	----------
दैवमेव	–	----------	+	----------
महात्मनामुक्तिः	–	----------	+	----------
विपदामादावेव	–	----------	+	----------

ANSWER:

माधुर्यम् + एव
अल्पम् + एव
सर्वम् + एव
दैवम् + एव
महात्मनाम् + उक्तिः
विपदाम् + आदौ + एव

अध्याय 2 - विलस्य वाणी न कदापि मे श्रुता

Question 2:

एकपदेन उत्तरं लिखत-

(क) सिंहस्य नाम किम्?

(ख) गुहाया: स्वामी क: आसीत्?

(ग) सिंह: कस्मिन् समये गुहाया: समीपे आगत:?

(घ) हस्तपादादिका: क्रिया: केषां न प्रवर्तन्ते?

(ङ) गुहा केन प्रतिध्वनिता?

ANSWER:

(क) खरनखर:।

(ख) दधिपुच्छ: शृगाल:।

(ग) सूर्यास्तसमये।

(घ) भयसन्त्रस्तमनसाम्

(ङ) सिंहस्य गर्जनेन

Question 3:

पूर्णवाक्येन उत्तरत-

(क) खरनखरः कुत्र प्रतिवसति स्म?

(ख) महतीं गुहां दृष्ट्वा सिहः किम् अचिन्तयत्?

(ग) शृगालः किम् अचिन्तयत्?

(घ) शृगालः कुत्र पलायितः?

(ङ) गुहासमीपमागत्य शृगालः किं पश्यति?

(च) कः शोभते?

ANSWER:

(क) खरनखर: वने प्रतिवसति स्म।

(ख) महतीं गुहां दृष्ट्वा सिंह: अचिन्तयत - "नूनम् एतस्यां गुहायां रात्रौ कोऽपि जीव: आगच्छति। अत: अत्रैव निगूढ़ो भूत्वा तिष्ठामि।"

(ग) शृगाल: अचिन्तयत् - "अहो विनष्टोऽस्मि। नूनम् अस्मिन् बिले सिंह: अस्तीति तर्कयामि। तत् किं करवाणि?"

(घ) शृगाल: गुहाया: दूरं पलायित:।

(ङ) गहुासमीपमागत्य शृगालः पश्यति यत् सिंहस्य-पदपद्धतिः गहुायां प्रविष्टा दृश्यते, न च बहिरागता ।

(च) यः अनागतं करोति स: शोभते ।

Question 4:

रेखांकितपदानि आधृत्य प्रश्ननिर्माणं कुरुत-

(क) क्षुधार्तः सिंहः कुत्रापि आहारं न प्राप्तवान्?

(ख) दधिपुच्छः नाम शृगालः गुहायाः स्वामी आसीत्?

(ग) एषा गुहा स्वामिनः सदा आह्वानं करोति?

(घ) भयसन्त्रस्तमनसां हस्तपादादिकाः क्रियाः न प्रवर्तन्ते?

(ङ) आह्वानेन शृगालः बिले प्रविश्य सिंहस्य भोज्यं भविष्यति?

ANSWER:

(क) कीदृशः सिंहः कुत्रापि आहारं न प्राप्तवान्?

(ख) किं नाम शृगालः गुहायाः स्वामी आसीत्?

(ग) एषा गुहा कस्य सदा आह्वानं करोति?

(घ) भयसन्त्रस्तमनसां कीदृशाः क्रियाः न प्रवर्तन्ते?

(ङ) आह्वानेन शृगालः कुत्र प्रविश्य सिंहस्य भोज्यं भविष्यति?

Question 5:

घटनाक्रमानुसारं वाक्यानि लिखत-

(क) गुहाया: स्वामी दधिपुच्छ: नाम शृगाल: समागच्छत्।

(ख) सिंह: एकां महतीं गुहाम् अपश्यत्।

(ग) परिभ्रमन् सिंह: क्षुधार्तो जात:।

(घ) दूरस्थः शृगालः रवं कर्तुमारब्धः।
(ङ) सिंहः शृगालस्य आह्वानमकरोत्।
(च) दूरं पलायमानः शृगालः श्लोकमपठत्।
(छ) गुहायां कोऽपि अस्ति इति शृगालस्य विचारः।

ANSWER:

एतानि उपयुक्त क्रमः निम्न अस्ति -
(क) परिभ्रमन् सिंहः क्षुधार्तो जातः।
(ख) सिंहः एकां महतीं गुहाम् अपश्यत्।
(ग) गुहायाः स्वामी दधिपुच्छः नाम शृगालः समागच्छत्।
(घ) गुहायां कोऽपि अस्ति इति शृगालस्य विचारः।
(ङ) दूरस्थः शृगालः रवं कर्तुमारब्धः।
(च) सिंहः शृगालस्य आह्वानमकरोत्।
(छ) दूरं पलायमानः शृगालः श्लोकमपठत्।

Question 6:

यथानिर्देशमुत्तरत-
(क) 'एकां महतीं गुहां दृष्ट्वा सः अचिन्तयत्' अस्मिन् वाक्ये कति विशेषणपदानि, संख्यया सह पदानि अपि लिखत?
(ख) तदहम् अस्य आह्वानं करोमि- अत्र 'अहम्' इति पदं कस्मै प्रयुक्तम्?
(ग) 'यदि त्वं मां न आह्वयसि' अस्मिन् वाक्ये कर्तृपदं किम्?
(घ) 'सिंहपदपद्धतिः गुहायां प्रविष्टा दृश्यते' अस्मिन् वाक्ये क्रियापदं किम्?
(ङ) 'वनेऽत्र संस्थस्य समागता जरा' अस्मिन् वाक्ये अव्ययपदं किम्?

ANSWER:

(क) 'एकां महतीं गुहां दृष्ट्वा सः अचिन्तयत्' – अस्मिन् वाक्ये द्वे विशेषणपदे स्तः।
तद्यथा – १. एकाम् इति प्रथमं विशेषणपदम्, २. महतीम् इति च द्वितीयं विशेषणपदम्।
(ख) तदहम् अस्य आह्वानं करोमि – अत्र 'अहम्' इति पदं सिंहाय प्रयुक्तम्।
(ग) 'यदि त्वं मां न आह्वयसि' अस्मिन् वाक्ये 'त्वम्' इति कर्तृपदम्।
(घ) 'सिंहपदपद्धतिः गुहायां प्रविष्टा दृश्यते' – अस्मिन् वाक्ये 'दृश्यते' इति क्रियापदम्।
(ङ) 'वनेऽत्र संस्थस्य समागता जरा' अस्मिन् वाक्ये अव्ययपदं भवति 'अत्र' इति।

Question 7:

मञ्जूषातः अव्ययपदानि चित्वा रिक्तस्थानानि पूरयत-

कश्चन	दूरे	नीचैः	यदा	तदा	यदि	तर्हि	परम्	च	सहसा

एकस्मिन् वने कश्चन व्याधः जालं विस्तीर्य दूरे स्थितः। क्रमशः आकाशे सपरिवारः कपोतराजः चित्रग्रीवः निर्गतः। तदा तण्डुलकणानामुपरि

कपोतानां लोभो जातः। परन्तु राजा तत्र सहमतः नासीत्। तस्य युक्तिः आसीत् यदि निर्जने वने कोऽपि मनुष्यो नास्ति तर्हि कुतो वा तण्डुलकणानां सम्भवः? यदा राज्ञः उपदेशमस्वीकृत्य ते नीचैः आगताः जाले च निपतिताः। अतः उक्तम् ' सहसा विदधीत न क्रियाम्'।

HOLIDAY HOME-WORK (SUMMER VACATION)

SCIENCE (2021-22)

CLASS VIB

- ❖ Collect samples of different types of fibres and paste them in scrap book/ notebook. Classify them as natural and synthetic fibres.
- ❖ Take paper strips of two different colours and prepare a weaving design.

- ❖ Create pages of your own book using the tool-https://bookcreator.com/ on **any one** of the following topics:
- Components of food (Name of components, their sources and functions)
- Deficiency diseases.
- Balanced diet chart for children of your age group.
- Process of obtaining cotton and jute from plants.

- ❖ Collect pictures of different dishes(food items) of different states and paste them on the outline map of India.
- ❖ Revise chapters- 1, 2 and 3.

Summer Vacation Holiday Homework

2022-23 CLASS VI b English

1.Write the forms of adjectives (50)

2.Write the paragraphs on the following topics:(100 words)

My pet

The Temple of Learning

My Best Friend

My Favorite Person

3.Write two notices on lost items(A wrist watch, Identity Card)

4.Write the summary, hard words and complete exercise of all the chapters you have been taught till now. (Complete them if not completed yet)

5.Write 10-10 new words along with their meaning by searching the dictionary. The words must be picked from the chapters you have learned so far.

6.Read any 5 moral based stories(fables) and write their summary in your own words.

7. Practice reading some paragraphs/ poems everyday.

8. Speak in English with your parents and siblings.

9.Make a PPT related to any English activity of your choice.

10.Read important news everyday. Write any 5 in your notebook date wise.

11.Write 10 good habits and follow them.

Do all your holiday work in a homework notebook only. Do not make any separate notebook.

Have a nice time ahead!

Happy Holidays! 😊

Holiday Homework

Class: VIII A, English

1. *Write a diary entry about any unforgettable day in about 100-120 words(in proper format)*

2. *Write a paragraph on the following topics:*
   #War and Peace(base on the chapter," The Best Christmas Present... "

   # Child Labour(based on the chapter, "Children at work".

   # Kindness is a virtue.

3. *Practice Active passive. Write any 20 active voice and change them into passive voice.*
4. *Read any five books of your choice and write a book review of any one.*
5. *To improve your vocabulary, make a dictionary of your own and enter new words you have read (from the story books)*
6. *Do your pending work and upload in google classroom(if left)*
7. *Make a PPT of any useful thing you have written or made related to English language (poetries, anecdotes or articles etc)*

Stay healthy, stay safe!

Have a nice time ahead!!

Holiday Homework

Class: IX A, English

1. ***Write a diary entry on the following topics:***

   # Imagine you are Ashish/ Arushi, you happen to see a stray kitten at your doorstep. You feel like keeping it as a pet. You persuade your parents to keep it with you. They get agreed. Narrate your feelings in the form of a diary

   # Your feelings about pandemic times and how are you utilizing your time these days.

2. ***Write the message of the following chapters:***
   The Road Not Taken, Wind, The Sound of Music

3. ***Write a biography on the following persons:***
   Robert Frost, Ruskin Bond, Ustad Bismillah Khan

(paste their pictures also) or show in a PPT.

4. ***Read any two good books of your choice and write a book review on any one.***
5. ***Find all the unfamiliar words and phrases from the chapters you have been taught and write in a dictionary of your own.***

6. ***List out all the poetic devices you have been taught and write in your notebook.***
7. ***Do complete your pending work (if left) and upload in google classroom.***

Stay healthy, stay safe!

Have a nice time ahead!!

KV AFS RAJOKRI, NEW DELHI

HOLIDAY HOME ASSIGNMENT

SUBJECT: ENGLISH

CLASS : X

1. Do Unit 1 & 2 from Text "Words and Expressions"

2. Do make Rules chart on Narration and Voice(A4 size sheets- to be pasted in notebook)

3. Do 5-5 Exercises of Gap fillings/Editing.

4. Make Portfolio

5. Project:

a. Comic Strip on lesson 3 Part- I: "His First Flight"

b. Do write 2 Book Reviews on any English Novels/Dramas.

6. Do write 2-2 examples of Business Letter Writing i.e. Enquiry, Order and Complaint.(1- any Article/Item,1- Any Course)

6. Write 2 analytical paragraphs.

7. Write stories, articles, poems, drawings, collection of thoughts, pictures, facts, tongue twister idioms, puzzles, sayings, etc in English for Digital School Magazine.(only one)

DO ALL THE ABOVE IN YOUR HOMEWORK NOTEBOOK WITH DATE . PROJECT & ACTIVITIES IN A4 SIZE SHEETS. WORK SUBMISSION DATE OF SUBMISSION IS 22 JUNE 2022.

Take care of your health*. Help your mother in household works.

STAY HOME, STAY SAFE

EAT HEALTHY FOOD

PLAY OUT DOOR EVERYDAY

REVISE THE LESSON

TAKE CARE OF ALL FAMILY MEMBERS

KV AFS RAJOKRI, NEW DELHI

HOLIDAY HOME ASSIGNMENT

SUBJECT: ENGLISH

CLASS : IX

1. Do Unit 1 & 2 from Text "Words and Expressions"

2. Do make Rules chart on Narration and Voice(A4 size sheets- to be pasted in notebook)

3. Do 5-5 Exercises of Gap fillings/Editing.

4. Make Portfolio

5. Project:

a. Comic Script on lesson 3 "Iswaran the Storyteller"(Moments)

b. Do write 2 Book Reviews on any English Novels/Dramas.

6. Do write 2-2 examples of Business Letter Writing i.e. Enquiry, Order and Complaint. (1- any Article/Item,1- Any Course)

6.Write stories, articles, poems, drawings, collection of thoughts, pictures, facts, tongue twister idioms, puzzles, sayings, etc in English for Digital School Magazine.(only one)

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TAKE CARE OF ALL FAMILY MEMBERS

KV AFS RAJOKRI, NEW DELHI

HOLIDAY HOME ASSIGNMENT

SUBJECT: ENGLISH

Class: VI

1. Write all verbs(with three forms)and Adjectives (with all three degrees)from the chapters " Taro's Reward" and " An Indian American Woman in space: Kalpana Chawla"

2. Prepare a Comic Strip on any of the chapter from An Alien Hand.

3. Read any 2 stories from any language and write their summary.

4. Prepare Learner's Diary of the chapters done in class.

5.

6. 6 Do paragraph writing on the following topics:

7. 1 My aim in life

8. 2 My favourite freedom fighter

9. 3 My strength and weakness

**DO ALL THE ABOVE IN YOUR HOMEWORK NOTEBOOK WITH DATE . PROJECT & ACTIVITIES IN A4 SIZE SHEETS.
WORK SUBMISSION DATE OF SUBMISSION IS 22 JUNE 2022.**

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REVISE THE LESSON

TAKE CARE OF ALL FAMILY MEMBERS

KV AFS RAJOKRI, NEW DELHI

HOLIDAY HOME ASSIGNMENT

SUBJECT: ENGLISH

Class: VII

1. Project Work:

A. Prepare a Comic Script on L-2 "A Gift of Chappals" (Conversation among Mridu,Ravi,Meena about Mahendran(kitten) OR Mridu,Ravi,Meena and Beggar)

B. 2- Book Reviews(colourful & attractive)

2. Prepare Learner's Diary of the lessons done.

3. Write 2 Notice writings (any Competition)

4. Write a letter to your friend and share your experience on Family Trip to Shimla after a long time of Covid - 19.

5. Write Degrees of Adjectives(20) and Forms of Verbs(40)

6. Write stories, articles, poems, drawings, collection of thoughts, pictures, facts, tongue twister idioms, puzzles, sayings, etc in English for Digital School Magazine.(only one)

DO ALL THE ABOVE IN YOUR HOMEWORK NOTEBOOK WITH DATE . PROJECT & ACTIVITIES IN A4 SIZE SHEETS. WORK SUBMISSION DATE OF SUBMISSION IS 22 JUNE 2022.

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REVISE THE LESSON

TAKE CARE OF ALL FAMILY MEMBERS

KENDRIYA VIDYALAYA AFS RAJOKRI

SUMMER VACATION HOLIDAYS HOMEWORK

SCIENCE- CLASS VIII

MAKE A SMALL COLORFUL COPY FOR DOING ALL THE HOLIDAYS HOMEWORK:-

A) Collect different types of seeds(any 20) of common fruits, vegetables and crops and paste them in your copy along with their names. Also mention their preferable season of sowing and harvesting.
B) Collect and paste labels of 15 different packed food items like jams, juices , squashes ,biscuits etc and identify and write down the preservatives used in the list of ingredients mentioned.
C) Paste pictures of atleast 3 type of each class of microorganism also write down the disease caused by them.
D) Collect and paste pictures of various types (any 10) of modern Agricultural equipment , also mention their uses.
E) Have a discussion with your family , friends and neighborhood regarding “Plastic waste management” , Write down various ways of achieving it. Also create your own 5 slogans conveying the message “ SAY NO TO PLASTICS”
F) Prepare your own manure at home by decomposing the peels of fruits and vegetables.
G) Identify/Explore/ Collect and paste 10 different types of fabrics in your copy along with their names. Identify them as synthetic or natural.
H) Study and write down the contribution of any 5 scientists in the field of medicine.
I) Write down the important keywords and their definition of Science Ch1 , 2 and 3.
J) Visit a Garden /Farm/Field observe the different types of crops and vegetation, Also carefully look for the plants having certain disease. Talk to the gardener regarding protection of their crops and vegetation.

K) **Attempt the following extra Questions of chapter Synthetic Fibres and Plastics in your Classwork Copy.**

Q1 Name : a) A fully synthetic fibre……

b) Most common polyester…….

c) Examples of synthetic fibres…….

d) Plastic used to make Unbreakable crockery……

e) Plastic used to make electric switches……

f) Plastic used to make water pipe lines……..

g) Fibre well known as artificial silk……..

h) Fibre derived from petrochemicals……..

i) synthetic fibre which can be used as wool……..

Q2 Write the difference between a) Melamine and Polythene

b) Biodegradable and non biodegradable

Q3 Write the advantages and disadvantages of Plastics and synthetic fibres separately.

Q4 Explain the 5R principle for plastic waste management.

Q5 What is PET? What is it used for?

Q6 Define the following terms :- Ester, Petrochemicals , Polymers

Q7 What is Rayon made up of? Write its uses.

Q8 A lady went to the market to buy a blanket. The shopkeeper showed her blankets made of acrylic fibres as well as made of wool. She preferred to buy an acrylic blanket. Can you guess why?

Q9 What time of arrangement of units does plastic have?

Q10 Write uses of the following:-

Polythene , PVC ,Acrylic ,Polyester, Teflon, Melamine , Bakelite , Nylon ,Rayon

L) From chapter Microorganisms Friend and Foe -Draw a neat and colorful Diagram of Nitrogen cycle in your classwork copy.

M) Prepare and learn Ch-1,2, and 3 from the book and notebook for the periodic test.

(Have a healthy and enjoyable holidays….!)

KENDRIYA VIDYALAYA AFS RAJOKRI SUMMER VACATION HOLIDAYS HOMEWORK SCIENCE- CLASS VIII

MAKE A SMALL COLORFUL COPY FOR DOING ALL THE HOLIDAYS HOMEWORK:-

A) **Collect different types of seeds (any 10) of common fruits, vegetablesand crops and paste them in your copy along with their names. Also mention their preferable season of sowing and harvesting.**

B) **Paste pictures of atleast 3 type of each class of microorganism alsowrite down the disease caused by them.**

C) **Collect and paste pictures of various types (any 5) of modern Agricultural equipment , also mention their uses.**

D) **Have a discussion with your family , friends and neighborhood regarding "Plastic waste management" , Write down various ways of achieving it.**

Also create your own 3 slogans conveying the message " SAY NO TO PLASTICS"

E) **Prepare your own manure at home by decomposing the peels of fruits and vegetables.**

F) **Identify/Explore/ Collect and paste 5 different types of fabrics in your copy along with their names. Identify them as synthetic or natural.**

G) **Study and write down the contribution of any 5 scientists in the field of medicine.**

H) Attempt the following extra Questions of chapter Synthetic Fibres and Plasticsin your Classwork Copy.

Q1 Name : a) A fully synthetic fibre……

b) Most common polyester…….

c) Examples of synthetic fibres…….

d) Plastic used to make Unbreakable crockery……

e) Plastic used to make electric switches……

f) Plastic used to make water pipe lines……..

g) Fibre well known as artificialsilk……

h) Fibre derived frompetrochemicals……

i) synthetic fibre which can be used as wool……..

Q2 Write the difference between a) Melamine and Polythene

b) Biodegradable and non biodegradable

Q3 Write the advantages and disadvantages of Plastics and syntheticfibres separately.

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Q5 What is PET? What is it used for?

Q6 Define the following terms :- Ester, Petrochemicals , Polymers Q7

What is Rayon made up of? Write its uses.

Q8 A lady went to the market to buy a blanket. The shopkeeper showed her blankets made of acrylic fibres as well as made of wool. She preferredto buy an acrylic blanket. Can you guess why?

Q9 What time of arrangement of units does plastic have?

Q10 Write uses of the following:-

Polythene , PVC ,Acrylic ,Polyester, Teflon, Melamine , Bakelite , Nylon ,Rayon

I) **From chapter Microorganisms Friend and Foe -Draw a neat and colorful Diagram of Nitrogen cycle in your classwork copy.**

J) **Prepare and learn Ch-1,2, and 3 from the book and notebook for the periodic test.**

K) Attempt the following extra questions of chapter Crop Production and Management in your class notebook:

Q1. What are advantages of manure?

Q2. How can we increase the yield of crops? Q3. What is animal husbandry? Give examples?

Q4. Draw neat and clean labeled diagram of agricultural equipment?

L) Attempt the following extra questions of chapter Microorganisms: Friend and Foe in your class notebook :

Q1. What are preservatives?

Q2. Write the method of food preservations? Q3. What is pasteurization?

Q4. What is communicable diseases?

Q5. How can milk be converted to curd? Q6. What are antibodies?

Q7. Write the methods for the preservation of following food :

a) **Milk**
b) **Jams and squashes**
c) **Pickels**
d) **Meat**
e) **Rusk**
f) **Vegetables**

Q8. Draw neat and clean labeled diagram of Algae(Chlamydomonas), Protozoa(amoeba), Fungi(bread mould and pencillium) and viruses.

HAVE A HEALTHY AND ENJOYABLE HOLIDAY!!

Class 6 A Science Holiday Home work

NCERT Solutions for Class 6

Science

Chapter 1 – Food: Where does it come from?

1. Do you find that all living beings need the same kind of food?

Ans: No, all living beings cannot survive with the same kind of food because -

- Sunlight is the main source of energy for plants.
- Humans cannot survive with just sunlight.
- Some animals eat only grass and are known as herbivores.
- Some animals eat other animals for nutrition and are known as carnivores.
- Some animals eat both plants and animals and are known as omnivores.

2. Name five plants and their parts that we eat.

Ans: The five plants and their parts that we eat are as follows-

Plant	Its part
Carrot	Root
Wheat plant	Seed
Mango	Fruit
Cauliflower	Flower
Beetroot plant	Root

3. Match the items given in column A with that in column B.

Column A	Column B
i. Milk, curd, paneer, ghee	a) Eat other animals
ii. Spinach, cauliflower, carrot	b) Eat plants and plant products
iii. Lion and tiger	c) Are vegetables
iv. Herbivores	d) Are all animal products

4. Fill up the blanks with the words given:
Herbivore, plant, milk, sugarcane, carnivore.

a) Tiger is a ---------- because it eats only meat.
Ans: Tiger is a carnivore because it eats only meat.

b) Deer eats only plants products and so, is called ----------.
Ans: Deer eats only plants products and so, is called herbivores.

c) Parrot eats only ---------- products.
Ans: Parrot eats only plant products.

d) The --------- that we drink comes from cows, buffaloes and goats is an animal product.
Ans: The milk that we drink comes from cows, buffaloes and goats is an animal product.

e) We get sugar from ----------.
Ans: We get sugar from sugarcane.

1. **Name the major nutrients in our food.**
2. **2. Name the following:**
   (a) The nutrients which mainly give energy to our body.
   (b) The nutrients that are needed for the growth and maintenance of our body.
   (c) A vitamin required for maintaining good eyesight.
   (d) A mineral that is required for keeping our bones healthy._2. Name the following:
   (a) The nutrients which mainly give energy to our body.
   (b) The nutrients that are needed for the growth and maintenance of our body.
   (c) A vitamin required for maintaining good eyesight.

(d) A mineral that is required for keeping our bones healthy.

Table

Food Item	*Starch Present*	*Protein Present*	*Fat Present*
Raw potato	Yes	—	—
Milk	—	Yes	Yes
Groundnut	—	Yes	Yes
Uncooked dry rice	Yes	—	—
Cooked rice	Yes	—	—
Dry coconut	—	—	Yes
Uncooked tuar dal (powdered)	—	Yes	—
Cooked dal	—	Yes	—
A slice of any vegetable	—	—	—
A slice of any fruit	—	—	—
Boiled egg white	—	Yes	—

3. **Name the following:**
   (a) The nutrients which mainly give energy to our body.
   (b) The nutrients that are needed for the growth and maintenance of our body.
   (c) A vitamin required for maintaining good eyesight.
   (d) A mineral that is required for keeping our bones healthy.
4. **Name two foods each rich in:**
   (a) Fats
   (b) Starch
   (c) Dietary fibre
   (d) Protein
5. **4. Tick (*/*) the statements that are correct, cross (X) those which dire incorrect.**
   (a) By eating rice alone, we can fulfill nutritional requirement of our body,
   (b) Deficiency diseases can be prevented by eating a balanced diet.
   (c) Balanced diet for the body should contain a variety of food items.
   (d) Meat alone is sufficient to provide all nutrients to the body.
6. **Fill in the blanks:**
   (a) _____ is caused by deficiency of Vitamin D. ,
   (b) Deficiency of_____ causes a disease known as beri-beri.
   (c) Deficiency of Vitamin C causes a disease known as_____ .
   (d) Night blindness is caused due to deficiency of_____ in our food.
7. **Do all meals consist of the same food items?**
8. **Why should a meal have different food items?**
9. **Name two substances which provide carbohydrates.**
10. **6. What happens when two or more drops of iodine solution fall on starch substance?**
    Ans: The colour of the substance becomes blue-black.

11. **7. If any food item gives blue-black colour with iodine then which nutrient is present in the food?**
    Ans: Starch.
12. **8. Name two substances which provide carbohydrates.**
    Ans:
    (i) Potato
    (ii) Rice/wheat/maize/sugar
13. **9. Name the food nutrient indicated by an oily patch on paper.**
    Ans: An oily patch on paper shows the presence of fat.
14.
15. **10. Name two energy-providing nutrients.**
    Ans:
    (i) Carbohydrates
    (ii) Fats
16. **11. Name a nutrient which helps in repairing the damaged body cells.**
    Ans: Proteins.
17. **12. Name two nutrients which protect the body from diseases.**
    Ans:
    (i) Vitamins
    (ii) Minerals
18. **13. Name two plant food items which provide proteins.**
    Ans:
    (i) Dal (pulses)
    (ii) Soyabean
19. **14. Name two sources of proteins provided by animals.**
    Ans:
    (i) Milk
    (ii) Eggs

Chapter -3

1. Paheli wants to present her friend a gift made of plant-fibre. Which out of the following will she select?
(a) Jute bag (b) Woollen shawl (c) Silk saree (d) Nylon scarf
2. Which of the following materials did people use in ancient times for making clothes?
(i) Leaves of trees (ii) Newspaper (iii) Metal foils (iv) Animal skins and furs
(a) (i) and (ii) (b) (i) and (iii) (c) (ii) and (iii) (d) (i) and (iv)
3. Boojho went to a cloth shop. There he found a fabric which was smooth to touch, had vibrant colour and shine. The fabric could be
(a) Cotton (b) Wool (c) Silk (d) Jute
4. Beera is a farmer. His field has black soil and the climate is warm. Which fibre yielding plant should he grow in his field?
(a) Jute (b) Cotton (c) Coconut (d) Wool
5. Boojho wants to make yarn from fibre at home. Which of the following will he use to carry out the task?
(a) Powerloom (b) Handloom (c) Charkha (d) Knitting needles
6. State whether the following statements are true or false. If false, correct them.
(a) Silk is a plant fibre.
(b) Jute is obtained from the leaves of a plant.
(c) Weaving is a process of arranging two sets of yarn together.
(d) Cotton yarn on burning gives an odour similar to that of a burning paper.
7. Once, Paheli visited a tailor shop and brought home some cuttings of fabric to study their properties. She

took two pieces and found that one of the pieces were shrinking when it was burnt with a candle. However the other did not shrink on burning. Can you help her to find out which of the two was a cotton fabric and which a silk fabric?

Holidays Homework

Winter Break-2022_23

Class-VI(Maths)

1.Do Examples of Chapter 'Knowing Our Numbers', 'Whole Numbers'

And 'Playing with Numbers'.

2.Make a Mathematical Model.

3.Make a file on the topic 'Indian Mathematicians' using cutting and Pasting method.

Class-VIII(Maths)

1.Do Examples of Chapter 'Rational Numbers', 'Linear Equations in one variable' and 'Understanding Quadrilaterals'.

2.Make a Mathematical Model.

3.Calculate Perimeter of various shapes of your home and collect data in a file.

Class-IX(Maths)

1.Do Examples of Chapter 'Number Systems' ,'Polynomials' ,Coordinate Geometry','Linear Equations in two variables','Introduction to Euclid Geometry'.

2.Make a Mathematical Model.

Class-X(Maths)

1.Do Examples of Chapter 'Knowing Our Numbers', 'Whole Numbers'

And 'Playing with Numbers'.

2.Make a Mathematical Model.

CLASS: VI B

SUBJECT: MATHEMATICS

A. Revise lesson 1 and 2 and 3

B. Solve the following questons:-

C. Learn tables from 2-20.

1. Fill in the blanks:
   (a) 1 million=……lakh.
   (b) The two digit largest whole number is…..
   (c) The successor of the largest of the 2 digit number is…….
   (d) The smallest prime number is……
2. Which of the following statements are true(T) and which are false(F)?
   (a) 1 is the smallest whole number.
   (b) 600 is the successor of 599.
   (c) If a number is divisible by 3, it must be divisible by 9.
   (d) All natural numbers are whole numbers.
3. Write the roman numerals for: (i) 38 (ii) 59.
4. A student multiplied 7236 by 65 instead of multiplying by 56. How much was his answer greater than the correct answer?
5. Find the difference between the greatest and the least number that can be written using the digits 6,2,7,4,3 each only once.
6. A vessel has 4 litres and 500ml of curd. In how many glasses, each of 25ml capacity, can it be filled?
7. Estimate each of the following using general rule:
   (a) 728+996
   (b) 796 – 314
8. Write the three whole numbers occurring just before 10001.
9. Write the successor of: (a) 254670 (b) 100199
10. Find the value of:
    (a) 298X17 + 298X3
    (b) 71264X169 – 71264X69
11. A vendor supplies 32 litres of milk to a hotel in the morning and 68 litres of milk in the evening. If milk costs Rs. 15 per litre, how much money is due to the vendor per day?
12. Find using distributive property:
    (a) 628X101
    (b) 5247X1001
13. Write all the factors of (a) 27 (b) 36.
14. Write the first five multiples of 12.
15. Write seven consecutive composite numbers less than 100 so that there is no prime between them.
16. Write five pairs of prime numbers less than 20 whose sum is divisible by 5.

17. Find the common factors of:

(a) 20 and 28 (b) 35 and 50.

18. Write and learn the tables from 2 to 20.

PISA BASED QUESTIONS

19. For her school science project Shreya performed an experiment in science lab. She prepared a report where she got different values of freezing points of some gases and her report was characterized into two categories that was degree Celsius and degree fahrenheit. The given table shows the freezing points in (°F) of different gases at sea level.

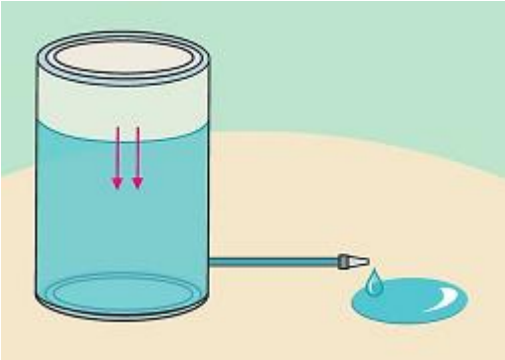
Gases	Freezing point at sea level(°F)	Freezing point at sea level(°C)
Hydrogen	-435	
Krypton	-251	
Oxygen	-369	
Helium	-458	
Argon	-309	

Q.1 Using the above table, list the gases in decreasing order according to their freezing point at sea level.

Q.2 Convert each into (°C) using the relation. C=5/9 (F-32).

Q.3 Which one of the gas has lowest temperature.

20. One day Rohit went to the market for brought a water tank for his home. Then he got a water tank for his house capacity 450 litres. He filled the tank to its brim. After one hour he noticed that the quantity of water has decreased due to a small hole in the tank. He observed the tank for next two hours and found out that quantity of water is decreasing at the rate of 9 litres every hour.



Q.1 What will be the quantity of water in the tank after 10 hours.

Q.2 After how many hours the tank would be empty?

Q.3 What kind of precautions should we have taken to save the water?

BY:MRS. VIJAY LAXMI YADAV(VI B)

Holiday Homework for SUMMER VACATION 2022-2023

Class- 7A AND 7B
Subject- Maths
By- MRS. VIJAY LAXMI YADAV

A. **Revise and practice lesson 1, 2 and 3 from NCERT BOOK AND NCERT EXEMPLER BOOK.**
B. **Learn tables 2-20.**
C. **Solve the following questions:-**

1. **When the integers 10, 0, 5, -5,-7 are arranged in descending or ascending order, then find out which of the following integers always remains in the middle of the arrangement.**
   (a) 0 (b) 5 (c) – 7 (d) -5

2. By observing the number line, state which of the following statements is not true?

a) B is greater than -10 (b) A is greater than 0
(c) B is greater than A (d) 6 is smaller than

3. By observing the above number line, state which of the following statements is true?

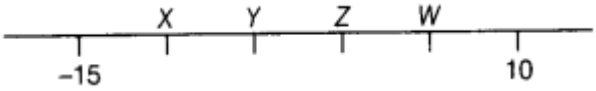
(a) B is 2 (b) A is – 4 (c) S is -13 (d) B is – 4

4. Next three consecutive numbers in the pattern 11, 8, 5, 2,_____ ,__ ,__ are
(a) 0, – 3, – 6 (b)-1,-5,-8 (c) – 2, — 5, – 8 (d)-1,-4,-7

5. Which of the following statements is not true? ;

(a) When two positive integers are added, we always get a positive integer.
(b) When two negative integers are added, we always get a negative integer.
(c) When a positive integer and a negative integer are added, we always get a negative integer.
(d) Additive inverse of an integer 2 is (-2) and additive inverse of (-2) is 2.

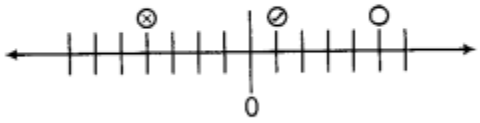
6. On the following number line value, 'zero' is shown by the point



(a) X (b) Y (c) Z (d) W

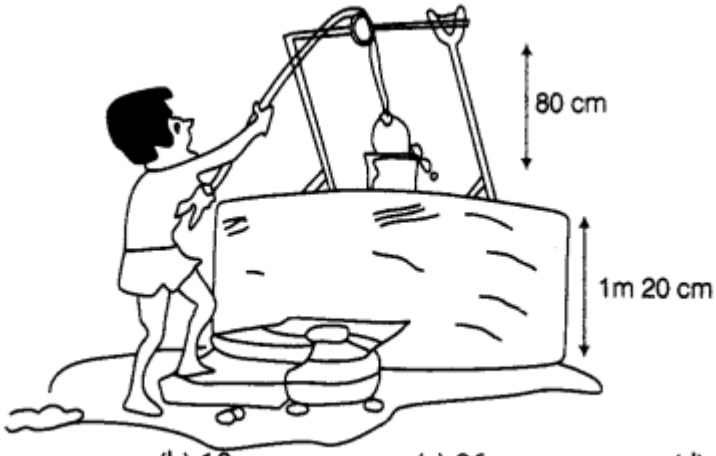
7. The value of 5 + (- 1) does not lie between
(a) 0 and -10 (b) 0 and 10 (c) – 4 and -15 (d) – 6 and 6

8 If ⊗, ○, ⊘ and • represent some integers on number line, then descending order of these numbers is



(a) •, ⊗, ⊘, ○ (b) ⊗, •, ⊘, ○ (c) ○, ⊘, ⊗, • (d) ○, •, ⊗, ⊘

9. Water level in a well was 20 m below ground level. During rainy season, rainwater collected in different water tanks was drained into the well and the water level rises 5 m above the previous level. The wall of the well is lm 20cm high and a pulley a fixed at a height of 80 cm. Raghu wants to draw water from the well. The minimum length of the rope, that he can use is



(a) 17 m (b) 18 m (c) 96 m (d) 97 m

10.
Fill in the blanks: -
i. A fraction is a number which can be written in the form a/b, where a, b are _____numbers and b ≠ 0.
ii. If numerator and denominator of a fraction have no common factor other than 1, then the fraction is said to be in its_____ form.
iii. if cd=m×am×b**cd=m×am×b ,then fractions** ab**ab and** cd**cd are called_____ fractions because they represent the _____portion of the whole.**
iv. The value of the product of two proper fractions is_____ than each of the two fractions.
v. The product of two improper fractions is_____ than the two fractions.
vi. A fraction whose denominator is any of the numbers 10,000, 1000 etc, called a_____
vii. 11.5 ÷ _____ =1.
viii. If 312.5 ÷ 25 = 12.5, then value of 3.125 ÷ 25 is_____.

ix. The product of a proper and an improper fraction is_____ than the improper fraction and _____then the proper fraction.
x. When a decimal number is multiplied by 10,000 or 1000 the digits in the product are same as in the decimal number but the decimal point in the product is shifted to the _____by as, many of places as there are zeros over one.

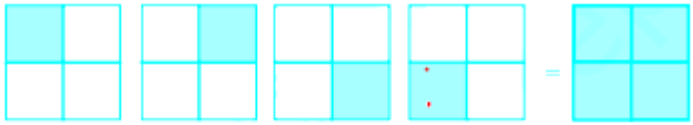
11. State true / false.
i. A decimal fraction is a fraction where the denominator is 10 or higher power of 10.
ii. Every integer can be expressed as a fraction.
iii. Like decimals have the same number of decimal places.
iv. Natural numbers can be expressed as a proper fraction.
v. The reciprocal of 2727 **is** 7272
vi. The reciprocal of a proper fraction is a proper fraction.
vii. The reciprocal of an improper fraction is an improper fraction
viii. The product of 7 and 364**364 is** 3112**3112**

12. A fruit seller buys 712 fruits, of which 3/4 are apples. Of all the apples that he bought, 1/3 were found to be rotten. If he sold all the good apples at Rs. 514**514 each. How much money did he receive on selling all the good apples.**

13. The picture interprets

a. 3×1/4 **b.** 3÷1/4 **c.** 1/4÷3 **d.** 3×3/4

14. **The picture interprets**



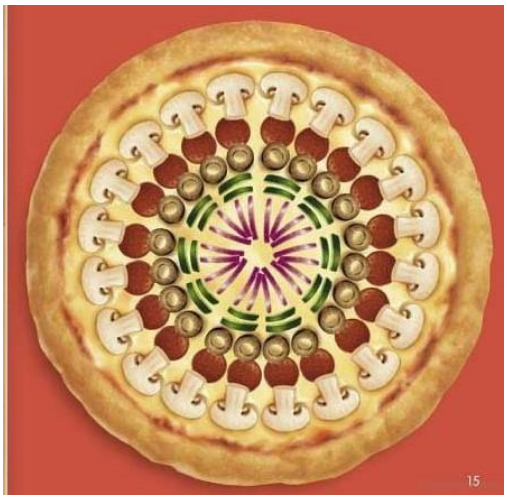
a. 4×1/4 **b.** 4÷1/4 **c.** 1/4÷4

PISA based question

15.

PIZZA

Riya, Teena and John are three friends. They meet after long time. They go to enjoy PIZZA together. While Riya wants capsicum and onion as toppings in her pizza, John wants mushroom and pepperoni and Teena wants to have black olives and capsicum. After much discussion they finally agree to have a combination of all the toppings with equal number of pieces of each type.



Q 1. What is the fraction of mushrooms in all the toppings in this pizza?

Q 2. If there are total 20 pieces of capsicum and fraction of capsicum pieces is 1/5 of total toppings, find the total number of pieces of all the toppings in the pizza.

Q 3. Find the fraction of choice of Riya's toppings in Pizza.

Q 4. What is the sum of fractions of all the five toppings?

16. ANIMAL SHELTER

Priya is an animal lover. She loves animals and takes care of them whenever she gets time. She loves to spend her free time with them. There is an animal shelter near her house, which she visits regularly. In this shelter there are total 150 animals. 4/6 of these animals are cats .Of the cats ½ are male.

Q 1. How many total cats are there in the shelter?

Q 2. How many total female cats are there in the shelter?

Q 3. What fractions of animals at the shelter are male cat?

Q 4. What is the number of total animals other than cats in the shelter?

Holiday Homework for SUMMER VACATION

2022-2023

Class- 9A

Subject- Maths

By- MRS.VIJAY LAXMI YADAV (9A)

Revise and practice lesoon 1,2,3,4 and 6 from NCERT BOOK AND NCERT EXEMPLER BOOK.

Solve the following questions:-

QUESTION 1. Which one is not a polynomial

(a) $4x^2 + 2x - 1$

(b) $y + \frac{3}{y}$

(c) $x^3 - 1$

(d) $y^2 + 5y + 1$

QUESTION 2. The polynomial $px^2 + qx + 5$ is

(a) linear

(b) quadratic

(c) cubic

QUESTION 3. The zero of the polynomial $p(x) = 2x + 5$ is

(a) 2

(b) 5

(c) $\frac{2}{5}$

(d) $-\frac{5}{2}$

QUESTION 4. The number of zeros of $x^2 + 4x + 2$

(a) 1

(b) 2

(c) 3

(d) none of these

QUESTION 5. The polynomial of type $ax^2 + bx + c$, $a = 0$ is of type

(a) linear

(b) quadratic

(c) cubic

QUESTION 6. The value of k, if $(x – 1)$ is a factor of $4x^3 + 3x^2 – 4x + k$, is

(a) 1

(b) 2

(c) –3

(d) 3

QUESTION 7. If $3 + 5 – 8 = 0$, then the value of $(3)^3 + (5)^3 – (8)^3$ is

(a) 260

(b) –360

(c) –160

(d) 160

QUESTION 8. The value of $\frac{(361)^3 + (139)^3}{(361)^2 - 361 \times 139 + (139)^2}$ is

(a) 300

(b) 500

(c) 400

(d) 600

QUESTION 9. If $x + 2$ is a factor of $x^3 – 2ax^2 + 16$, then value of a is

(a) 3

(b) 1

(c) 4

(d) 2

QUESTION 10. If one of the factor of $x^2 + x – 20$ is $(x + 5)$. Find the other

(a) $x – 4$

(b) $x + 2$

(c) $x + 4$

(d) $x – 5$

QUESTION 11. State whether the following statements are true or false

(i) $2\sqrt{5}25$ is a rational number.

(ii) There are infinitely many integers between any two integers.

(iii) Number of rational numbers between 11 and 13 is finite.

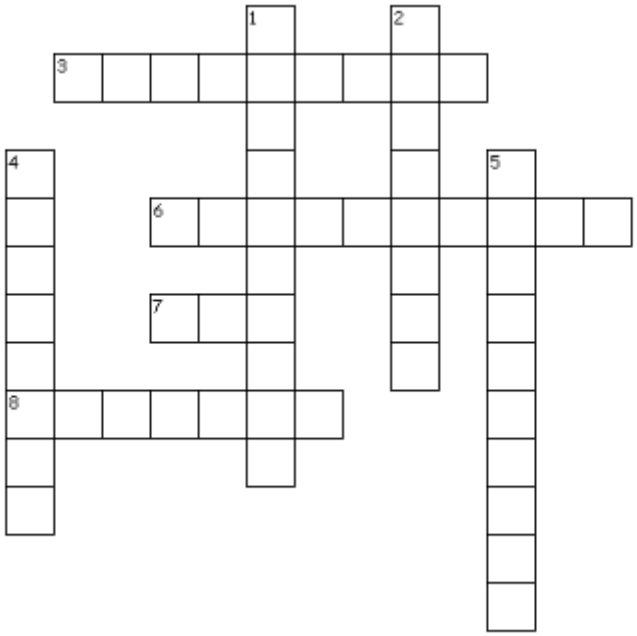
(iv) There are numbers which cannot be written in the form p/q , $q \neq 0$, p, q both are integers.

(v) The square of an irrational number is always rational.

(vi) $\sqrt{18}\sqrt{2}182$ is not a rational number as $\sqrt{18}18$ and $\sqrt{2}2$ are not integers.

QUESTION 12.

Cross-word Puzzle



Across

3. rational numbers have only two choices- either they are terminating or non-terminating _____
6. The First person to discover the numbers which were not rational
7. The number $(\sqrt{3}-1)(\sqrt{3}+1)$ is
8. Counting Number are called

Down

1. Non-terminating non recurring decimal expression
2. The set of positive and negative number is
4. Number of the form p/q
5. Who was the first to compute digits in the decimal expansion of π(Greek genius)

QUESTION 13. Write the following in decimal form and say what kind of decimal expansion each has:

(i) 1910019100
(ii) 1313
(iii) 11121112
(iv) 113113
(v) 313313
(vi) 111400111400

PISA BASED QUESTIONs

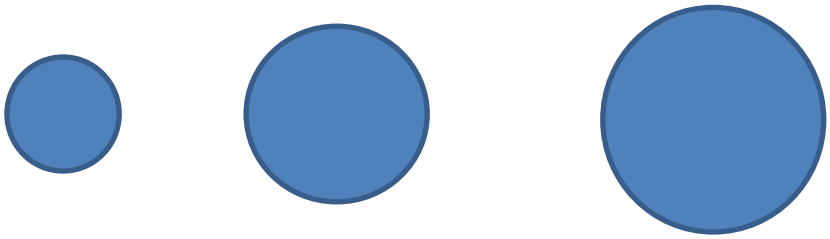
QUESTION 14. **Coins**

You are asked to design a new set of coins. All coins will be circular and coloured silver, but of different diameters. Researchers have found out that an ideal coin system meets the following requirements:

• diameters of coins should not be smaller than 15 mm and not be larger than 45 mm.

• given a coin, the diameter of the next coin must be at least 30% larger.

• the minting machinery can only produce coins with diameters of a whole number of millimetres (e.g. 17 mm is allowed, 17.3 mm is not).



Question 1: You are asked to design a set of coins that satisfy the above requirements. You should start with a 15 mm coin and your set should contain as many coins as possible. What would be the diameters of the coins in your set?

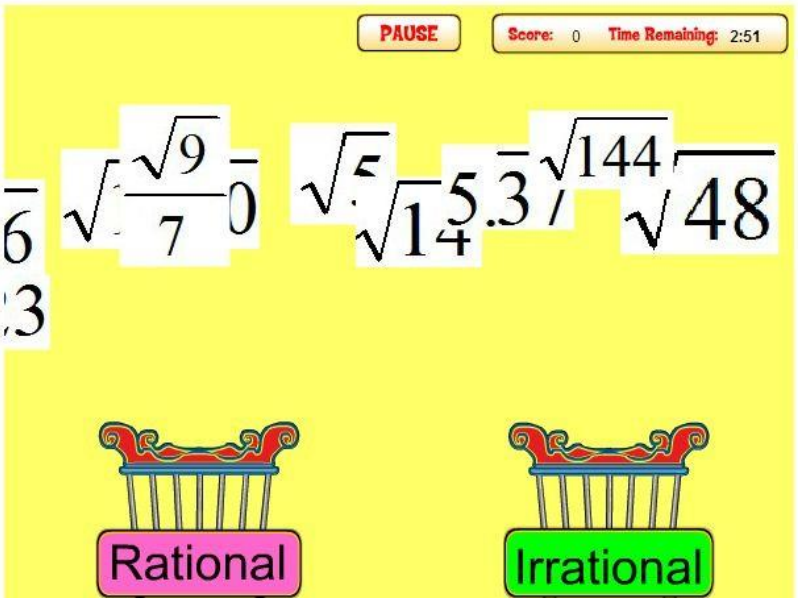
QUESTION 15. **DRUG CONCENTRATIONS**

A woman in hospital receives an injection of penicillin. Her body gradually breaks the penicillin down so that one hour after the injection only 60% of the penicillin will remain active. This pattern continues: at the end of each hour only 60% of the penicillin that was present at the end of the previous hour remains active.

Suppose the woman is given a dose of 300 milligrams of penicillin at 8 o'clock in the morning. Complete this table showing the amount of penicillin that will remain active in the woman's blood at intervals of one hour from 0800 until 1100 hours.

Time	0800	0900	1000	1100
Pencillin(mg)	300			

QUESTION 16. **ONLINE GAME**



Reeta and Geeta are twin sisters. They both study in class IX.They love to study Maths as it is their favourite subject.These days they are not going to school and having online classes only due to Corona pandemic. They are somewhat bored as they miss their school friends. One day they decide to play online quiz. The quiz is about rational and irrational numbers. One by one they are given a number on screen. They have to identify that number as rational or irrational and put that number in the correct bin as shown in picture. They get +10 points for correct answer and -5 points for incorrect answer.

Following is the detail of their responses after finishing the game.

Reeta's responses		**Geeta's responses**	
Rational	**Irrational**	**Rational**	**Irrational**
5/7	√3	5	0.777777…
√25	4π	28/99	25.252525…
5.1211114444…	1.5125473694…	-5	√49
8.5	1.5	0	22/7
0.333333…	√47	5789.2	0/5

Q.1 Who won the game?

(a) Reeta

(b) Geeta

(c) Both got equal score

Q.2 Geeta says that 22/7 is an irrational number as it is value of π(pi) but Reeta disagrees with her and says that 22/7 is a rational number. What do you think, who is correct? Explain your answer.

Q.3 Identify, whether 25.252525… is a rational or irrational number. Justify your answer.

KENDRIYA VIDYALAYA RAJOKRI

SUMMER VACATION ASSIGNMENT/HW (2022-23)

CLASS- X

SUBJECT- MATHEMATICS

INSTRUCTIONS:

- *Read all the questions carefully before solving. Write the solution of questions in a separate notebook.*
- *Complete the project separately on A4 sheets in neat and clear hand writing.*
- *Make a cover page for project mentioning your name, class and roll number clearly.*

Section A (Questions)

1. Check whether 75/455 is terminating or non-terminating decimal expansion.

2. Check whether 654.737373... is a rational number.Justify.

3. A polynomial of degree 2 is called ----------polynomial. (Cubic/ quadratic/ linear)

4. √25 is a ----------number. (rational/irrational)

5. Find the p/q form of 0.09999....

6. Find the H.C.F. of 567 and 255 using Euclid's division lemma.

7. Find the LCM and HCF of 510 and 92 and check whether LCM x HCF = product of the given numbers .

8. Find the degree of :

(i)$6x^3 - 7x - 3$ (ii) $4x^4 - 3x^5 - 4x + 1$ (iii)

9. If $p(x) = x^3 - 3x^2 + 5x - 3$. find p(2), p(-1).

10. Prove that $-\sqrt{3}$ is an irrational number.

11. Prove that $2 - 7\sqrt{3}$ is an irrational number.

12. Factorize the following polynomials:

i. $4x^2 - 3x - 1$

ii. $3x^2 + 4x - 4$

iii. $5t^2 + 12t + 7$

13. Prepare a table representing different solids and their names, surface areas and Volumes formulas.

Section B (project work/activities)

14. Make a project on the title **" π - WORLD'S MOST MYSTERIOUS NUMBER"**

15. Perform following activities and write in activity file :

Activity 1: OBJECTIVE : To represent a pair of linear equations in two variables graphically.

Activity 2: OBJECTIVE : To find the geometrical representation of a quadratic polynomial.

16. **CCT QUESTIONS**

(i) A mathematical Exhibition is being conducted in your school and one of your friends is making a model of a factor tree. He has some

difficulty and ask for your help in completing a quiz for the audience. Observe the following factor tree and answer the following.

Four satellites revolve around the earth once every 6, 8, 10, and 15 hr, respectively. If the satellites are initially lined up, how many hours must pass before they will again be lined up?

(ii)

(iii)

The traffic lights at three different road crossings change after every 48 seconds, 72 seconds and 108 seconds respectively. If they change simultaneously at 7 AM, at what time will they change simultaneously again?

SECTION-B

1.Revise lesson 1,2,3,4 from NCERT BOOK.

2.Solve lesson 1,2,3,4 from NCERT MATHS EXEMPLAR BOOK IN A SEPARATE NOTEBOOK.

A tile floor is to be made from 10 inch, 12 inch, and 15 inch square tiles. A design is made by alternating rows with different size tiles. The first row uses only 10 inch tiles, the second row uses only 12 inch tiles, and the third row uses only 15 inch tiles. Neglecting the grout seams, what is the shortest length of floor space that can be covered evenly by each row?

CLASS IX A and B (Science)

- Do practice of **Case study** questions:
  Ch-2 https://www.popularchemistry.online/2021/08/case-study-based-questions-from-is.html

  Ch-5 https://www.netexplanations.com/case-study-questions-class-9-science-the-fundamental-unit-of-life/

  Ch-8 https://www.netexplanations.com/case-study-questions-class-9-science-motion/

- Do practice of **Assertion Reason** Questions:
  Ch -2 https://physicsgurukul.com/2021/09/01/assertion-and-reason-questions-for-class-9-science-chapter-2-is-matter-around-us-pure/

  Ch-5 https://physicsgurukul.com/2021/08/28/assertion-and-reason-questions-for-class-9-science-chapter-5-the-fundamental-unit-of-life/
  Ch-8 https://physicsgurukul.com/2021/08/27/assertion-and-reason-questions-for-class-9-science-chapter-8-motion/
- Create pages of your own book using the tool-https://bookcreator.com/ on any one of the following topics:

- Structure of plant cell
- Structure of animal cell
- Cytoplasmic organelles and their functions.
- Prokaryotic and eukaryotic cell

- Revise ch-2 ,5 and 8

CLASS XA and B(Science)

- ❖ Do practice of **Case study Questions** of Ch- 1, 6 and 10
  https://www.selfstudys.com/update/cbse-class-10th-science-chapterwise-case-study-question-solution

- ❖ Do practice of **Assertion Reason** Questions of Ch-1, 6 and 10
- https://physicsgurukul.com/2021/07/26/assertion-and-reason-questions-for-class-10-science-chapter-1-chemical-reactions-and-equations/
- https://physicsgurukul.com/tag/class-10-science-chapter-6-life-processes-assertion-reason-questions/
- https://physicsgurukul.com/2021/07/29/assertion-and-reason-questions-for-class-10-science-chapter-10-light-reflection-and-refraction/

- ❖ Do practice of Numerical problems of Ch-10- Light……

  https://www.youtube.com/watch?v=RbH3YsLuoKo
- ❖ Learn Ch-1,2,6 and 10 (Intext, and Exercise questions)

KENDRIYA VIDYALAYA AFS RAJOKRI

SUMMER VACATION HOMEWORK

CLASS-VII, SUBJECT: - SOCIAL

WRITE AND LEARN THE ANSWERS OF FOLLOWING QUESTIONS

(1) Who was considered a “foreigner” in the past?
(2) In what ways has the meaning of the term “Hindustan” changed over the centuries?
(3) How many layers of earth are there?
(4) How many types of rocks are there? Write in detail with examples.
(5) Which are the major components of the environment?
(6) What is ecosystem?
(7) What is biosphere?
(8) Define universal adult franchise?
(9) What was civils right movement in USA?
(10) Who was Omprakash Valmiki?

PROJECT WORK

(1) Make scrapbook/project/wall magazine on “Historical events of freedom movement of India from 1857 to 1947”

(2) Make scrapbook/project/wall magazine on “Historical monuments of “DELHI”

HOMEWORK OF HOLIDAY

SOCIAL SCIENCE

CLASS VIII - B

1. 10 Indian P.M Biography
2. History 2 chapters (Learn and Write)
3. Civics 2 chapters (Learn and Write)
4. .Geography 2 chapters (Learn and Write)
5. 10. Indian Woman (Famous) Biography

HOLIDAY HOMEWORK OF

SOCIAL SCIENCE

CLASS VI- A,B

1. History 2 chapters (Learn and Write)
2. Civics 2 chapters (Learn and Write)
3. Geography 2 chapters (Learn and Write)

HOLIDAY HOMEWORK OF

SOCIAL SCIENCE

CLASS X- A

1. History 2 chapters (Learn and Write)
2. Geography 2 chapters (Learn and Write)

3. Political Science 2 chapters (Learn and Write)
4. Economic 2 chapters (Learn and Write)

HOLIDAY HOMEWORK OF

SOCIAL SCIENCE

CLASS IX-B

1. History 2 chapters (Learn and Write)
2. Geography 2 chapters (Learn and Write)
3. Political Science 2 chapters (Learn and Write)
4. Economic 2 chapters (Learn and Write)

2. (4. Model Question Paper Solve) R K Ram Sir

KENDRIYA VIDYALAYA AFS RAJOKRI

SUMMER VACATION HOMEWORK

CLASS-VIII, SUBJECT: - SOCIAL

WRITE AND LEARN THE ANSWERS OF FOLLOWING QUESTIONS

(1) What do you mean by separation of power?
(2) What is parliamentary form of government?

(3) What is fundamental right?
(4) What do you mean by archives?
(5) What are differences between evergreen forest and deciduous forest?
(6) Write a note on battle of Plassey?
(7) Who was Mir Zafar?
(8) What is subsidiary alliance?
(9) What is doctrine of lapse?
(10) How many types of resources are there?

PROJECT WORK

(1) Make scrapbook/project/wall magazine on "Historical events of freedom movement of India from 1857 to 1947"

(2) Make scrapbook/project/wall magazine on "Historical monuments of DELHI"

KENDRIYA VIDYALAYA AFS RAJOKRI

SUMMER VACATION HOMEWORK

CLASS-IX, SUBJECT: - SOCIAL

WRITE AND LEARN THE ANSWERS OF FOLLOWING QUESTIONS

(1) The central location of India at the head of the Indian Ocean is considered of great significance. Why?
(2) What are non-farming activities of village Palampur?
(3) What are factors of production?
(4) What is democracy?
(5) What is reign of terror?
(6) What were the reasons of French Revolution?
(7) Why time is measured from 82 ½^0 longitude in India?
(8) What are neighboring countries of India?
(9) How electricity helps people of Palampur?
(10) What is tithe and taille?

PROJECT WORK

(1) Make scrapbook/project/wall magazine on "Historical events of freedom movement of India from 1857 to 1947"

(2) Make scrapbook/project/wall magazine/ppt on "Historical monuments of "DELHI"

SUMMER VACATION HOMEWORK

CLASS-X, SUBJECT: - SOCIAL

WRITE AND LEARN THE ANSWERS OF FOLLOWING QUESTIONS

(1) Define life expectancy, per capita income and literacy rate?
(2) Define infant mortality rate and net attendance ratio?
(3) Write the process of German unification?
(4) Write the process of Italian unification?
(5) What were Marianne and Germania?
(6) Write provisions of Napoleonic Code of 1804?
(7) Write in detail about forms of power sharing?
(8) What is Belgian Model?
(9) What are types of resources? Write in detail.
(10) Write in detail about types of soil?

PROJECT WORK

(1) Make scrapbook/project/wall magazine on “Historical events of freedom movement of India from 1915 to 1942”

(2) Make scrapbook/project/wall magazine/ppt on “RESOURCES AND DEVELOPMENT”

Senior Secondary

केंद्रीय विद्यालय राजोकरी

ग्रीष्मावकाश कालीन गृहकार्य

कक्षा 12 हिंदी

1.कराए गए सभी पाठों के पुस्तक में दिए गए प्रश्न अभ्यास के अतिरिक्त पांच पांच अन्य प्रश्न बनाकर उनके उत्तर कॉपी में लिखो।

2.आत्मपरिचय और दिन जल्दी जल्दी ढलता है कविताओं का काव्य सौंदर्य लिखिए व याद कीजिए।

3. निम्नलिखित विषयों पर रचनात्मक लेख लिखिए :

टेक्नोलॉजी और बदलती दुनिया

बचपन बचाओ

मेरे घर के सामने के पार्क में रहने वाला माली

कार्टून की अनोखी दुनिया

4. अभिव्यक्ति और माध्यम के कक्षा 11 व 12 के सभी पाठों को ध्यान से पढ़िए व परियोजना कार्य के लिए एकत्र कीजिए।

5. प्रतिदिन हिंदी का अखबार पढ़िए और एक फाइल में संपादकीय, आलेख, समाचार, फीचर, स्तंभ लेख, साक्षात्कार, कार्टून कोना, पाठकों के पत्र, विज्ञापन आदि अखबार से काट कर A 4 साइज शीट पर चिपकाइए।

6. आवधिक परीक्षा 1 के लिए अब तक कराए गए सम्पूर्ण कार्य की पुनरावृति कीजिए।

KENDRIYA VIDYALAYA AFS RAJOKRI

Year 2022-23

SUBJECT: MATHEMATICS

CLASS: XII


HOLIDAY
HOMEWORK

Dear students

I am sure that you will enjoy your summer vacation with members of the family and friends. Some of you must be planning to travel or to visit your relatives and grandparents. It will be great if you spend some time with them and gift them something that is handmade and designed by you. This will surely make them feel special. If possible, join some activity classes or learn something new during your holidays. Spend some time reading storybooks, newspapers, watching interesting and informative programs . Help your parents by cleaning up your room, arranging things kept in the cupboard and donating things that you do not need to a NGO .*we have embarked on our journey in this new session, the most awaited time of the year has arrived. Time to relish summer delicacies, rejuvenate our mind and body, rethink and recreate our potentials. Life is all about climbing mountains and fording streams. In these longer days and shorter nights when you spend your time with favorite music and best friends, give space to creativity and honing skills. Ignite the spark of your imagination and spend time purposely, for dreams only become reality when efforts are made for achievement.*

Seema Sharma

RELATIONS & FUNCTIONS

Gist of chapter :

(i).Domain, Co domain & Range of a relation
(ii).Types of relations
(iii).One-one , onto & inverse of a function
Points to be Remember:

Relation and Functions

1.(a) A relation in setA is a subset of A x A . We also write it as R = {(a, b) € Ax A ;a R b}. (b). For relation R in set R, R^{-1} is inverse relation if $R R^{-1} R$ => b R a.

2. A relation R in a set A is said to be reflexive , if (a, a) € R, for every a € A or we say aRa , for every a € A.

3. A realtion R in a set A is said to be symmetric , if (a, b) € R => (b, a) € R, for all a, b € A. We can also say aRb , bRa for every a, b € A.

4. A relation R in a set A is said to be transitive , if (a,b) € R and (b, c) € R => (a, c) € R for every a , b , c € A. We can also say aRb, bRc => aRc , for all a, b , c € A.

5. A realtion in a set A is said to be an equivalence relation if relation R reflexive , symmetric and transitive .

6. A function ƒ is a rule from set A to set B which assigns to each elements of set A , a unique element of set B . Set A is called the domain of the function ƒ set B is known as its co-domain . The set of values from set B which are actually taken by the function ƒ is called the range of the function ƒ .

We denote it as f: A → B , if x € A then f(x) € B.

7. A function whose domain and co – domain are the sets of real numbers is known as a real valued function , i.e ƒ: R → R.

8. One-one function : a function ƒ: A → B is said to be one-one (or injective) , if the images of distinct elements of A under the rule ƒ are distinct in B, i.e for every a, b € A,

a ≠ b => ƒ (a) ≠ ƒ(b) or we also say that ƒ(a) => a = b .

9. one to function ƒ: A → B is said to be onto (or subjective) , if every elements of B is imaged of some element of B is image of some element of A under the rule ƒ , i.e for every b € B , there exists an element a € A such that ƒ (a) = element a € A such that ƒ (a) = b.

NOTE: - A function is onto if only if $□_1$ = □.

10. One – one and onto function: A function ƒ : A → B is said to be one one and onto (bijective **) if ƒ Is both one-one and onto.**

ASSIGNMENTS

Q.1. If A = {1, 2, 3, 4, 5}, write the relation a R b such that a + b = 8, a ,b € A. Write the domain, range & co-domain.

Q.2. Define a relation R on the set **N** of natural numbers by R = {(*x*, *y*) : *y* = *x* + 7, *x* is a natural number less than 4; *x*, *y* ∈**N**}. Write down the domain and the range.

Q.3. Let R be the relation in the set N given by R = {(a,b)| a = b – 2 , b > 6}

Whether the relation is reflexive or not ? justify your answer.

Q.4. Show that the relation R in the set N given by R = {(a , b)| a is divisible by b , a , b ∈ N} is reflexive and transitive but not symmetric.

Q5 Let R be the relation in the set N given by R = {(a ,b)| a > b} Show that the relation is neither reflexive nor symmetric but transitive.

Q6 Let R be the relation on R defined as (a , b) ∈ R iff 1+ ab > 0 ∀ a,b ∈ R.

a. a Show that R is symmetric.
b. Show that R is reflexive.
c. Show that R is not transitive.

Q7 Check whether the relation R is reflexive, symmetric and transitive.

R = { (x ,y)| x – 3y = 0} on A ={1,2,3… 13,14}.

Q8 Show that the function f: N → N given by f(x) = 2x is one-one but not onto.

Q9 Show that the signum function f: R → R given by: $f(x) = \begin{cases} 1, & \text{if } x > 0 \\ 0, & \text{if } x = 0 \\ -1, & \text{if } x < 0 \end{cases}$

is neither one-one nor onto.

Q10 Let A = {-1, 0, 1} and B = {0 , 1}. State whether the function f : A → B defined by f(x) = x^2 is bijective , x ≠ -1,then find $f^{-1}(x)$.

Q11 Let $f(x) = \frac{x-1}{x+1}$

Q12 Let A = {1,2,3}, B = {4,5,6,7} and let f = {(1 , 4),(2 , 5), (3 , 6)} be a function from A to B. State whether f is one-one or not.

Q13 If f: R → R is defined by f(x) = $\frac{3x+5}{2}$. Find f^{-1}

Check the injectivity and surjectivity of the following functions:

14 f: N → N given by $f(x) = x^2$

15 f: Z → Z given by $f(x) = x^2$

16 f: R → R given by $f(x) = x^2$

17 f: N → N given by $f(x) = x^3$

18 f: Z → Z given by $f(x) = x^3$

19 . If f: R → R defined as f(x) = $\frac{2x-7}{4}$ **is an invertible function . Find $f^{-1}(x)$.**

20 . . Write the number of all one-one functions on the set A={a, b, c} to itself.

21 Show that function f : R ⟶ R defined by f(x)= 7 - $2x^3$ for all x ∈ R is bijective

22 Show that the function f: R ⟶ R defined by f(x) = $\frac{2x-1}{3}$. x∈ R is one- one & onto

function. Also find the f^{-1}.

23 . Show that the relation R on A ,A = { x ; x ∈ ℤ , 0 ≤ x ≤ 12 } ,

R = {(a ,b): |a - b| is multiple of 3.} is an equivalence relation.

24 . Show that *f*: [−1, 1] → R, $f(x) = \frac{x}{(x+2)}$ given by is one-one. Find the inverse of the function *f*: [−1, 1] → Range *f*.

25 Let S = {1,2,3}. Find whether the function f : S → S defined as f = {(1,3), (3,2), (2,1)} has inverse. If yes, find f^{-1}

)

26 Show that the relation R on A ,A = { x| x ∈ **Z , 0 ≤ x ≤ 12 } ,**

R = {(a ,b): |a - b| is multiple of 3.} is an equivalence relation.

27 Prove that the Greatest Integer Function *f*: R → R given by *f*(*x*) = [*x*], is neither one-once nor onto, where [*x*] denotes the greatest integer less than or equal to *x*.

28 Let A = Set of all triangles in a plane and R is defined by R={(T_1,T_2) : T_1,T_2 ∈ A & T_1~T_2 }

Show that the R is equivalence relation. Consider the right angled Δs, T_1 with size 3,4,5; T_2 with size 5, 12,13; T_3 with side 6, 8, 10; Which of the pairs are related?

29 Show that the relation R in the set A of all polygons as:

R ={(P_1,P_2), P_1& P_2 have the same number of sides} is an equivalence relation. What is the set of all elements in A related to the right triangle T with sides 3,4 & 5 ?

30 Consider a function f :R_+ → [-5, ∞) defined f(x) = $9x^2 + 6x - 5$. Show that f is invertible **&**

$f^{-1}(y) = \frac{\sqrt{y+6}-1}{3}$, where $R_+ = (0 , \infty)$.

31 Show that the relation R in the set A = {1, 2, 3, 4, 5} given by R = {(a, b) : |a – b| is even}, is an equivalence relation. Show that all the elements of {1, 3, 5} are related to each other and all the elements of {2, 4} are related to each other. But no element of {1, 3, 5} is related to any element of

{2, 4}.

32 . Show that each of the relation R in the set A = {x ∈ **Z** : 0 ≤x ≤12}, given by

R = {(a, b) : |a – b| is a multiple of 4} is an equivalence relation.

Find the set of all elements related to 1.

33 Show that the relation R defined in the set A of all triangles as R = {(T_1, T_2) : T_1 is similar to T_2}, is equivalence relation. Consider three right angle triangles T_1 with sides 6, 8, 10, T_2 with sides 5, 12, 13 and T_3 with sides 12, 16, 20. Which triangles among T_1, T_2 and T_3 are related?

34 If R_1 and R_2 are equivalence relations in a set A, show that $R_1 \cap R_2$ is also an equivalence relation.

35 Let A = **R** – {3} and B = **R** – {1}. Consider the function f : A → B defined by f (x) = $\left(\frac{x-2}{|x-3|}\right)$

. Is f one-one and onto? Justify your answer.

36 Consider f : **R+** → [– 5, ∞) **given by f (x) = 9x² + 6x – 5. Show that f is invertible and find f** $^{-1}$.

37 Show that the function f : W → W defined by

$$f(x) = \begin{cases} x+1, & \text{if } x \text{ is odd} \\ x-1, & \text{if } x \text{ is even} \end{cases}$$ **is a bijective function**

TOPIC 2

INVERSE TRIGONOMETRIC FUNCTIONS

(I).PRINCIPAL VALUE BRANCH TABLE

Inverse trigonometric Functions

1. **Inverse of $\sin^{-1}$ (arc sine function). We also Inverse of sin (sine function) is denoted write as $\sin^{-1} x$. Similarly other inverse trigonometric functions are given by $\sin^{-1} x$, $\cos^{-1} x$, $\tan^{-1} x$, $\operatorname{cosec}^{-1} x$, and $\sec^{-1} x$.**
2. **Note that $\sin^{-1} x \neq \frac{1}{\sin x}$ and $(\sin^{-2} x)^2 \neq \sin^{-1}$. Also $\sin^{-1} x \neq (\sin x)^{-1}$.**

3. Table for domain and range of inverse Trigonometric Functions .

Function **Domain** **Range**

i

$y = \sin^{-1}$	$-1 \le x \le 1$	$-\frac{\pi}{2} \le y \le \frac{\pi}{2}$
$y = \cos^{-1}$	$-1 \le x \le 1$	$0 \le y \le \pi$
$y = \tan^{-1}$	$-\infty \le x \le \infty$	$-\frac{\pi}{2} < y < \frac{\pi}{2}$
$y = \operatorname{cosec}^{-1}$	$x \ge 1$ or $x \le -1$	$-\frac{\pi}{2} \le y \le \frac{\pi}{2}$ $y \neq 0$
$y = \sec^{-1}$	$x \ge 1$ or $x \le -1$	$0 \le y \le \pi$ $y \neq 0$
$y = \cot^{-1}$	$-\infty \le x \le \infty$	$0 < y < \pi$

4. The value of inverse trigonometric function which lies in the range of principal branch is called the principal value of that inverse trigonometric function .

5. Proper Trigonometric functions

(i) $\sin^{-1}(\sin x) = x$ $\quad$ $\sin(\sin^{-1} x) = x$

$\cos^{-1}(\cos x) = x$ $\quad$ $\cos(\cos^{-1} x) = x$

$\tan^{-1}(\tan x) = x$ $\quad$ $\tan(\tan^{-1} x) = x$

$\operatorname{cosec}^{-1}(\operatorname{cosec} x) = x$ $\quad$ $\operatorname{cosec}(\operatorname{cosec}^{-1} x) = x$

$\sec^{-1}(\sec x) = x$ $\quad$ $\sec(\sec^{-1} x) = x$

$\cot^{-1}(\cot x) = x$ $\quad$ $\cot(\cot^{-1} x) = x$

(ii) $\cos^{-1}\left(\frac{1}{x}\right) = \sec^{-1} x$ $\quad$ $\sec^{-1}\left(\frac{1}{x}\right) = x$

$\sin^{-1}\left(\frac{1}{x}\right) = \operatorname{cosec}^{-1} x, x > 0$ $\quad$ $\operatorname{cosec}^{-1}\left(\frac{1}{x}\right) = x$

$\sin^{-1}\left(\frac{1}{x}\right) = \operatorname{cosec}^{-1} x$ $\quad$ $\operatorname{cosec}^{-1}\left(\frac{1}{x}\right) = x$

(iii) $\cos^{-1}(-x) = \pi - \cos^{-1} x$ $\quad$ $\sec^{-1}(-x) = \pi - \sec^{-1} x$

$\cos^{-1}(-x) = \pi - \cos^{-1} x$ $\quad$ $\sec^{-1}(-x) = \pi - \sec^{-1} x$

$\sin^{-1}(-x) = -\sin^{-1} x$ $\quad$ $\operatorname{cosec}^{-1}(-x) = -\operatorname{cosec}^{-1} x$

LEVEL I(20 Questions)

Write the principal value of the following :

1. $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

2. $\sin^{-1}\left(-\frac{1}{2}\right)$

3. $\tan^{-1}\left(-\sqrt{3}\right)$

4. $\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$

5 . Evaluate $\cot[\tan^{-1}a+\cot^{-1}a]$

6. Find x if $\sec^{-1}\left(\quad 2\right)+\operatorname{cos}\operatorname{ec}^{-1}x=\frac{\pi}{2}$

7 . Evaluate $\cos^{-1}\left(\cos\frac{2\pi}{3}\right)+\sin^{-1}\left(\sin\frac{2\pi}{3}\right)$

8 . Evaluate $\sin^{-1}\left(\sin\frac{4\pi}{5}\right)$

9. Evaluate $\cos^{-1}\left(\cos\frac{7}{}\right)$

10 $\tan^{-1}\left(\tan\frac{7\pi}{6}\right)$ **Evaluate.**

11 Find the principal value of

$\sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$

12 $\tan^{-1}(1)+\cos^{-1}\left(-\frac{1}{2}\right)+\sin^{-1}\left(-\frac{1}{2}\right)$ Evaluate

13 Evaluate: $\sin\left[\frac{\pi}{3}-\sin^{-1}\left(-\frac{1}{2}\right)\right]$

14 Find the Principal value of $\sin^{-1}\left(\sin\frac{2\pi}{3}\right)+\sin^{-1}\left(\sin\frac{7\pi}{6}\right)$

15 Evaluate: $\sin^{-1}\left[\sin\left(-\frac{\pi}{4}\right)\right]$

16 Evaluate $\cos^{-1}\left(\cos\frac{2\pi}{3}\right)+\sin^{-1}\left(\sin\frac{2\pi}{3}\right)$

17 Write the principal value of the following

$\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

18 . Evaluate $\cos^{-1}\left(\cos\frac{7}{}\right)$

19 Write the principal value of the following

$\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$

TOPIC 3 MATRICES & DETERMINANTS

(i) Order, Addition, Multiplication and transpose of matrices

(ii) Cofactors & Adjoint of a matrix

(iii)Inverse of a matrix & applications

(iv) To find difference between |A|, |adj A |, **| kA|, |A.adjA|**

1. A matrix is a rectangular array, of number or functions , i.e, arrangement of numbers or functions in row or columns.
2. Matrix having m rows and n columns is of order m x n and total number of elements in matrix are mn . A matrix is denoted by A = $[a_{ij}]$; 1 ≤ I ≤ m and 1 ≤ j ≤ n.
   a_{ij} is known as an element of a matrix lying in the ith row and jth column.
3. An identity matrix or a unit matrix is denoted by /. It is a square matrix whose all non – diagonal elements are zero and diagonal elements are 1 each.
   We also define it as : A square matrix A = $[a_{ij}]$ is an identity matrix or a unit matrix,
   If a_{ij} = 0 for I ≠ j and a_{ij} = 1 for I = j.

e.g I_{2X2} $\begin{bmatrix} 1 & 0 \\ & \end{bmatrix}$, $I_{3\times 3} = I_3 \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$.

4. Row matrix: A matrix having only one row is acalled a row matrix, e.g [2, 4]; [-1, 0, 6].
5. Column matrix: A matrix having only one column is called a column matrix, e.g $\begin{bmatrix} 6 \\ 2 \end{bmatrix}$; $\begin{bmatrix} 1 \\ -2 \\ 5 \end{bmatrix}$.
6. Square matrix: A matrix having equal number of rows and columns is a square **matrix.**

e.g $\begin{bmatrix} 2 & 3 \\ -1 & 4 \end{bmatrix}$ $\begin{bmatrix} 1 & 6 & 0 \\ 3 & -1 & 2 \\ 1 & 4 & 1 \end{bmatrix}$

7. Diagonal matrix: A square matrix whose all the elements expect the diagonal

elements are zero is a called a diagonal matrix .
We define it as : A square matrix A = [a_{ij}] is called a diagonal matrix if a_{ij} = 0 for I ≠ j a_{ij} ≠ 0 for I = j.

e.g $\begin{bmatrix} 5 & 0 \\ 0 & -7 \end{bmatrix}$; $\begin{bmatrix} 2 & 0 & 0 \\ 0 & 5 & 0 \\ 0 & 0 & -3 \end{bmatrix}$.

8. Scalar matrix : A diagonal matrix whose all the elements are equal , non zero , scalar is a scalar matrix , it is denoted by O.

e.g $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$; $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$.

10. A matrix obtained by interchanging rows and columns is called the transpose of a matrix is A, then transpose is denoted by A′ or A^t or A^T.
Also a matrix A = $[a_{ij}]_{m\,X\,n}$, then its transpose is A′ = A = $[a_{ij}]_{m\,X\,n}$.

11. Properties with respect to transpose

(i) (A′)′ = A (ii) (A + B)′ = A′ + B′

(iii) (AB)′ = B′A′ (iv) (kA)′ = ′ , k is a scalar .

12. Equality of matrices : The matrices A and B are said to be equal if (i) their order are **same (ii) elements at the corresponding places are equal , I .e, matrices A = [] and B = [], 1 ≤ î ≤ m, ĵ ≤ n are equal if = , I, j.**

13. A square matrix A = a_{ij} is symmetric if a_{ij} = a_{ij} ¥ I, j.

Also a symmetric matrix A is symmetric , if A′ = A.

14. A square matrix A = a_{ij} is skew symmetric, if a_{ij} = $-a_{ij}$ ¥ I, j.
Also a square matrix A is skew symmetric , if A′ = -A.

15. Daigonal elements of a skew symmetric matrix are always zeros.

16. Multiplication of matrix by scalar k is a matrix of the same order whose each element is obtained by multiplying corresponding element of the given matrix by scalar matrix k.

If matrix A = , then multiplication of matrix A by scalar k is kA = $ka_{ij}{}_{m\,X\,n}$.

17. Addition of matrix : Addition of two matrices are of the same order and their **addition is a matrix of the same order whose each element is obtained by adding the corresponding elements of two matrices , If A = and B = and A + b** = C, then C = $b_{ij}{}_{m\,X\,n}$ where a_{ij} + b_{ij} = c_{ij} ¥ I, j.

18. Properties with respect to addition

(i) Communicative A + B = B + A, for matrices A and B.

(ii) Associative: A + (B + C) = (A + B) + c, for matrices A, B & C.

(iii) Additive identity : For a given matrix A, a zero matrix of the same order as that if A is called its additive identity as

A + O = A.

(iv) Additive inverse : For a given martrix A, a matrix (-A) is called its additive inverse as A + (-A) = O.

19. All main diagonal elements of a skew-symmetric matrix are zero.

20. Every square matrix can be expressed as the sum of a symmetric and a skew- symmetric matrix.

21. All positive integral powers of a symmetric matrix are symmetric.

22. All odd positive integral powers of a skew-symmetric matrix are skew-symmetric.

23. Let A and B be two square matrices of the order n such that AB = BA = I.

Then A is called the inverse of B and is denoted by B = A−1. If B is the inverse of A, then A is also the

inverse of B.

24. If A and B are two invertible matrices of the same order, then $(AB)^{-1} = B^{-1} A^{-1.}$

ASSIGNMENTS

1. If a matrix has 5 elements, what are the possible orders it can have?

2. Construct a 3 × 2 matrix whose elements are given by $a_{ij} = \frac{1}{2}|i - 3j|$

3. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 1 & 3 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 3 & 1 \\ 1 & 0 & 2 \end{bmatrix}$, then find A –2 B.

4. If $A = \begin{bmatrix} 2 & 1 & 4 \\ 4 & 1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -1 \\ 2 & 2 \\ 1 & 3 \end{bmatrix}$, write the order of AB and BA.

5 Find the co-factor of a_{12} in $A = \begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$

6 For the following matrices A and B, verify $(AB)^T = B^T A^T$,

where $A = \begin{bmatrix} 1 \\ -4 \\ 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 2 & 1 \end{bmatrix}$

7 Give example of matrices A & B such that AB = O, but BA ≠ O, where O is a zero matrix and

A, B are both non zero matrices.

8 If B is skew symmetric matrix, write whether the matrix (ABA^T) is

Symmetric or skew symmetric.

9 $A = \begin{bmatrix} 3 & 1 \\ 7 & 5 \end{bmatrix}$ and $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, find a and b so that $A^2 + aI = bA$

10 Find the co-factor of a_{23} in $A = \begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$

11 Find the adjoint of the matrix $A = \begin{bmatrix} 2 & -1 \\ 4 & 3 \end{bmatrix}$

12 If $A = \begin{bmatrix} 2 & 3 \\ 5 & -2 \end{bmatrix}$, write A^{-1} in terms of A

13 Verify A(adjA) = (adjA) A = $|A|I$ if

$A = \begin{bmatrix} 2 & 3 \\ -4 & -6 \end{bmatrix}$

14 Verify A(adjA) = (adjA) A = $|A|I$ if

$\mathbf{A} = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 2 \\ 3 & 3 & 4 \end{bmatrix}$

15 If A is square matrix satisfying $A^2 = I$, then what is the inverse of A ?

16 For what value of k , the matrix $A = \begin{bmatrix} 2-k & 3 \\ -5 & 1 \end{bmatrix}$ is not invertible ?

17 If $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$, show that $A^2 - 5A - 14I = 0$. Hence find A^{-1}

18 Evaluate $\begin{vmatrix} \cos 15^\circ & \sin 15^\circ \\ \sin 75^\circ & \cos 75^\circ \end{vmatrix}$

19 What is the value of $|3I|$, where I is identity matrix of order 3?

20 If A is non singular matrix of order 3 and $|A|$ = 3, then find $|2A|$

21 If A, B, C are three non zero square matrices of same order, find the condition

on A such that AB = AC $\Rightarrow$ B = C.

22 Find the number of all possible matrices A of order 3 × 3 with each entry 0 or

1 and for

swhich $\begin{bmatrix} x \\ y \\ z \end{bmatrix}$ A $\begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$ = has exactly two distinct solutions.

23 If A is a square matrix of order 3 such that $|adjA| = 64$, find $|A'|$

24 If A is a non singular matrix of order 3 and $|A| = 7$, then find $|adjA|$

25 Evaluate $\begin{vmatrix} a+ib & c+id \\ -c+id & a-ib \end{vmatrix}$

26 Express the matrix A as the sum of a symmetric and a skew symmetric matrix, where:

$$\mathbf{A} = \begin{bmatrix} 3 & -2 & -4 \\ 3 & -2 & -5 \\ -1 & 1 & 2 \end{bmatrix}$$

27 If $A = \begin{bmatrix} a & 2 \\ 2 & a \end{bmatrix}$ and $|A|^3 = 125$, then find a.

28 Solve the following system of equations : x + 2y + z = 7, x + 3z = 11, 2x – 3y = 1.

29

Solve the equation for *x*, *y*, *z* and *t* if

$$2\begin{bmatrix} x & z \\ y & t \end{bmatrix} + 3\begin{bmatrix} 1 & -1 \\ 0 & 2 \end{bmatrix} = 3\begin{bmatrix} 3 & 5 \\ 4 & 6 \end{bmatrix}$$

30 $$3\begin{bmatrix} x & y \\ z & w \end{bmatrix} = \begin{bmatrix} x & 6 \\ -1 & 2w \end{bmatrix} + \begin{bmatrix} 4 & x+y \\ z+w & 3 \end{bmatrix}$$

31 Find $A^2 - 5A + 6I$ **if**

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

32 If, **prove that** $A^3 - 6A^2 + 7A + 2I = O$

$$A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$$

33

If $A = \begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$ **and** $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$**, find *k* so that** $A^2 = kA - 2I$

34 If $A=\begin{bmatrix} 0 & -\tan\frac{\alpha}{2} \\ \tan\frac{\alpha}{2} & 0 \end{bmatrix}$ **and *I* is the identity matrix of order 2, show that**

$$I+A=(I-A)\begin{bmatrix} \cos\alpha & -\sin\alpha \\ \sin\alpha & \cos\alpha \end{bmatrix}$$

35 A trust fund has Rs 30,000 that must be invested in two different types of bonds. The first bond pays 5% interest per year, and the second bond pays 7% interest per year. Using matrix multiplication, determine how to divide Rs 30,000 among the two types of bonds. If the trust fund must obtain an annual total interest of:

(a) Rs 1,800 (b) Rs 2,000

36 The bookshop of a particular school has 10 dozen chemistry books, 8 dozen physics books, 10 dozen economics books. Their selling prices are Rs 80, Rs 60 and Rs 40 each respectively. Find the total amount the bookshop will receive from selling all the books using matrix algebra**.**

37 Express the following matrices as the sum of a symmetric and a skew symmetric matrix

$$\begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}$$

38 Find the inverse of each of the matrices, if it exists.

$$\begin{bmatrix} 2 & -3 & 3 \\ 2 & 2 & 3 \\ 3 & -2 & 2 \end{bmatrix}$$

39 Find the inverse of each of the matrices, if it exists.

$$\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$$

40 For what value x, $\begin{bmatrix} 1 & 2 & 1 \end{bmatrix}\begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix}\begin{bmatrix} 0 \\ 2 \\ x \end{bmatrix}=O$ of

41 Using matrix method, solve the system: x + y – z = 1 ; 3x + y – 2z = 3 ; x – y – z = -1

42 Solve the system using matrices: $\frac{2}{x} - \frac{3}{y} + \frac{3}{z} = 10$; $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 10$; $\frac{3}{x} - \frac{1}{y} + \frac{2}{z} = 13$

LAST ONE

An ancient Chinese proverb states: "The best time to plant a tree was 20 years ago. The second best time is now."

Our planet provides us with everything we need to live. In turn, what do we do? Utilize the resources, increase emissions, deplete the ozone layer and then finally, battle with the climate change. The fight against climate change is not only the responsibility of certain countries, leaders and corporations. It is a concern and necessity for all of us. Hence, it is essential to address this message to everyone.

One of the ways to fight the climate change is to increase green spaces on Earth, by planting more trees. As a tree matures, it can consume 21KG of carbon dioxide per year. When we create such awareness among students and the public, it greatly reduces human impact on the environment. So my dear students plant one tree or take care the already planted near your house and send the pics when you care that plant on my email

Seema Sharma
P.G.T (Maths)

K.V.AFS RAjokri

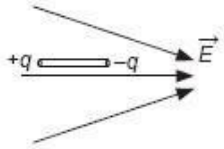
KENDRIYA VIDYALYA SANGATHAN (AFS RAJOKRI)

HOLIDAY HOMEWORK (SUMMER VACATIONS) CLASS- XII

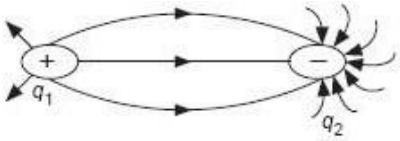
SUBJECT- PHYSICS

1. Draw the electric field lines due to a point charge (i) $Q > 0$ and (ii) $Q < 0$.

2. What is the direction of net force on electric dipole, placed in a non-uniform electric field?



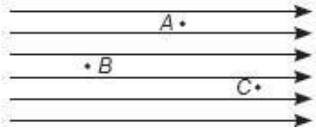
3. Determine the ratio of magnitudes of two charges q_1 and q_2.



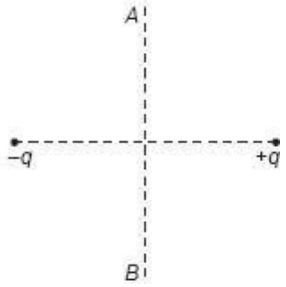
4. Why should electrostatic field be zero inside a conductor?

5. For what position of an electric dipole in a uniform electric field its potential energy is (*i*) minimum and (*ii*) maximum?

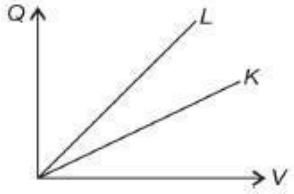
6. Figure given below shows three points *A*, *B* and *C* in a uniform electrostatic field. At which of the points will the electric potential be maximum ?



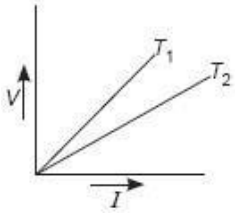
7. A charge q is moved from a point A above dipole of dipole moment P to a point B below the dipole in equatorial plane without acceleration. Find the work done in the process.



8. The following graph shows the variation of charge *Q*, with voltage *V*, for two capacitors *K* and *L*. In which capacitor is more electrostatic energy stored?

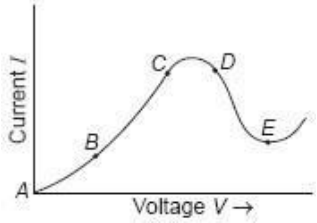


9. *V–I* graph for a metallic wire at two different temperatures T_1 and T_2 is as shown in the figure. Which of the two temperatures is higher and why?



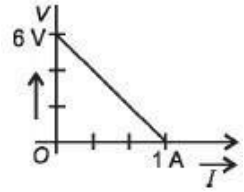
10. A car battery is of 12 V. Eight dry cells of 1.5 V connected in series also give 12 V, but such a combination is not used to start a car. Why?

11. Graph showing the variation of current versus voltage for a material GaAs is shown in the figure. Identify the region of
    (i) negative resistance,
    (ii) where Ohm's law is obeyed.



12. Give an example of a material each for which temperature coefficient of resistivity is (i) positive and (ii) negative.

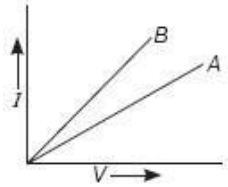
13. The plot of the variation of potential difference across a combination of three identical cells in series, versus current is as shown here. What is the emf of each cell?



14. Two similar wires of same length and same area of cross-section but of different material, having resistivity ρ_1 and ρ_2 are connected end to end (in series). Calculate the effective resistivity of their combination.

15. Two materials, Si and Cu, are cooled from 300 K to 60 K. What will be the effect on their resistivity?

16. Out of V – I graph for parallel and series combination of two metallic resistors, which one represents parallel combination of resistors? Justify your answer.



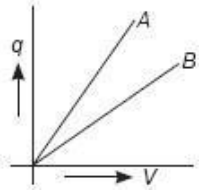
17. Two fixed point charges + 4 *e* and + *e* units are separated by a distance '*a*'. Where should the third point charge be placed for it to be in equilibrium?

18. An oil drop of mass m and charge – *q* is to be held stationary in the gravitational field of the earth. What is the magnitude and direction of the electrostatic field required for this purpose?

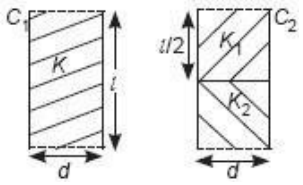
19.2

Plot a graph showing the variation of coulomb force ($\left(\frac{1}{r^2}\right)$) versus *F*, where *r* is the distance between the two charges of each pair of charges: (1μC, 2μC) and (2μC, – 3μC). Interpret the graphs obtained.

20. The given graph shows that variation of charge *q* versus potential difference *V* for two capacitors *C*1 and *C*2. The two capacitors have same plate separation but the plate area of *C*2 is double than that of *C*1. Which of the lines in the graph correspond to *C*1 and *C*2 and why?



21. Two identical parallel plates (air) capacitors *C*1 and *C*2 have capacitances *C* each. The space between their plates is now filled with dielectrics as shown. If the two capacitors still have equal capacitance, obtain the relation between dielectric constants *K*, *K*1 and *K*2.



22. Two point charges 2μC and –2μC are placed at points *A* and *B*, 6 cm apart.

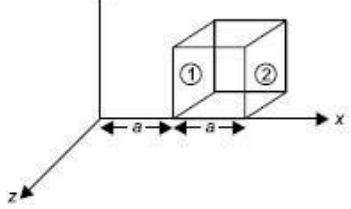
    (i) Draw the equipotential surfaces of the system.

    (ii) Why do the equipotential surfaces get closer to each other near the point charges?

23. State Gauss's law in electrostatics. A cube with each side a is kept in an electric field given by $\vec{E} = Cx\hat{i}$, (as is shown in the figure) where *C* is a positive dimensional constant. Find out

    (i) the electric flux through the cube, and

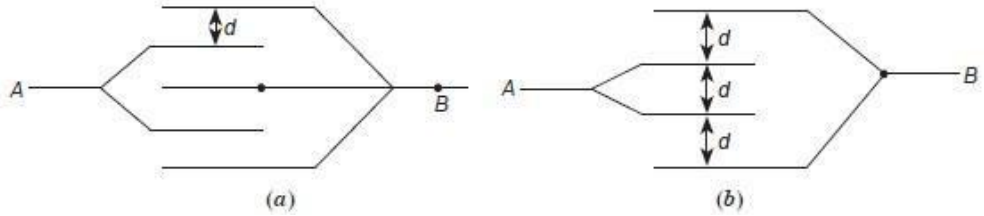
    (ii) the net charge inside the cube



24. Four charges +*q*, –*q*, +*q* and –*q* are to be arranged respectively at the four corners of a square *ABCD* of side a. a Find the work required to put together this arrangement.

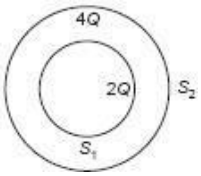
b A charge q_0 is bought to the centre of the square, the four charges being held fixed. How much extra work is needed to do this?

25. Five identical horizontal square metal plates each of area *A* are placed at a distance d apart in air and connected to the terminals *A* and *B* as shown in the figures (a) and (b). Find the effective capacitance between the two terminals *A* and *B*.

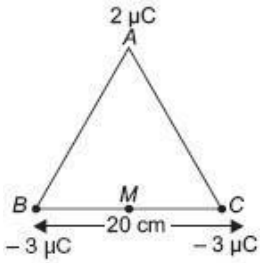


a (a) Deduce the expression for the torque acting on a dipole of dipole moment $\vec{p}$ in the presence of a uniform electric field $\vec{E}$.

b Consider two hollow concentric spheres, *S*1 and *S*2, enclosing charges 2*Q* and 4*Q* respectively as shown in **the figure. (i) Find out the ratio of the electric flux through them. (ii) How will the electric flux through the sphere S_1 change if a medium of dielectric constant 'ε_r' is introduced in the space inside S_1 in place of air? Deduce the necessary expression.**



27. Three point charges of +2 μC, –3 μC and –3 μC are kept at the vertices *A*, *B* and *C* respectively of an equilateral triangle of side 20 cm as shown in the figure. What should be the sign and magnitude of the charge to be placed at the mid-point (*M*) of side *BC* so that the charge at *A* remains in equilibrium?



28. Given a uniform electric field $\vec{E} = 5 \times 10^3 \hat{i}$ N/C, find the flux of this field through a square of 10 **cm on a side whose plane is parallel to the *y*-*z* plane. What would be the flux through the same square if the plane makes a 30° angle with the *x*-axis?**

HAVE A HEALTHY AND ENJOYABLE HOLIDAYS

Class 12 biology

Do the given worksheets for already done chapters
Make the project for your final cbse practical exam
Make a slogan or write an essay on conservation of water
Make a project in group in any innovative form on one topic from the unit -principles and Molecular

basis of inheritance

KENDRIYA VIDYALAYA AFS RAJOKARI

SUMMER VACATION– HOLIDAYS HOMEWORK

SESSION-2022-23

CLASS XII- CHEMISTRY

Q1 Prepare one Investigatory Project of Chemistry (Suggested Topicswill be shared separately)

Q2 Write down all the formulas of Chapter – solution and electrochemistry on a colorful page and paste it in your Classworkcopy.

Q3 Make the mind Maps of the Chapter Solutions and Electrochemistryin your class copy. Also make a separate file for notes of all the chapters. Complete the notes of Ch2 and Ch3 on A4 sheets .

Q4 Learn the scheme of Qualitative analysis of cation and anion forpractical examination. (Shared separately)

Q5 Learn the elements of d block (3d,4d and 5d series) and f block (lanthanoids and actinoids) from the periodic table

Q6 Explore, identify and relate practical applications of Chemistry in real life from the chapter solutions, Electrochemistry and ChemicalKinetics.

Q7 Learn and prepare syllabus done until now for upcoming Periodictests.

Q8 Learn and write the name reactions from organic chemistry- Part 2Chapter 10,11,12 and 13

(Do the following assignments on A4 sheets/or a separate practice copy.)

Solutions – Chemistry – Ch-2
Assignment

* Problems on Concentration of solutions :

Q1 The density of 85% of H_2SO_4 is 1.7 g/cm³. What is the volume of solution which contains 17g of H_2SO_4? (Ans 11.8 cm³)

Q2 The density of 10% by mass KCl solution is 1.06 g/cm³. Calculate the molarity of the solution. (Ans 1.42M)

Q3 If density of some lake water is 1.25 g/mL and it contains 92g of Na^+ ions per kg of water, calculate the molality of Na^+ ions in the lake. (Ans 3.2 molal)

Q4 The molefraction of a solute in solution is 0.1. At 298K, molarity of this solution is same as its molality. Density of this solution at 298K is 2.0 g/cm³. Calculate the ratio of molar masses of solute & solvent. (Ans $M_B/M_A = 9$)

Q5 Express the conc of 5% mass of solution of $Na_2S_2O_3$ in terms of a) Molarity b) Molality and c) Mole fraction, if density of solution is 1.04 g/L. (Ans M = 0.329, m = 0.333, $\chi_B = 5.95 \times 10^{-3}$)

* Problems on Henry's law and Raoult's law

Q6 K_H for oxygen dissolved in water is 4.34×10^4 atm at 25°C. If partial pressure of O_2 in air is 0.2 atm under ordinary atmospheric conditions, calculate the conc (mole/L) of dissolved O_2 in water. (Ans 2.55×10^{-4})

Q7 What conc of N_2 should be present in glass water at room temp? Assume temp of 25°C, a total pressure of 1 atm & mole fraction of N_2 in air as 0.78 (K_H of N_2 8.42×10^{-7} M/mm Hg) (Ans 2.77×10^{-2} mol)

Q8 Calculate solubility of CO_2 in water at 298K under 760 mm of Hg (K_H of CO_2 in water is 1.25×10^{-4} mm Hg) (Ans 6.08×10^{-4})

Q9 The vapour pressure of an aqueous soln of glucose is 750 mm of Hg at 100°C. Calculate its molality & mole fraction of solute. (Ans 0.73 m, $\chi_B = 0.013$)

Q10 The vap pressure of pure liquid A & B are 450 mm & 700 mm of Hg respt. at 350K. Calculate the composition of the liquid mixture if the total vapour pressure is 600 mm of Hg. Also find composition of mixture in vapour phase. (Ans 0.6, 0.7)

Q11 Vap pressure of pure components A & B are 120 mm of Hg & 96 mm of Hg respt. What will be total pressure when the solution contains 1 mole of A & 4 moles of B if the solution is Ideal. (Ans 100.8 mm of Hg)

* Problems on colligative properties

Q12 At 298K, 1.0g of non volatile solute is dissolved in 100g of acetone (mol mass = 58). The vapour pressure of the solution at this temperature is found to be 192.5 mm of Hg. Calculate the molar mass of the solute. The vapour pressure of pure acetone at 298K is found to be 195 mm of Hg. (Ans M = 44.62 g/mol)

Q13 Vapour pressure of water at 20°C is 17.5 mm of Hg. Calculate the vapour pressure of the solution at 20°C when 15g of glucose is dissolved in 150g of water. (Ans 17.328 mm)

Q14 The vapour pressure of pure water at 30°C is 31.80 mm of Hg. How many grams of urea (Mol mass = 60) should be dissolved in 1000g of water to lower the vapour pressure by 0.25 mm of Hg. (Ans – 26.2g)

Q16 A solution is prepared by dissolving 1.25g of oil in 99.0g of benzene has a BP of 80.31°C. Determine the molar mass of this compound (BP of pure benzene = 80.10°C) and K_b for benzene = 2.53 K Kg/mol. (Ans 152.12 g/mol)

Q17 For a dil solution containing 2.5 g of a non-volatile and non-electrolyte solute in 100 g of water, the elevation in BP of 1 atm pressure is 2°C Assuming that the concentration of solute is much less than conc of solvent, what is the Vap pressure (mm of Hg) of the solution. ($K_b = 0.76$ K kg/mol) (Ans $m_2 = 9.5$ g/mol, VP = 723.12)

Q18 Menthol is a crystalline substance. A 6.2% solution of menthol in cyclohexane freezes at 1.95°C Determine the molar mass of menthol. The freezing point & molal depression constant for cyclohexane are 6.5°C & 20.2 K/m respectively (Ans 158 g/mol)

Q19 Molal enthalpy of fusion of water is 6.0246 KJ/mol at 273K. Calculate the molal depression constant for water (Ans 1.85 K/m)

Q20 When 2.56 g of sulphur is dissolved in 100g of CS_2, the freezing point of the solution gets lowered by 0.383 K. Calculate the formula of sulphur (S_x) [given K_f of CS_2 = 3.83 K kg/mol, mass of sulphur = 32 g/mol) (Ans S_8)

Q21 What osmotic pressure would 1.25 molal sucrose solution exhibit at 25°C? The density of the solution is 1.34 g/mL. (Ans 28.7 atm)

Q22 At what concentration of 'P' the solution will be isotonic with a 5% solution of urea? (Molar mass of P = 342 g/mol) (Concentration of solute P = 28.5 %)

Q23 200ml of an aq soln of protein contains 1.26 g of the protein. The osmotic pressure of such a solution is found to be 2.7×10^{-3} bar at 300 K. Calculate the molar mass of protein ($R = 0.083$ L bar/mol/K) (Ans 58,100 g/mol)

* Problems on Vant' Hoff factor

Q24 Calculate the amount of $CaCl_2$ (Mol. m = 111 g/mol) which must be added to 500 g of water to lower its freezing point by 2K, assuming $CaCl_2$ to be completely dissociated (K_f for water = 1.86 K kg/mol) (Ans 14.89 g)

Q25 17.4% K_2SO_4 solution at 27°C is isotonic with 4% NaOH solution at same temperature. If NaOH is 100% ionised, what is the degree of ionisation of K_2SO_4 in aq solution? (Ans M of K_2SO_4 = 1M = M of NaOH, i K_2SO_4 = 2, % = 50%)

Q26 Calculate the BP of a solution containing 0.61 g of benzoic acid in 5 g of CS_2 assuming 84% dimerisation of acid. The BP and K_b of CS_2 are 46.2°C & 2.3 K kg/mol respectively. (Ans 46.33 °C)

Q27 A solution containing 1.9 g / 100ml of KCl (Mol mass = 74.5 g/mol) is isotonic with a solution containing 3g / 100ml of urea (M = 60 g/mol) Calculate the degree of dissociation of KCl solution. Assume that both have same temperatures. (α = 96%)

~~Q28 Calculate the BP of a solution containing 0.61g of benzoic acid in 5g of CS_2 assuming 84% dimerisation of acid. The BP of CS_2 and K_b are 46.2°C & 2.3 K kg/mol respectively. (Ans 4~~

Q28 3.9 g of benzoic acid dissolved in 49 g of benzene shows depression in FP of 1.62K Calculate Vant Hoff factor & predict the nature of solute (ass./diss.) (Mol. mass of benzoic acid = 122 g/mol, K_f of benzene = 4.9 K/kg/mol) (Ans i = 0.506, Associated)

Q29 An 0.01 m aq solution of $AlCl_3$ freezes at −0.068°C. Calculate the percentage of dissociation. (Given K_f of water = 1.86 K kg/mol) (α = 88%)

Q30 A 1.0 molal aq solution of trichloroacetic acid (CCl_3COOH) is heated to BP. The soln has its BP of 100.18°C. Determine the Vant Hoff factor for CCl_3COOH. (K_b of water = 0.512 K kg/mol) (Ans 0.351)

Chemistry – CH-3 – Electrochemistry – Assignment

* Problems on E°_{cell}, Nernst eqn, ΔG, Equilibrium Constant

Q1 Calculate E_{cell} for $Mg(s) | Mg^{2+}(0.1M) || Cu^{2+}(0.001M) | Cu(s)$ given, $E^\circ_{Cu^{2+}/Cu} = 0.34V$
$E^\circ_{Mg^{2+}/Mg} = -2.37V$. (Ans 2.65V)

Q2 A voltaic cell is set up at 25°C with following half cell : $Ag^+(0.001M) | Ag$ & $Cu^{2+}(0.1M) | Cu$. What would be the voltage of the cell ($E^\circ_{cell} = 0.46V$) (Ans 0.3125V)

Q3 A Cu-Ag cell is set up. The Cu ion conc in it is 0.10M. The conc of silver ions is not known. The cell potential is 0.422V. Determine the conc of silver ions in the cell. (Given $E^\circ_{Ag^+/Ag} = 0.80V$, $E^\circ_{Cu/Cu^{2+}} = -0.34V$) (Ans 7.15×10^{-2} M)

Q4 Calculate the potential of the half cell reaction containing 0.1M $K_2Cr_2O_7$, 0.20M $Cr^{3+}(aq)$ and 1.0×10^{-4} M $H^+(aq)$. Half cell reaction is :–
$Cr_2O_7^{2-}(aq) + 14H^+(aq) + 6e^- \longrightarrow 2Cr^{3+}(aq) + 7H_2O(l)$, $E^\circ_{cell} = 1.33V$ (Ans 0.78V)

Q5 A cell reaction is given as $A(s) + B^{2+}(aq) \rightleftharpoons A^{2+}(aq) + B(s)$, Equilibrium constant K_c of the cell is 10. Calculate E°_{cell}. (Ans 0.02955V)

Q6 Calculate the eqm constant of the disproportionation reaction : $2Cu^+(aq) \longrightarrow Cu(s) + Cu^{2+}(aq)$ at 25°C. Given $E^\circ_{Cu^+/Cu} = 0.52V$, $E^\circ_{Cu^{2+}/Cu^+} = 0.16V$.
(Ans $K_c = 1.2 \times 10^6$)

Q7 Calculate ΔG° & Log K_c for the reaction : $2Al + 3Cu^{2+}(aq) \longrightarrow 2Al^{3+}(aq) + 3Cu(s)$
Given $E^\circ_{cell} = 2.02V$ (Ans 205) ($\Delta G = -1169.580$ KJ/mol)

Q8 Calculate ΔG° for the reaction $Au + Ca^{2+}(aq)(1M) \longrightarrow Au^{3+}(aq\,1M) + Ca(s)$
Given $E^\circ_{Au^{3+}/Au} = 1.50V$, $E^\circ_{Ca^{2+}/Ca} = -2.87V$, Predict whether the reaction will be spontaneous or not. (Ans $\Delta G = +2530.23$ KJ, not sp)

Q9 At what pH of HCl solution be H_2 gas electrode show electrode potential of $-0.118V$? H_2 gas is passed at 298K and 1atm pressure. (Ans pH = 2)

Q10 A zinc rod is dipped in 0.1M solution of $ZnSO_4$. The salt is 95% dissociated at this dilution at 298K. Calculate the electrode potential [Given $E^\circ_{Zn^{2+}/Zn} = -0.76V$]
(Ans $E^\circ_{Zn^{2+}/Zn} = -0.79V$)

Q11 Estimate min potential difference needed to reduce Al_2O_3 at 500°C. The free energy change for the decomposition rxtn $\frac{2}{3}Al_2O_3 \longrightarrow \frac{4}{3}Al + O_2$ is 960 KJ (Ans $E_{cell} = -2.48V$)

Q12 Calculate E°_{cell} for the rxtn $2Al + 3Cu^{2+}(0.01M) \longrightarrow 2Al^{3+}(0.01M) + 3Cu$ (Given $E_{cell} = 1.98V$) ($E^\circ_{cell} = 1.9997V$)

* Problems on R, P, G, K, Λ_m, G^*, α, K_a, Kohlrausch's law

Q13 Conductivity of 2.5×10^{-4} M methanoic acid is 5.25×10^{-5} S/cm. Calculate its molar conductivity and degree of dissociation (Given $\lambda^\circ(H^+) = 349.5$, $\lambda^\circ(HCOO^-) = 50.5$) (Ans 52.5 ...)

Q14 The electrical resistance of a column of 0.05M NaOH solution of diameter 1cm and length 50cm is 5.55×10^3 ohm. Calculate resistivity, conductivity & molar conductivity. (Ans 87.13 Ω cm, 0.01148 S/cm, 229.63 cm^2/mol)

Q15 Molar conductivity of a 1.5M solution of an electrolyte is found to be 138.9 Scm^2/mol. Calculate the conductivity of the solution. (Ans 0.2084 Scm^{-1})

Q16 When a certain conductance cell was filled with 0.1 mol/L KCl solution, it had a resistance of 85 ohm at 298K. When same cell was filled with an aq solution

of 0.052 mol/L of an electrolyte, the resistance was 96Ω. Calculate the molar conductivity of the electrolyte when conductivity of 0.1 mol/L KCl solution is 1.29×10^{-2} ohm^{-1} cm^{-1}) (Ans 220.25 cm^2/mol)

Q17 The measured resistance of a conductivity cell containing 7.5×10^{-3}M solution of KCl was 1005Ω. Calculate i) Conductivity ii) Molar conductivity. Given cell constant is 1.25 cm^{-1} (Ans 1.244×10^{-3} S cm^{-1}, 165.87 S cm^2/mol

Q18 The resistance of a conductivity cell containing 0.001M KCl solution at 298K is 1500Ω, what is the cell constant if the conductivity of 0.001M KCl solution is 0.146×10^{-3} S cm^{-1}? (Ans 0.219 cm^{-1})

Q19 The conductivity of 0.001 mol/L solution of CH_3COOH is 4.95×10^{-5} S cm^{-1}. Calculate its molar conductivity and degree of diss. Given $\Lambda^\circ_{H^+} = 349.6$ $\Lambda^\circ_{CH_3COO^-} = 40.9$)
(Ans $\Lambda_m = 49.5$ S cm^2/mol, $\alpha = 0.127$)

* Problems on Laws of electrolysis

Q20 Calculate no. of coulombs required to deposit 40.5g of Al when the electrode reaction is $Al^{3+} + 3e^- \rightarrow Al$ (Ans 4.342×10^5 C)

Q21 Calculate the time to deposit 1.5g of Ag at cathode when a current of 1.5A is passed through the solution of $AgNO_3$ (Ans 14.85 min)

Q22 Chromium metal is electroplated using an acidic soln containing CrO_3 acc to the eqn: $CrO_3(aq) + 6H^+ + 6e^- \rightarrow Cr(s) + 3H_2O$ Calculate how many grams of Cr will be electroplated by 24,000 C. How long will it take to 1.5g Cr using 12.5A current? (Ans 2.156g, 1336 sec)

Q23 A steady current of 2 amp was passed through 2 electrolytic cell X and Y connected in series containing electrolyte $FeSO_4$ and $ZnSO_4$ until 2.8g of Fe deposited at the cathode of cell X. How long did the current flow? Calculate the mass of Zn deposited at cathode of cell Y (Fe = 56 g/mol, Zn = 65 g/mol) (Ans 4825 s, Zn = 3.25g)

Q24 How many moles of Cu will be deposited by passing 24125 C of electric current through $CuSO_4$ soln? (Ans 0.125 mol)

Q25 Calculate the mass of Ag deposited at cathode when a current of 2 amp was passed through a solution for 15 min. (Ans 2.014g)

* Product of Electrolysis :-

Q26 Write the product for electrolysis for the following :-

a) H_2SO_4 (dil, conc) with Pt electrodes
b) $CuSO_4$ (aq) with Cu electrodes
c) $CuSO_4$ (aq) with Pt electrodes
d) NaCl (aq) with Pt electrodes
e) $CuCl_2$ (s) with Pt electrode
f) $AgNO_3$ (aq) with Ag electrodes

Learn and develop some skill among yourself

Always remember time spent among books will never go wasted-Sooner or Later youwill be paid back

Relax and enjoy

Holiday home work

Class XII B

(ACCOUNTANCY)

1. Solve all unsolved practical problems of text book (from completed chapters)
2. Extra questions from different books or previous years sample papers of CBSE . (5 from each chapter)
3. Notebook to be completed during vacations.

(BUSINESS STUDIES)

1. Mind map of all completed chapters to be prepared by the students . Materials have already been provided for above .
2. Case studies and application based questions to be solved in notebook (10 from each chapter)
3. Primary data to be collected by the students for project work .
4. Notebook to be completed during vacations.

Kendriya Vidyalaya AFS Rajokri, New Delhi

Holidays Home Work (Summer Break) (2022-23)

Subject: Economics

Class- XII

1. Complete all the work done in class.

2. Revise the syllabus for PT1 exam.

3. Prepare Project on the topic assigned by CBSE.

4. Prepare 20 questions of 1mark from each chapter: 1 Money and banking

2. Government Budget

3. Indian economy on the eve of independence

4. Indian Economy (1950 - 1990)

5. New economic policy 1991

Ritu Tanwar

PGT (Economics

KV AFS Rajokri, New Delhi

Summer vacation Holidays Home work

S. No.	Class	Subject	Topic
1	XII	Computer Science	I. Follow up of Monthly test
			II. Watch recorded videos of review of Python & Function chapters
			III. Complete assignment through www.pythonworld.in
			IV. Make notes of Review of Python & Function chapter
			V. Complete Practical note book for the review of Python & Function chapters
			VI. Solve all quiz through www.pythonworld.in
			VII. Solve 5 sample paper for the practice of PT-I

S. No.	Class	Subject	Topic
1	X	Artificial Intelligence	I. Follow up of Monthly test
			II. Make notes of Part-B (Introduction to AI) & Part-A (Communication Skills & Green Skills)
			III. Solve all Quiz through www.pythonworld.in
			IV. Complete practical of Part-A Unit-03 & Part-B Unit-I

			V. Complete Practical note book for the Python chapters
			VI. Make chart for the decoration of Computer Lab
			VII. Solve assignment & worksheet
			VIII. Solve 5 sample paper for the practice of PT-I

D.S. Thakur

PGT (Comp. Sci.)

Open with

A. Answer the following questions:

1. What do you mean by term Canvas of Python turtle graphics?
2. Why do we use turtle?
3. Why do you require to set up Python turtle screen?
4. What is home position? How many quadrants are there in python turtle screen?
5. How do you change the direction of turtle?

B. Fill in the blanks:

1. There are ..... quadrants in Python turtle.
2. A .....is a set of instructions to make a shape.
3. pen.fd(100) will move the turtle 100 ..... In forward direction.
4. ..... Is the default shape of turtle.
5. ..... and ..... are used to turn the face of the turtle.

C. Match the following:

A	B
a. Canvas is	1. Home
b. import	2. Used for giving different parameters for defining the behaviour of pen
c. The default position of turtle	3. Used for repetitively running the commands
d. Pen1.pen()	4. Python turtle drawing area
e. for	5. Used for including Python turtle library for using the functions of turtle

D. Select the correct answer for each question:

1. pen.circle(n) has n as :

a. side b. radius c. diameter d. None

2. Which of the following is not a valid command in turtle graphics?

a. fd() b. bd() c. lt() d. rt()

3. You can use pen.dot(n) for drawing a ?

a. dot b. filled circle c. circle d. none of these

4. pen.clone() is used to -

a. create a different pen b. define a pen c. copy a pen d. both a and c

5.What is the highest value we can give in pen.speed()?

a. 4 b. 1 c. 10 d. 5

E. State True or False.

1. By default face of the turtle is downwards.
2. We can define more than one turtle on a screen of turtle graphics.

3. We cannot change the outline color of pen.
4. We can fill the shape with any color of our choice.
5. pen.forward(100) is same as pen.fd(100).

Something to Do:

1. We can position the turtle to any x,y location. Use the following command to go to any coordinate wrt home.

>>>turtle.goto(x,y)

e.g. turtle.goto(10,20)

2. Turtle.up() can be used to stop all drawing on the screen, cursor can still be placed at any location. Drawing will resume when you call turtle.down() again

Turtle.clear() can be used to clear the entire screen area. Try it as the last command.

1. **Write the brief of Computer with its generation.**
2. **Make a list of basic components of computer and paste their images in yourcopy.**
3. **What is the difference between Input and Output devices? Make a list of thesame and paste their images in your copy.**
4. **Write Do's and Don'ts while working on computer in lab/ in home.**
5. **Make a list of different types of printers in details with their images.**

CLASS VII Computer

Something to Know:

A. Answer the following questions:

1. Explain the terms:
   a. Algorithm
   b. Flowchart
2. Why do we require Coding?
3. List various symbols used in flowchart development.
4. Differentiate between Flowchart and Algorithm.
5. Write any two advantages of flowchart.

B. Fill in the blanks:

1. A .....is a diagram that depicts a process, system or computer algorithm.
2. ..... and ..... are advantages of flowchart.
3. ..... are used to describe the flow of control in a program.
4. Using the programming language to get the computer to behave as desired is termed as .....
5. Writing instructions of a program in English language to solve a particular problem is known as developing .....

Open with

C. Match the following:

A	B
a. Used to depict process visually	1. Terminator
b. As easy to write in English	2. Coding
c. Used to develop a is a computerized solution of a problem	3. Flowchart
d. start/stop of a program is known as	4. Algorithm
e. It is a process of creating computerized solution of a problem	5. Python

D. **Select the correct answer for each question:**

1. The ..... is a convenient tool to represent the flow of control in a program?

a. Algorithm b. Flowchart c. Decision Chart d. None

2. In a flowchart, a process is represented by:

a. A rhombus b. A circle c. A rectangle d. A parallelogram

3. What should be considered when designing an algorithm?

a. if the correct hardware is being used

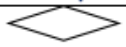
b. if the correct software is being used

c. if there is more than one way of solving the problem

4. What shape represents the start and End of a flowchart?

a. Oval b. Rectangle c. Diamond d. Square

5. Which of the following symbol is used to mark a question/decision in flowchart?

a. 	b. 	c. 	d. 

E. State True or False

1. Programming languages give instruction to computer.
2. The order of the instructions is very important when you write an algorithm.
3. We can't develop algorithm without using computer.
4. Flowchart is a type of graphical diagram that represents an algorithm.
5. Data flow in flowchart is represented through diamond symbol

1. **What are the main threats to the computer? Make a list.**
2. **What are computer virus and its history? Write all types of computer virus?**
3. **What are Cyber Crime and Cyber Law?**
4. **Write Do's and Don'ts while working on computer in lab on a chart paper.**
5. **What is the difference between Backup and Restore in computers?**

A. Answer the following questions.

1. What do you mean by Wizard?

_____

2. What is the importance of a Wizard?

_____

3. Can we assign a primary key to a field during the creation of a table using wizard?

_____

4. What do you mean by a query?

_____

5. What is the use of query in a database?

_____

B. Fill in the Blanks

1. A _____ is a step by step help of the procedure of creation of a database object.

2. A _____ is a request to fetch some information from a database.

3. One can _____ a field either by ascending or descending order during the creation of a query.

4. We can add or delete _____(s) from the table at the time of creation of a table using wizard.

5. One can give _____ name to a field/column during the creation of a query using wizard.

C. State True / False:-

1. Any number of columns may be added to the table during creation using wizard.

2. A wizard is a step-by-step guide to create a table only.

3. Query is a request of information from the table.

4. A query may have few or all columns as per the need of information.

5. A query once created cannot be deleted.

SOMETHING TO DO

1. Create a table named "Customers" using Wizard that will having the following fields:

Field Name	Data Type
CustomerID	Integer
First Name	Varchar
CompanyName	Varchar
MobileNumber	Integer
Department	Varchar

Also, add any 10 records into the above table on your own.

2. Create the following queries on the above table "Customers" using Wizard:-

(a) To display the name of those customers who have "Finance" Department. (Add some values of "Finance" in the Department column).

(b) To display the name and mobile number of all customers in ascending order of their first names.

(c) To display all records in descending order of their Mobile Number.

(d)To display the name of all the customers who have Mobile Number less than 9555565555.

1. **What is the main difference between Algorithm and Flow chart? Write in details with images.**
2. **What are various types of boxes used in Flow chart? Define each with imagesand examples on a chart paper.**
3. **Write Do's and Don'ts while working on computer in lab/ in home.**
4. **What are the full forms of PDF, GOOGLE, YAHOO, MOUSE, IMPS, RTGS, NEFTand CVV?**

CLASS IX AI

Q1- The most effective way of communication –
a) Written
b) Verbal
c) Both of above
d) None of the above

Q2- Barriers to written communication can be
a) Language
b) Expressions
c) Verbal
d) None of the above

Q3- What do you think is necessary to perform a specific job in the desired manner.
a) Advice
b) Administration
c) Management
d) All of the above

4- Eye contact is very important in –
a) Face to face communication
b) Verbal
c) Written
d) Indirect

5- Eye contact is very important in –
a) Face to face communication
b) Verbal
c) Written
d) Indirect

6 What do you mean by self – management skills?

7. What are the different practices of self management skills?

8. Self – management skills strengths and weaknesses

9. What are the factors that decrease self – confidence?

10 **Question 1: Explain the features of Python language.**

11. **Question 2: Explain print() function with an example.**

12. **Question 3: Explain comments in Python with an example.**

13. **Question 4: Explain variables with an example.**

14. **Question 6: Explain the various types of data types supported by Python.**

15. **Question 7: Explain type function with example.**

Question 10: Explain input() function with an example.

Answer: input() function is used to get the input from the user.

Syntax:
input(prompt)

Example:

```
print("Enter your name: ")
name = input()
print("Hello " + name)
```

Output:

```
Enter your name: ABCD
Hello ABCD
```

16.

17. **Question 12: Write a program to display a number.**

Question 14: Write a program to find three different types of data.

Answer:

For integer number:

```
a=15
print(type(a))
```

Output: <class 'int'>

For float number:

```
b=3.15
print(type(b))
```

Output: <class 'float'>

For string:

```
c="Hello"
print(type(c)
```

Output: <class 'str'>

18.

Question 16: Write a program to perform addition of three numbers.

Answer:

```
a=input("Enter a number: ")
b=input("Enter a number: ")
c=input("Enter a number: ")
sum=int(a)+int(b)+int(c)
print(sum)
```

Output:

Enter a number: 10

Enter a number: 20

Enter a number: 30

60

19.

Write a program to perform all arithmetic operations by reading two numbers.

20.

1. Make a poster on different types of AI domains.
2. Write down the history of AI.
3. Write the coding for a simple calculator (addition,multiplication,subtraction,division) in PYTHON