

**SHAMBHU DAYAL GLOBAL SCHOOL**  
**WINTER'S HOLIDAY HOMEWORK(2023-24)**  
**CLASS IX**

1

English

\*Write an Extended Essay on A-4 Sheets on of the given topics(ACCORDING TO THE ROLL NO) in 1000 words. You also need to mention BIBLIOGRAPHY at the end of the Essay.

\* Along with hard copy of Extended Essay students need to submit a Video of Extended Essay which contains the EXPLANATION of your Essay.

**TOPICS:**

- 1.Quantum Mechanics role in advancing science. (Roll no 1to 3)
- 2.Crypto Currency and its implication in global economy. (Roll no 4 to 7)
- 3.Impact of climate change in hilly areas. (Roll no 8 to 10)
- 4.Astro Physics and Mystery of Black Holes. (Roll no 11 to 13)
- 5.Human Genome Project. (Roll no 14 to 16)
- 6.Roles of Drones in modern warfare. (Roll no 17 to 20)
- 7.Historical Evolution of Olympic Games. (Roll no 21 to 24)
- 8.Plastic Pollution. (Roll no 25 to 28)
- 9.Role of Probiotics in human health. ( Roll no 29 to 32)
- 10.Machine Learning and its application in finance. (Roll no 33 to 34)
- 11.Fast Fashion industries environment mental impact. (Roll no 35to 37)
- 12.Nano Technology in Cancer treatment. (Roll no 38 to 40)
- 13.Evolution of special effects in cinema. (Roll no 41 to 43)

**REVISION WORKSHEET**

Choose the correct determiner from the brackets (Editing)

1. Let us save (a little, the little) for a rainy day.
2. Won't you have (many, some) tea? Yes, I'll have (a little, a few).
3. Don't you have (any, some) match at all? Of course, we have (any, some).
4. He is mischievous, like (many, a good many) boys.
5. (Many a, A good many) persons have made the same mistake.
6. (Every, Many) boy is keen on gymnastics.
7. Generally, Mr Jones doesn't have (many, much) money with him. But whenever he goes to visit his grandchildren, he has (many, much) coins in his pocket.
8. (Lot of, A lot of) petrol leaked from the tank.
9. 'How (much more, many more) strength must I exert, the mechanic asked.
10. There is (lots of, a lot of) marbles here, Andy told Mark. "Let's take (few, a few)".

Complete the complex sentences below with the conjunctions 'before', 'after', 'when', 'if', 'although' or 'because':

11. \_\_\_\_\_ the rain stopped, we went for a walk.
12. Jayanthi will call \_\_\_\_\_ she attends her class.
13. Dick jogs every evening \_\_\_\_\_ he wants to lose some weight.
14. \_\_\_\_\_ he was tired, he continued running.
15. \_\_\_\_\_ it continues to rain heavily, the match will be postponed.
16. The thief ran away \_\_\_\_\_ the policemen arrived.
17. I try to eat less fast food \_\_\_\_\_ it is not very nutritional.
18. We talked softly and turned the music down \_\_\_\_\_ we saw the baby sleepin

Conversation at any two places.

(Written in notebook and videos as well)

Q 1 : Remplacez les expressions en soulignant par "y" ou "en".

- Je vais à Paris pour mes vacances.
- Il pense à son ami.
- Nous parlons de la fête.
- Tu as besoin de conseils.
- Elle va à la plage.
- Veux-tu des légumes?
- Tu vas acheter de la bière ?
- Vous - participez-vous à la compétition ?
- Les bijoux sont ? dans la boîte
- Vous êtes montés sur la montagne?

Q 2 : Complétez les phrases avec la forme correcte du passé récent.

- Hier, il (venir) \_\_\_\_\_ me voir.
- Nous (venir) \_\_\_\_\_ de finir nos devoirs.
- Elle (venir) \_\_\_\_\_ d'acheter une nouvelle voiture.
- Vous (venir) \_\_\_\_\_ de prendre le train.
- Ils (venir) \_\_\_\_\_ de comprendre la leçon.

Q 3 : Créez des phrases avec le passé récent en utilisant les indications données.

- (tu / sortir / cinéma)
- (nous / arriver / aéroport)
- (elle / acheter / nouveau livre)
- (je / terminer / travail)
- (ils / manger / restaurant)

Q 4 : Transformez les phrases au passé récent en phrases au passé composé.

- J'arrive de Paris.
- Il sort du magasin.
- Nous comprenons la question.
- Elle prend le bus.
- Vous finissez votre repas.

Q 5 : Utilisez un pronom interrogatif pour poser des questions sur les éléments soulignés.

- J'ai trouvé le livre que tu m'as recommandé.  
\_\_\_\_\_ livre as-tu trouvé?
- Ils ont rencontré des personnes intéressantes à la conférence.  
\_\_\_\_\_ personnes ont-ils rencontrées à la conférence?
- Nous allons visiter le musée demain.  
\_\_\_\_\_ musée allons-nous visiter demain ?
- Elle a préparé une délicieuse tarte aux pommes.  
\_\_\_\_\_ tarte aux pommes a-t-elle préparée ?
- Il a résolu le problème mathématique difficile.  
\_\_\_\_\_ problème mathématique a-t-il résolu ?

Q 6 : Complétez avec les pronoms toniques:

- Il vient avec ses parents ? => Oui, il vient avec .....
- Tu sors avec ce garçon ? => Oui, je sors avec.....
- Vous déjeunez chez nous demain ? => Oui, nous déjeunons chez .....
- C'est pour moi ? => Oui, c'est pour .....
- Il est d'accord avec Fred et toi ? => Oui, il est d'accord avec .....

- Tu as rendez-vous avec Lucie? => Oui, j'ai rendez-vous avec .....
- Tu as reçu une lettre des filles ? => Oui, j'ai reçu une lettre d' .....
- Tu es fâché à cause de moi ? => Oui, je suis fâché à cause de .....
- Il est arrivé avant mon frère et moi. => Il est arrivé avant .....
- Tu viens avec nous ? => Oui, je viens avec .....

Q 7 : Le Comparatif:

- Cette voiture est \_\_\_\_\_ (rapide) que celle-ci.
- Mon frère est \_\_\_\_\_ (grand) que moi.
- La pizza est \_\_\_\_\_ (délicieuse) que la salade.
- Le livre que j'ai lu hier était \_\_\_\_\_ (intéressant) que celui que je lis aujourd'hui.
- Les examens finaux sont \_\_\_\_\_ (difficiles) que les examens de mi-session.

Q 8 : Le Superlatif:

- C'est le \_\_\_\_\_ (joli) pays que j'aie jamais visité.
- Cet exercice est le \_\_\_\_\_ (facile) de tous.
- Mon chien est le \_\_\_\_\_ (intelligent) de la portée.
- Cette montagne est la \_\_\_\_\_ (haute) de la région.
- Le film que nous avons vu hier soir est le \_\_\_\_\_ (ennuyeux) que j'aie jamais vu.

Q 9 : Mélangé (Comparatifs et Superlatifs)

- Paris est \_\_\_\_\_ (grand) ville de France.
- L'hiver est souvent \_\_\_\_\_ (froid) saison de l'année.
- Cette chanson est \_\_\_\_\_ (bon) que toutes les autres.
- Le musée d'art moderne est \_\_\_\_\_ (intéressant) que le musée d'histoire naturelle.
- Les éléphants sont \_\_\_\_\_ (grands) animaux terrestres.

Q 10 : Complète les phrases avec la forme correcte de l'adjectif (comparatif ou superlatif).

- De toutes les filles de sa classe, elle est ..... (petit).
- Ton shampoing est ..... (bon) que le mien.
- Ce livre est ..... (mauvais) de toute la collection.
- Le pull vert est aussi .....(cher) que le pull rouge.
- Je trouve que les bottes sont ..... (joli) que les chaussures.
- Cet hiver les températures sont ..... (chaud) que l'hiver dernier.

अपनी कल्पना शक्ति के आधार पर 800 से 1000 शब्दों में उत्साहवर्धन पूर्ण स्वरचित कहानी लिखिए व कहानी का वाचन करते हुए एक वीडियो भी बनाएं।

A/4 शीट पर कहानी लिखकर लाएं तथा दी हुई ई-मेल आई.डी. पर कहानी की वीडियो भेजें। इस कार्य के लिए अंक प्रदान किए जाएंगे, जो विद्यार्थी इस कार्य को नहीं करेगा उसको अंक नहीं दिए जाएंगे।

कहानी लेखन सुंदर शब्दों में लिखकर लाएँ अन्यथा अंक नहीं दिए जाएंगे

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शीतकालीन गृह कार्य

विषय हिंदी (व्याकरण) अभ्यास पत्रक

निम्नलिखित प्रश्नों के उत्तर अपनी हिंदी व्याकरण की उत्तर पुस्तिका में लिखिए।(प्रश्न 1 से 7 तक) बाकी के प्रश्न इसी पत्रक में हल करके अपनी कॉपी में चिपकाए।

1-समास किसे कहते हैं?

2-समास के कितने भेद होते हैं?सभी भेदों के नाम लिखिए।

3-प्रथम और उत्तर पद किस समास में होते हैं?

4-पहले पद विशेषण तथा दूसरा पद विशेष्य किस समास में होता है? उदाहरण लिखिए।

5-संख्यावाची समास किसे कहते हैं? उदाहरण सहित लिखिए।

6-जिस समास में प्रथम व उत्तर पद के अलावा तीसरा पद प्रधान होता है वह कौन सा समास होता है? उदाहरण द्वारा स्पष्ट कीजिए।

7-समास का शाब्दिक अर्थ क्या होता है?

क) संक्षेप                      ख) विस्तार                      ग) विग्रह                      घ) विच्छेद

8-इनमें से कौन सा अव्ययीभाव पद है।

क) कुमारी                      ख) गृहागत                      ग) आचारकुशल                      घ) प्रतिदिन

9-देवासुर में कौन सा समास है।

क)बहुव्रीहि                      ख) कर्मधारय                      ग) तत्पुरुष                      घ) द्वंद

10-निम्न में से कौन सा बहुव्रीहि समास का उदाहरण है।

क) निशिदिन                      ख) त्रिभुवन                      ग) नीलकंठ                      घ)पुरुषसिंह

11-यह खबर मैंने समाचार पत्र में पढ़ी। वाक्य का भेद बताइए

क)विधानवाचक                      ख) प्रश्नवाचक                      ग) निषेधवाचक                      घ) संदेहवाचक

12-कल दीपावली होने के कारण समाचार पत्र नहीं छप सका वाक्य का भेद है।

क)विधान वाचक                      ख) प्रश्नवाचक                      ग) निषेधवाचक                      घ) संदेहवाचक

13-मुसाफिर अपनी मंजिल तक पहुंच चुका होगा। वाक्य का भेद बताइए।

क)विधानवाचक                      ख) प्रश्नवाचक                      ग) निषेधवाचक                      घ) संदेह वाचक

14-अगर पुजारी आ गया होता तो कार्यक्रम शुरू हो जाता। वाक्य का भेद बताइए।

क)विधानवाचक                      ख) संकेतवाचक                      ग) निषेधवाचक                      घ) संदेहवाचक

15-मेज पर रखी सुंदर सी घड़ी किसकी है ? वाक्य का भेद बताइए।

क)विधानवाचक                      ख) प्रश्नवाचक                      ग) निषेधवाचक                      घ) संदेहवाचक

16-यह पत्र आज ही भेज देना। वाक्य का भेद बताइए।

क)विधानवाचक                      ख) प्रश्नवाचक                      ग) आज्ञावाचक                      घ) संदेह वाचक

- 17-यदि बारिश न होती तो हम मैदान में खेलने जाते । वाक्य का भेद बताइए ।  
 क)संकेतवाचक      ख) प्रश्नवाचक      ग) निषेधवाचक      घ) संदेह वाचक
- 18-शायद धोबी ने सभी कपड़ों को धो दिया होगा वाक्य का भेद बताइए ।  
 क)विधानवाचक      ख) प्रश्नवाचक      ग) निषेधवाचक      घ) संदेह वाचक
- 19-बिजली के तारों को हाथ नहीं लगना चाहिए। वाक्य का भेद बताइए ।  
 क)विधानवाचक      ख) प्रश्नवाचक      ग)निषेधवाचक      घ) संदेह वाचक
- 20-तुम जोर से मत बोलो। वाक्य का भेद बताइए।  
 क)विधानवाचक      ख) प्रश्नवाचक      ग) निषेधवाचक      घ) संदेह वाचक
- 21-जब एक ही शब्द दो या दो से अधिक बार आते हैं, हर बार उनका अर्थ अलग होता है- वहां कौन सा अलंकार होता है ?  
 क) श्लेष      ख) अनुप्रास      ग) यमक      घ) रूपक
- 22-काव्य या रचनाओं में अलंकार का उपयोग किया जाता है ।  
 क) भाषा को शब्दों या अर्थों से सजाने के लिए      ख) काव्य या रचना को बड़ा करने के लिए  
 ग) उदाहरण देने के लिए      घ) अर्थ को समझने के लिए
- 23-"मधुर-मधुर मेरे दीप जल"- इनमें कौन सा अलंकार होगा ।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 24-"कर का मनका डारी दे, मनका-मनका फेर "- नीचे दिए गए अलंकारों में से उचित अलंकार की पहचान करें।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 25-"मखमल- सा झूला पड़ा हाथी-सा टीला" अलंकार की पहचान करें ।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 26-"बरसा रहा है रवि अनल, भूतल तवा-सा जल रहा" पंक्ति में कौन सा अलंकार होगा ।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 27-उपमा का अर्थ है ।  
 क) सदृश्य      ख) समानता      ग) (क) और (ख) दोनों      घ) इनमें से कोई नहीं
- 28-"चांद जैसे मुखड़े पर बिंदिया सितारा" में कौन-सा अलंकार है ।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 29-उस अलंकार का नाम बताइए जिसमें एक वर्ण की पुनरावृत्ति होती है ।  
 क) रूपक      ख) यमक      ग) श्लेष      घ) अनुप्रास
- 30-किस समास में गुणों की अत्यंत समानता के कारण उपमेय को ही उपमान मान लिया जाता है।क) रूपक  
 ख) यमक      ग) श्लेष      घ) अनुप्रास

1. कक्षा के निर्देशानुसार एक पोर्टफोलियो तैयार कीजिए ।

2. दिए गए अभ्यास पत्र को संस्कृत पुस्तिका में कीजिए।

WORKSHEET:

प्रश्न 1 अधोलिखितं संवादं मञ्जूषायां प्रदत्तपदानां सहायतया पूरयत-

अध्यापिका - बाला ! किं भवन्तः किञ्चित् प्रष्टुम् (i) .....

बाला: - महोदये! (ii) ..... तु गातुम् इच्छामः ।

अध्यापिका - गातुम् इच्छन्ति ! (iii)..... अहं तु (iv)..... न समर्था।

बाला: - (v).....! वयं गास्यामः । समूहगानम्। (vi)..... भवती अपि ।

अध्यापिका - (vii).....| अहम् अपि गास्यामि । गीतं किम् अस्ति ? किं वाद्ययन्त्राणाम् अपि (viii).....अस्ति ।

बाला: - (ix)..... यदि सन्ति, शोभनम् अन्यथा एतानि (x)..... एव गीतं तु 'पोङ्गल' इति उत्सवेन सम्बद्धम् अस्ति ।

अध्यापिका - एवम् ! तदा गायामः ।

मञ्जूषा

विना, गातुम्, इच्छन्ति, वयम्, महोदये, परन्तु, यदि, शोभनम्, आवश्यकता, वाद्ययन्त्राणि

अथवा

अपोलिखितकथायाः पूर्ति मञ्जूषायां दत्तानां पदानां सहायतया कुरुत-

एकदा (i)..... निज (ii)..... गृहम् अगच्छम्। तत्र (iii) ..... माता अपृच्छत्

यत् (iv)..... पिता किम् करोति तव माता च कुत्र (v)..... ? अहम् अकथम् -

"(vi)..... पिता तु भारतीय-प्रशासनिक (vii) ..... अधिकारी अस्ति मम माता च

गृहस्य (viii).....एव (ix)..... विद्यालये अध्यापयति।" मम मित्रस्य माता अकथयत्, अतीव

(x).....।

मञ्जूषा

अध्यापयति, मित्रस्य, शोभनम्, अहम्, मम, तव, तस्य, समीपे, सेवायाम्, एकस्मिन्

प्रश्न 2 अबोलिखितप्रश्नानाम् उत्तराणि लिखत-

(i) 'ट्, ड्, झ्, ग्' एतेषु वर्णेषु कः वर्णः दन्त्यः?

(ii) 'म्' वर्णस्य उच्चारणस्थानं किम्?

(iii) 'कमलम्' अस्मिन् पदे 'दन्त्यः' वर्णः कः?

(iv) 'आनन्दः' अस्य पदस्य 'आ' वर्णस्य उच्चारणस्थानं किमस्ति ?

प्रश्न 3 रेखाङ्कितपदानां सन्धिं विच्छेदं वा कृत्या लिखत-

(i) सहसा + एव वृष्टिः आगता ।

(ii) गुरुं दृष्ट्वा कृष्णः उल्लसितः जातः ।

(iii) सोऽपि मम मित्रम् अस्ति।

(iv) रामस्य हृदयं निश्छलम् अस्ति ।

प्रश्न 4 उचितविभक्तिपदं विकल्पेभ्यः चित्वा वाक्यानि पूरयत-

(i) इयं शान्तिसभा, अलम् ..... । (कोलाहल)

(क) कोलाहलेन (ख) कोलहलात्—(ग) कोलाहलस्य (घ) कोलाहलम्

(ii) श्री ..... नमः । (गणेश)

(क) गणेशम्— (ख) गणेशाय —(ग) गणेशात्— (घ) गणेशेन

(iii) .....समया वनम् अस्ति। (ग्राम)

(क) ग्रामात् — (ख) ग्रामस्य —(ग) ग्रामम् —(घ) ग्रामेण

(iv) सोमदेवः .....विश्वसिति । (माता)

(क) मातरि (ख) माते (ग) मातुः - (घ) मातरम्

प्रश्न 5 प्रदत्तविकल्पेभ्यः उचितं शब्दरूपं चित्वा वाक्यानि पूरयत-

(i) बालकाः .....तरन्ति। (नदी)

—(क) नद्याः — (ख) नयः —(ग) नद्याम् —(घ) नद्यै

(ii) मन्त्री..... मधुरं मधु आनीतवान्। (साधु)

—(क) साधू (ख) साधवे —(ग) साधुना - (घ) साधुपु

(iii) .....बालके अनेके गुणाः सन्ति। (तत्)

—(क) सः — (ख) तेन — (ग) तस्मिन् - (घ) तस्य

(iv) .....उत्सवे बहवः जनाः सम्मिलिताः आसन्। (भवत्)

—(क) भवन्तम् —(ख) भवतः —(ग) भवते — (घ) भवान्

प्रश्न 6 प्रदत्तविकल्पेभ्यः उचित पातुरूपं चित्वा वाक्यानि पूरयत-

(i) श्वः अहं मातुलगृहं .....। ('गम्' लृट् लकारे)

—(क) अगच्छन् - (ख) गच्छामि (ग) गमिष्यामि - (घ) गच्छानि

(ii) सुनीता जतम् आनेतुं .....। ('गम्' लट् लकारे)

—(क) गच्छसि —(ख) गच्छामि —(ग) गच्छेत् - (घ) गच्छति

(iii) शिक्षकः असत्यवादिनं छात्र .....। ('जा' ललकारे)

—(क) जानाति — (ख) अजानात् (ग) जानीयात् — (घ) जास्यति

(iv) त्वं शिक्षकं .....। ('सेव्' ललकारे)

—(क) सेवस्व (ख) सेवे — (ग) सेवसे — (घ) सेवन्ते

प्रश्न 7 अधोलिखितवाक्येषु रेखाङ्कितपदानां प्रकृति-प्रत्ययविभागं संयोजनं वा विकल्पेभ्यः चिनुत-

(i) देशभक्ताः मातृभूमिं प्रणम्य देशं रक्षन्ति ।

(क) प्र + नम् + ल्यप् (ख) प्र + नम् + क्तवा (ग) प्र + नम् + तुमुन्—(घ) प्र + नम् + क्त

(ii) उषा भोजनं खादित्वा भ्रमति ।

—(क) खाद् + ल्यप् —(ख) खाद् + तुमुन् —(ग) खाद् + क्तवा (घ) खाद् + क्त

(iii) भक्ताः कथा .....प्रसीदन्ति । (श्रु + शतृ)

—(क) शृण्वत —(ख) श्रुशतृ —(ग) श्रुवन् —(घ) शृण्वन्

प्रश्न 8 मञ्जूषातः उचितम् अव्ययपदं चित्वा रिक्तस्थानानि पूरयत-

(i) मार्गे अनेके बालकाः ----- सन्ति ।

(ii) त्वं ----- कथं विद्यालयं न अगच्छः ?

(iii) ----- अहं संस्कृतं पठामि ।

(iv) रामः, लक्ष्मणः सीता ----- वनं गच्छन्ति ।

मञ्जूषा

अधुना, एकत्र, च, ह्यः

प्रश्न 9 अधोलिखितवाक्येषु कोष्ठकेषु लिखिताः सङ्ख्याः संस्कृते लिखित्वा रिक्तस्थानानि पूरयत-

(i) मम (3) ----- भगिन्यः ।

(ii) (2) ----- च भ्रातरौ सन्ति ।

(iii) अद्य वयं (10) ----- मित्राणि मिलित्वा पठिष्यामः ।

(iv) त्रयोदश च त्रयोदश च मिलित्वा (26) ----- भवन्ति ।

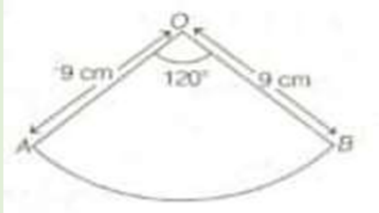
Q.1 A right circular cone is 5.4 cm high and radius of its base is 2 cm. It is melted and recast into another right circular cone with radius of base as 1.5 cm. Find the height of the new cone formed. **(SUBJECTIVE)**

Q.2 The height and the base diameter of a conical tomb are 24 m and 14 m, respectively. Find the cost of white-washing its curved surface at the rate of ₹210 per 100 sq m. Also, find volume of air inside the tomb. **(SUBJECTIVE)**

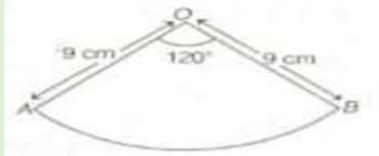
Q.3 Calculate the curved surface area and total surface area of a cone, whose radius of the base and height are in the ratio 5 : 12 and its volume is 2512  $\text{cucm}$ . (take,  $\pi = 314$ ) **(SUBJECTIVE)**

Q.4 Along a path, 100 conical pillars are constructed. Each pillar has base radius 14 cm and height 18 cm. Find the total cost of painting these pillars at the rate of ₹120 per  $\text{m}^2$ . (Take,  $\pi = 22/7$ ) **(SUBJECTIVE)**

Q.5 A sector of a circle of radius 9 cm and central angle of  $120^\circ$ . It is rolled up so that the two bounding radii are joined together to form a cone.



Q.6 A sector of a circle of radius 9 cm and central angle of  $120^\circ$ . It is rolled up so that the two bounding radii are joined together to form a cone.



the radius of the base of the cone. **(SUBJECTIVE)**

Q7

Draw a frequency polygon for the following data:

Marks	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
No. of students	10	15	40	45	40

How many students got marks less than 60? **(SUBJECTIVE)**

Q8

Draw a frequency polygon for the following data:

Marks	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
No. of students	10	15	40	45	40

How many students got marks more than or equal to 40? **(SUBJECTIVE)**

Q.9 Read the following passage carefully and answer the questions given below it. Certain words have been printed in the bold to help you locate them while answering some of the questions.

Q11

Draw a histogram to represent the following grouped frequency.

Age (in years)	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39
No. of persons	10	28	32	48	50	35	12

Also draw frequency polygon. **(SUBJECTIVE)**

Q12

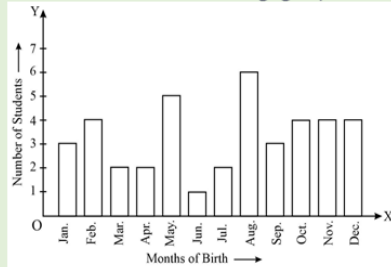
Various modes of transport used by 1850 students of a school are given below

Mode of Transport	School bus	Private bus	Bicycle	Rickshaw	By foot
No. of Students	640	360	490	210	150

Draw a bar graph to represent the above data. **(SUBJECTIVE)**



Q.13 In a particular section of Class IX, 40 students were asked about the months of their birth and the following graph was prepared for the data so obtained:



Observe the bar graph given above and answer the following question:  
In which month were the maximum number of students born?  
**(SUBJECTIVE)**

Q.14 Draw a histogram for the frequency distribution of the following data:

Class Interval	8 – 13	13 – 18	18 – 23	23 – 28	28 – 33	33 – 38	38 – 43
Frequency	320	780	160	540	260	100	80

**(SUBJECTIVE)**

Q.15 Draw a double bar graph to compare the data in the given table:  
Enrolment in computer courses

Year/Course	Basic	Logo	Computer Science	Using Software
Year One	130	40	10	20
Year Two	260	110	30	90

**(SUBJECTIVE)**

Q 17 A conical tent with base radius 7 m and height 24 m made from 5 m wide canvas .Find the length of the canvas.

Q 18 The sphere and cone are of same radius and same height. Find the ratio the curved surface areas .

Q 19 Draw the histogram and frequency polygon of the following:

Class interval	Frequency
10-20	4
20-30	5
30-40	9
40-50	12
50-60	7
60-70	3

Q 20 A spherical ball is divided into two equal halves. Given that the curved surface area of each half is 56.57 cm, what will be the volume of the spherical ball?

Q 21 Calculate the amount of ice-cream that can be put into a cone with base radius 3.5 cm and height 12 cm.

Q 22 A capsule of medicine is in the shape of a sphere of diameter 3.5 mm. How much medicine (in mm<sup>3</sup>) is needed to fill this capsule?

Q 23 Meera has a piece of canvas whose area is  $551 \text{ m}^2$ . She uses it to have a conical tent made, with a base radius of 7 m. If all the stitching margins and the wastage incurred while cutting, amounts to approximately  $1 \text{ m}^2$ , find the volume of the tent that can be made with it.

Q 24 A lead pencil consists of a cylinder of wood with a solid cylinder of graphite filled in the interior. The diameter of the pencil is 7 mm and the diameter of the graphite is 1 mm. If the length of the pencil is 14 cm, find the volume of the wood and that of the graphite.

Q 25

Depict the following frequency distribution by a histogram.

Weekly wages(in ₹)	725 – 750	750 – 775	775 – 800	800 – 825	825 – 850
No. of workers(Frequency)	30	45	75	60	30

**(SUBJECTIVE)**

Please do worksheets assigned on Embibe portal  
Worksheets would be accessible from 1-1-24 to 7-1-24

### Class IX Science Worksheet

1. Which force keep the moon going around the Earth. Who provides this force? What would have happened in the absence of such a force?
2. Why is the Law of Gravitation called Universal law of gravitation?
3. A particle is thrown up vertically with a velocity of 50m/s. What will be the velocity at the highest point of its journey? How high the particle would rise? What time would it take to reach the highest point?
4. Distinguish between balanced and unbalanced forces.
5. Give reasons:
  - (a) A karate player can break a pile of tiles in a single blow.
  - (b) A car driver prefers to hit something soft (say hay stock) than a wall if his car goes out of control while driving.
  - (c) Shockers are provided in vehicles.
6. If we take out a piece of paper from under a book with a jerk, the book will not move. Explain.
7. What is the difference between True solution and colloids?
8. What is the concentration of a solution which contains 16 g of urea in 120 g of solutions?
9. What produces more severe burns, boiling water or steam? Explain Why?
10. Why does the water in an earthen pot becomes cool?
11. Write the contribution of (a) Robert Hooke, (b) Leeuwenhoek (c) Robert Brown.
12. Draw a large diagram of an animal cell as seen through an electron microscope. Label the parts that carry on the function of Respiration, secretion, protein synthesis, transport of material.
13. What will happen if we keep a plant cell or animal cell in a
  - i) Hypotonic solution    ii) Hypertonic solution    iii) Isotonic solution.
14. What is the difference between
  - i) collenchyma and sclerenchyma    ii) chlorenchyma and Aerenchyma.
  - ii) Striated and unstriated muscle tissues
15. What is lymph? What are its functions?
16. Write the postulates of Dalton's atomic theory.
17. Write the chemical formula of:
  - (a) Sodium oxide    b) calcium chloride    c) aluminum oxide
  - (d) magnesium hydroxide    (e) sodium carbonate
18. How many molecules are present in 10 g of H<sub>2</sub>O?
19. State which of the following situations are possible and give an example of each of these:-
  - (a) a body moving with constant acceleration but with zero velocity.
  - (b) A body moving horizontally with acceleration in vertical direction.
  - (c) A body moving with a constant speed in an accelerated motion.
20. Identify the following as scalar or vector quantities:- mass, velocity, speed, length, distance, displacement, temperature, force, weight, power, work and energy.
21. Differentiate between:
  - (a) Homogenous and heterogenous mixture
  - (b) Elements and Compounds
22. A bullet of mass 10 g traveling at 400 m/s gets embedded in a wooden block of mass 900 g. What is the velocity acquired by the block?
23. A stone dropped from the roof of the building reaches ground in 4 seconds. What is the height of the building? With what velocity it strikes the ground?

		<p>24. A body weighs 490 N on the earth. The same body weighs 82 N on the moon. What are the values of its mass on moon and acceleration due to gravity on the moon?</p> <p>25. If the distance between two objects is increased by a factor of 5, the by what factor the mass of any one of them would have to be changed to keep the force between them unchanged?</p>
7	Social Sciences	<p>Please do worksheets assigned on Embibe portal. Worksheets would be accessible from 1-1-24 to 7-1-24.</p> <p><u>Civics and Geography</u></p> <ol style="list-style-type: none"> <li>1. Trace any three main features of the foreign policy of Hitler.</li> <li>2. "India has a large coastline which is advantageous." Explain</li> <li>3. State any three features of Himalayan mountain range.</li> <li>4. Describe the three ranges of Himalayan from south to north?</li> <li>5. Name the three sections into which Northern Plains have been divided?</li> <li>6. Why are Peninsular rivers seasonal in nature? State any three reasons.</li> <li>7. On the basis of the availability of water, tropical deciduous forests are divided into two parts. What are these two Categories? Explain.</li> <li>8. Distinguish between Tropical Evergreen and Deciduous forests.</li> <li>9. Describe the basic factors affecting the population of India.</li> <li>10. What is meant by population growth and how do you calculate it?</li> <li>11. Distinguish between Total Population and Average Density of Population.</li> <li>12. Explain the role of health in human capital formation.</li> <li>13. How has Japan become a developed country despite being poor in natural resources? Explain.</li> <li>14. What is poverty? What are the dimensions of poverty?</li> <li>15. How can poverty be reduced in future in India?</li> <li>16. Distinguish between political executive and permanent executive.</li> <li>17. Who appoints the Prime Minister and the Council of Ministers?</li> <li>18. What is the importance of civil servants in running the government?</li> <li>19. How is the President of India elected?</li> <li>20. What details are required from the candidates who wish to contest elections?</li> <li>21. What are the merits of electoral competition?</li> <li>22. What are the choices generally a voter can make in an election?</li> <li>23. What do you mean by 'Constitution'?</li> <li>24. What were the steps involved in the framing of the Indian Constitution?</li> <li>25. Write a brief note on the following personalities.             <ol style="list-style-type: none"> <li>(a) Jawaharlal Nehru</li> <li>(b) Sarojini Naidu</li> <li>(c) Bhimrao Ramji Ambedkar</li> </ol> </li> </ol>

8	Artificial Intelligence	<p>Write programs in project file with proper output  Assignment 1 :- Write a program in python to print 5 line about yourself using print() function.  Assignment 2:- Write a program in python to calculate addition, subtraction, multiplication and division of two numbers using arithmetic operation (+,-,*,/).</p> <p>Note:- Video link for help to complete Assignment 1 and Assignment 2  <a href="https://www.youtube.com/watch?v=KYbL8HuJ_7k">https://www.youtube.com/watch?v=KYbL8HuJ_7k</a></p> <p>Assignment 3:- Write a program in python to print multiplication table of entered numbers.  Assignment 4:- Write a program in python to find the sum of first N numbers.  Assignment 5:- Write a program in python to find the average of first N numbers.</p> <p>Note:- Video link for help to complete Assignment 3, Assignment 4 and Assignment 5  <a href="https://www.youtube.com/watch?v=B8qpfz4_ozY">https://www.youtube.com/watch?v=B8qpfz4_ozY</a></p>
9	Design Thinking Innovation	<p>Title:- “ Reimagine and Repurpose”</p> <div data-bbox="587 745 1155 1010" data-label="Image"> </div> <p>Objective:- To encourage creativity and innovation thinking by exploring alternative uses for common everyday items.</p> <p>Task:- Research and Report (2-3 pages)</p> <ol style="list-style-type: none"> <li>1. Introduction to Repurposing: <ul style="list-style-type: none"> <li>➤ Define repurposing and explain its significance in reducing waste and fostering creativity.</li> <li>➤ Provide examples of successful repurposing projects.</li> </ul> </li> <li>2. Environmental Impact: <ul style="list-style-type: none"> <li>➤ Research and discuss the environmental benefits of repurposing items compared to disposal</li> </ul> </li> </ol>
10	Electronics & Hardware	<p>Answer the following questions.</p> <ol style="list-style-type: none"> <li>1- Write down the parts and uses of a combination plier.</li> <li>2- What are the symbols of following electronic components: cell, battery, resistance, open switch, bulb and inductor.</li> <li>3- Write the uses of screw driver and line tester and differentiate between them.</li> <li>4- Explain and differentiate between series and parallel combination circuits.</li> <li>5- What is a semiconductor? Write its types and uses.</li> <li>6- What is TDS meter? Write the steps to measure TDS.</li> </ol>