O. P. JINDAL SCHOOL, RAIGARH (CG) 496 001, INDIA

Phone: 07762-227042, 299255, JSP ICM No. 49802, 49809; website: https://www.opjsrgh.in; e-mail: opjs.raigarh@jindalsteel.com

VACATION HOME WORK (2025-26)

CLASS- X

SUBJECT- ENGLISH

1. Read the following passage.

1. Darjeeling tea, called the *'Champagne of teas'*, was the first Indian product to get the Geographical Indication (GI) tag in 2004 for its distinctive aroma and flavour. About 87 gardens in Darjeeling, which employ about 55,000 workers, produce approximately 7 million kg. of tea, most of which is exported.

2. Inferior quality tea from Nepal is being imported and then sold and re-exported as premium Darjeeling Tea. Nepal shares similar climatic conditions and terrain and produces tea at a lower price because of less input costs, particularly labour, and fewer quality checks. Even though the quality is no match, the tea from Nepal poses a serious challenge to Darjeeling Tea.

3. The influx of tea from Nepal picked up pace in 2017, when the 107-day agitation and shutdown in the Darjeeling hills due to *Gorkhaland* agitation brought tea production to a halt. Since a substantial amount of Darjeeling tea is exported, exporters switched to cheaper varieties of tea, including the inferior quality tea imported from Nepal. Tea planters and industry experts admit that the tea industry in Darjeeling has not recovered from the damage it incurred in 2017.

4. Tea production in Darjeeling, which used to be around 10–12 million kg a decade back, now stands at 6.87 million kg (2021). Industry experts say that the decline in production is due to multiple factors including climate change, declining yields, and high absenteeism among workers. The tea bushes are older than in other parts of the country. Uprooting and planting them again is both time-consuming and cost-intensive. Because of the hilly terrain of Darjeeling, there is no land left for expansion of tea gardens.

5. In November 2021, the Tea Board of India issued a notification to restrict the import and distribution of inferior quality tea. It asked those who were packaging tea to give the source of origin of tea and details of blended tea. Packaging staff further reduced their purchase of Darjeeling Tea after the notification impacted prices. Global factors like the demand from European markets in the wake of the Russian–Ukraine war have compounded the problems.

6. Darjeeling tea is under acute stress and urgently requires government aid and attention as 40–50 per cent of estate owners are looking to sell their tea gardens.

Answer the following questions, based on the passage above.

(a) How does the setting/context contribute to the overall mood and atmosphere of the description given in the passage? (1)
(i) It gives a sense of flavour and aroma.
(ii) It gives a sense of hope.
(iii) It gives a sense of threat.
(iv) Both (i) and (iii).

(b) Tea from Nepal is being exported because of the following reason:
(i) Nepal tea is of superior quality

(ii) Nepal tea is cheaper
(iii) People do not like Darjeeling tea
(iv) Climate of Nepal is different from that of Darjeeling

(c) Complete the following suitably:
Decline in production is due to multiple factors including the climate change, _____.

(d) Rectify and rewrite the given false statement:
(1)
Superior quality of tea from Nepal is being exported and then re-exported as Premium Darjeeling tea.

(e) Answer in a sentence why Darjeeling tea is nicknamed the *'Champagne of tea'*?

(f) Answer briefly why tea production in Darjeeling came to a halt in 2017?

(g) Give two reasons why tea from Nepal is cheaper than tea from Darjeeling.
(h) Why is uprooting of old tea plants in Darjeeling and replanting in new tea gardens very difficult?

2. Read the given passage

1. In a world dominated by digital technology, the way we capture, store, and share memories has evolved significantly. Traditional photo albums and digital photo galleries are two primary methods for preserving personal and family memories, each with its own unique characteristics. Though both share the common goal of keeping memories alive, they offer different experiences, advantages, and disadvantages.

2. Photo albums represent a tangible and tactile way to capture memories. A physical album filled with printed photographs provides a sense of reminiscence and can be passed down through generations, becoming a family heirloom. The process of selecting photos, printing them, and placing them in an album can be a personal and intimate experience, allowing one to reflect on the moments captured.

3. One of the prominent advantages of photo albums is their permanence. Unlike digital files, which can be lost or corrupted, physical photographs in a well-maintained album can last for decades, if not centuries. Albums also provide a sensory experience; flipping through the pages, feeling the texture of the paper, and smelling the aging prints can evoke strong emotional responses.

4. Additionally, photo albums require little to no technology to enjoy. This makes them accessible to a wider range of people, including those who may not be tech-savvy. Albums can be taken to family gatherings or passed around during holidays, creating a shared experience among family and friends.

5. However, photo albums come with certain disadvantages. They take up physical space and are vulnerable to damage from environmental factors like water, fire, or sunlight. Albums are also limited in capacity; once they are filled, creating additional albums can become cumbersome. Furthermore, the process of creating a photo album can be time-consuming and costly. Printing photographs, purchasing albums, and maintaining them can add up.

6. Digital photo galleries have transformed the way we capture and share memories. With the rise of smartphones and digital cameras, taking and storing photos has become more convenient than ever.

7. The main advantage of digital photo galleries is their convenience and capacity. With a single device, you can store thousands of photos and access them from anywhere. Digital galleries also offer powerful organization tools, allowing users to sort and categorise their photos with metadata, tags, and dates. Sharing digital photos is effortless; you can send them via email, social media, or cloud-based platforms, enabling friends and family to enjoy memories instantly. Digital galleries also allow for easy editing and enhancement of photos, helping to correct imperfections and improve quality.

8. Despite their convenience, digital photo galleries have their drawbacks. The reliance on technology means that photos can be lost due to hardware failure, software corruption, or accidental deletion. Additionally, the ephemeral nature of digital files makes them less tangible and more prone to being overlooked or forgotten among the vast array of digital content. Security and privacy are also concerns with digital galleries. Sharing photos online opens up the risk of unauthorized access or data breaches, leading to potential misuse of personal images.

9. Ultimately, the choice between traditional photo albums and digital photo galleries depends on personal preferences and priorities. Photo albums offer a tactile, enduring connection to memories, while digital galleries provide convenience, flexibility, and ease of sharing. A combination of both methods can offer the best of both worlds, ensuring that cherished memories are preserved and enjoyed for years to come.

Answer the following questions, based on the passage above.

a. What do traditional photo albums and digital photo galleries share in common?
b. What aspect of traditional photo albums makes them a cherished item for families?
c. Complete suitably: The personal experience associated with photo albums is important because _____.
d. Rectify the false statement: The prominent benefit that photo albums have over digital files is the sensory experience.
e. List any ONE way the photo albums can contribute to an enjoyable family time. (1)
f. Why has it become cumbersome to create additional photo albums, according to paragraph 5?
g. Why does the writer say that digital cameras have made taking and storing photos “more convenient than ever”?
h. How can we say that digital photographs may not always represent reality?
i. Explain why we can say that the writer did not choose sides.

Writing Skills

(3) Write an application, in about 70-80 words, to the Principal of your school, requesting permission to stay back after school for rehearsals of the upcoming inter-school debate competition. You are Subham Roy, Class X-k, Secretary, Literary Club.

(4) You are Aman Kumar, Amrit Vihar Colony, Noida. Write a letter to the Editor of *The Statesman*, expressing your views on the obsession with influencer culture and unrealistic lifestyles portrayed online, and how it distorts the aspirations of young people. Suggest ways to promote authenticity in media.

(5) You are Prem Verma, Class X-A, 21, White Park, Delhi. You purchased a branded wristwatch from *City Time House*, Delhi. Within a week, it stopped functioning properly. Write a letter of complaint to the Manager requesting immediate repair or replacement of the product.

Grammar

6. Fill in the blanks (i) and (ii) with the appropriate option from those in the brackets.

Therapeutic gardens are a public health measure and key to Singapore’s aim of (i) _____ (become/ becoming/ will becoming) one of the world’s top wellness destinations. In a tourism

sense, wellness often (ii) _____ (had referred / refers / referring) merely to spa treatments but Singapore's approach is more scientific.

7. In the following paragraph, one word has been omitted in each line. In your answer sheets, remember to write the missing word along with the word that comes before and after it, as shown below.

S No.	Text	Word Before	Omission/ Word After
e.g.	The environment is most precious resource.	is	our / most
i	We reduce waste, conserve energy, and plant		
ii	more trees to combat pollution. This planet is only		
iii	home we have. Each action, big or small, make a		
iv	significant difference. We act now to safeguard the environment and prevent it from further harm.		

8. Rearrange the following jumbled words/phrases in the given dialogue to create a meaningful sentence.

RAVI: Priya! Tell me about Orissa. I've always been curious about your state's culture and traditions.

PRIYA: for our / in the eastern / is a beautiful / state / temple architecture/ rich heritage, part of India / and we are known / vibrant festivals / Orissa / and exquisite

9. Report the dialogues to complete the paragraphs that follow. (

Mother: You seem so tired. Take some rest.
Suraj: I can't even think of relaxing. I have lots of homework to do.
Mother: You should not take so much stress.
Suraj: Don't worry. Please give me a hot cup of tea.

Mother said to Suraj that ……. (a) ……. Suraj replied that ……. (b) ……. The mother advised him not to take so much of stress. Suraj told his mother not to worry and requested her to give him a hot cup of tea.

SUBJECT- HINDI

प्रश्न*: निम्नलिखित वाक्यों में परिचय लिखिए।-पदों का पद *गहरे काले छपे

(1) हम देश पर सर्वस्व न्योछावर करने को तैयार *हो जाते हैं।*

(2) वहाँ लोग जमा हो गए थे। *अत्यधिक*

(3) हिमालय विश्व का सबसे ऊँचा है। *पर्वत*

(4) *जबहम रेलवे स्टेशन पहुँचे *, गाड़ी छूट रही थी।

(5) *किसीजानवर ने खाई है। *किसी* ने मेरी किताब ले ली। यह फसल *

(6) *अरेआप तो यहाँ बैठे हैं *?

(7) *गणतंत्रजगह राष्ट्रीय ध्वज फहराया जाता है।-दिवस पर जगह *

(8) शहनाई की मंगल ध्वनि के नायक *इसी*बिस्मिल्ला खाँ थे।

(9) बच्चे खेल रहे हैं। *उधर*

(10) *अधिकलोग यहाँ नहीं आए। *

(11) *उसनेसंपूर्ण ग्रंथ पढ़ लिया। *

(12) वह गरम पूड़ियाँ ला रहा है। *बाज़ार से*

(13) आनंद बहुत है। *भाग्यशाली*

(14) बच्चा *हँस रहा है।*

(15) *बच्चेघर में आराम कर रहे हैं। *

***प्रश्न*:निम्नलिखित पंक्तियों में अलंकार के भेद लिखिए* ***

1. छुअत टूट रघुपति न दोसू।
मुनि बिनु काज करिअ कत रोसू 1

2. कोटि कुलिस सम बचनु तुम्हारा।

3. तुम्ह तौ कालु हाँक जनु लावा।
बारबार मोहि लागि बोलावा।।-

4. यह विडंबना अरी सरलते तेरी हँसी उड़ाऊँ मैं। !

7. अभी समय भी नहीं, थकी सोई है मेरी मौन व्यथा।

8. कहीं साँस लेते हो, घरघर भर देते हो।।-

9. तुम्हारी यह दंतुरित मुसकान, मृतक में भी डाल देगी जान

10. छू गया तुमसे कि झरने लग पड़े शेफालिका के फूल बाँस था कि बबूल?

11. मुख्य गायक के चट्टान जैसे भारी स्वर का साथ देती,
वह आवाज सुंदर कमजोर काँपती हुई थी।

12. 'भजमन चरणकमल अविनासी।-'

13.पायो जी मैंने राम रतन धन पायो-|

14.प्रीति नदी में पाँउ न बोरयो-|

15.मैया मैं तो चंद्रखिलौना लैहों-||

***प्रश्न:निम्नलिखित प्रश्नों के उत्तर लिखिए ***

१वाच्य किसे कहते हैं.?

२वाच्य के. कितने भेद हैं? नाम लिखिए।

३किस वाच्य में क्रिया का प्रयोग कर्ता के लिंग ., वचन और कारक के अनुसार होता है?

४ .'रोहन ने भैंस को डंडे से मारा' वाक्य में कौन सा वाच्य होगा?

५ .'राहुल बहुत धीरे चलता है' वाक्य में वाच्य भेद बताइए|

६ .'सोनार आकर्षक गहने बनाता है' प्रयोग के आधार पर वाच्य भेद बताइए |

७जिस वाक्य में कर्म की प्रधानता होती है वहां कौन सा वाच्य होता है .?

८ .'भगत जी द्वारा अनाज दान दे दिया जाता था'- में कौन सा वाच्य होता है ?

९भाव वाच्य की पहचान किस शब्द से होती है .?

१० उसने नया व्यवसाय शुरू कर दिया.हैकर्म वाच्य में लिखिए। -

११भाव वाच्य में बदलिए । -मोहिनी क्षण भर के लिए भी शांत नहीं बैठती है .

१२ .'चलो अब खाया जाय' वाच्य का भेद बताइए।

१३ .'चोट लगने के कारण वह चल नहीं पाया' वाक्य को भाव वाच्य में बदलिए।

१४ .'मुझे अंग्रेजी नहीं पढ़ाई गई'- वाच्य भेद बताइए ।

१५ .'किसने गमला तोड़ा है'- वाक्य को कर्म वाच्य में बदलिए ।

SUBJECT- SANSKRIT

सामान्यनिर्देशाः- सर्वे प्रश्नाः अनिवार्याः|

1.अधोलिखितवाक्येषु रेखाङ्कितपदेषु सन्धिं सन्धिच्छेदं वा कुरुत -

(i) आलस्यं हि मनुष्याणां शरीरस्थो महान् रिपुः ।

(ii) नास्ति योजकः+तत्र दुर्लभः ।

(iii) त्वया महत्कौतुकम् आवेदितं यन्मानुषादपि बिभेषि?

(iv) बालभावात् हिमकरोऽपि पशुपति मस्तकेब्रजति ।

(v) वयः + अनुरोधात् शिशुजनः लालनीयः ।

(vi) मेघरवैः + च सह वर्षा तत्राभवत् ।

(vii) अचिरादेव तत्र प्रवर्षः समजायत ।

(viii)शरीरस्य सत् + निवेशः समरूप एव ।

(ix) यथास्थितः काष्ठगतः + हि वह्निः

(x) तदेवाहुः महात्मानः समत्वमिति तथ्यतः ।

2.अधोलिखितवाक्येषु रेखाङ्कितपदानां प्रकृति-प्रत्ययौ संयोज्य वियुज्य वा उत्तरं विकल्पेभ्यः चिनुत -

(i) यः धर्मप्रद + टाप् वाचम् त्यक्त्वा परुषाम् अभ्युदीरयेत् ।

(क) धर्मप्रदाम् (ख) धर्मप्रदा (ग) धर्मप्रदः

(ii) वाक्पटु- धैर्यवान् मन्त्री सभायामप्यकातरः|

(क) धैर्यम् + मतुप (ख) धीर + मतुप् (ग) धैर्य + मतुप्

(iii) सर्वेषामेव मत्कृते महत्त्वं विद्यते ।

(क) महत् + त्व (ख) महत् + त्वम् (ग) महत्व्य + त्व

(iv) व्याघ्रं दूरात् दृष्ट्वा बुद्धिमती चिन्तितवती-

(क) बुद्धि + मतुप् (ख) बुद्धि + क्तवतु (ग) बुद्धि + णिनि

(v)..... (बल + मतुप्) जनाः निर्बलेषु बलप्रयोगं न कुर्युः।

(क) बलवान् (ख) बलवती (ग) बलवन्तः

(vi) तानि सर्वाणि ..... पुस्तकानि सन्ति । (बालक +टाप्)

(क) बालिकायाः (ख) बालिका (ग) बालिकाः

(vii) विद्वांस एव लोकेऽस्मिन् चक्षुष्मन्तः प्रकीर्तिताः।

(क) चक्षुष् + मतुप् (ख) चक्षुस् + मतुप् (ग) चक्षुः + मतुप्

(viii) सुश्रुतः एकः श्रेष्ठः धार्मिकः आसीत् ।

(क) धर्म + त्व (ख)धर्म + ठक् (ग) धर्म + टाप्

(ix) औषधेः कटु + त्व कदापि निन्दा न करणीया ।

(क) कटुत्वस्य (ख) कटुत्वम् (ग) कटुत्वेः

(x) तत्र अनेकाः गुण + मतुप् नार्यः आसन् |

(क) गुणवान् (ख) गुणवन्तीः (ग) गुणवत्यः

3 अधोलिखितवाक्येषु प्रदत्तविकल्पेभ्यः वाच्यपरिवर्तनं कृत्वा लिखत

(i) मोहन: - कमले ! किं त्वया प्रदर्शनी ..... ।

(क) दृश्यसे (ख) दृश्यते (ग) दृश्ये

(ii) कमला - आम् ! अहं प्रदर्शनीम् एव द्रष्टुं .....।

(क) गच्छामः (ख) गच्छामि (ग) गम्यते

(iii) मोहनः - अधुना यावत् ..... कथं न गता।

(क)त्वया (ख) त्वम् (ग) तुभ्यम्

(iv) कमला - अहं स्वपरीक्षायाः सज्जायां व्यस्ता ..... ।

(क) आसीत् (ख) आसन् (ग) आसम्

(v) परोपकारी ..... करोति।

(क) परोपकारम् (ख) परोपकारः (ग) परोपकारेण

(vi) आचार्यैः ..... पाठ्यन्ते ।

क) छात्राः ख) छात्रः ग) छात्रम्

(vii) छात्रैः ..... ।

क) वदति ख) वदन्ति ग) उद्यते

(viii) सर्वैः.....श्रूयते ।

(क) कथाः ख) कथाम् ग) कथा

ix) शिष्यैः गुरुः.....

(क) नम्यते ख) नम्यन्ते ग) नमन्ति

x) बालकाः फलानि.....।

(क) खाद्यते ख) खाद्यन्ते ग) खादन्ति

प्र.4 -उचितपदैः अधोलिखितवाक्येषु रेखांकितपदानि संशोध्य लिखत -

i. यत्रास्ते सा <u>धूर्तः</u> तत्र गम्यताम् ।

(अ)धूर्त (ब) धूर्ता (स) धूर्तः

ii. <u>मनम्</u> शोषयत् तनुः पेषयत् सदा वक्रम् भ्रमति ।

(अ)मनवः (ब) मनाः (स) मनः

iii. <u>जानन्ति</u> अहं तस्य नामधेयम् ।

(अ)जानाति (ब) जानीमः (स) जानामि

(iv) वृद्धा <u>भिक्षुकस्य</u> भोजनं अयच्छत्।

(क) भिक्षुकः (ख) भिक्षुकं (ग) भिक्षुकाय

(vi) संसारे अनुशासनस्य <u>महत्</u> आवश्यकता वर्तते।

(क) महती (ख) महान् (ग) महान्तः

(vii) सज्जनः परेभ्यः अहितं <u>कर्मः</u> न करोति।

(क) कर्मम् (ख) कर्मणा (ग) कर्म

(viii) वृक्षात् शुष्कानि पत्राणि <u>पतथ</u>।

(क) पतन्ति (ख) पततः (ग) पतति

(ix) सुरेशः <u>नेत्रयोः</u> पश्यति ।

(क) नेत्राभ्याम् (ख) नेत्रेषु (ग) नेत्रेभ्यः

(x) पाठ्यपुस्तके अष्ट <u>पाठानि</u> सन्ति ।

(क) पाठाः (ख) पाठान् (ग) पाठः

5 अधोलिखितवाक्येषु वाक्यानुगुणम् उचिताव्ययपदं प्रदत्तविकल्पेभ्यः चिनुत–

(i) कक्षायां छात्राः ---------- वदन्ति।

(i) उच्चैः (ii) वृथा (iii) इतस्ततः (iv) सहसा

(ii) ऋषभः ---------- बिलासपुरम् गतवान् ।

(i) श्वः (ii) ह्यः (iii) सम्प्रति (iv) शनैः

(iii) यदि सफलताम् इच्छति ----------परिश्रमं कुरु |

(i) कुतः (ii) किमर्थम् (iii) तर्हि (iv)श्वः

(iv).....स्थाष्यन्ति गिरयः तावत्रामायणि कथा प्रचरिष्यति |

(i) च (ii) श्वः (iii) यावत् (iv) इदानीम्

(v) ज्वालामालाकुलाः अश्वाः प्राणत्राणाय..... अधावन्।

(i)अपि (ii) इतस्ततः (iii) शनैः (ग) उच्चैः

(vi) 'अहम् इदं कार्यं पुनः करिष्यामि' .....सः दृढतया अवदत्।

(i) तर्हि (ii) इति (iii) यथा (iv) च

(Vii) गृहे ..... कलहं मा कुरुत |

(i) कुतः (ii) वृथा (iii) यथा (iv) च

(viii) ..... छात्राः विद्यालयात् आगछन्ति |

(i) श्वः (ii) ह्यः (iii) इदानीम् (iv) यथा

(ix) यदि एवं ..... मां निजगले बद्ध्वा चल सत्वरम्।

(i) तर्हि (ii) तदा (iii) अन्यत्र (iv) तथा

(x) यदि ..... चित्ते, तथा वाचि अवक्रता भवेत् |

(i) तर्हि (ii) तदा (iii) यथा (iv) कदा

SUBJECT- MATHS : SARVODAYA (OPTIONAL)

1. Prove that $\sqrt{3} + \sqrt{5}$ is an irrational number.

2. If $6x = \sec\theta$ and $\frac{6}{x} = \tan\theta$, find the value of $9(x^2 - \frac{1}{x^2})$.

3. Prove the following: $(\text{cosec}A - \sin A).(\sec A - \cos A) = \frac{1}{\tan A + \cot A}$.

4. Prove that $\frac{\sec x + \tan x - 1}{\sec x - \tan x + 1} = \frac{\cos x}{1 - \sin x}$.

5. Find the zeroes of the quadratic polynomial $2x^2 + 5x - 3$ and verify the relationship between zeroes and coefficients.

6. A quadratic polynomial has zeroes 3 and –2. Find the polynomial and verify the relation between coefficients and zeroes.

7. If one zero of the polynomial $6x^2 + kx - 15$ is 5/3, find the value of k and the other zero.

8. Find a quadratic polynomial whose zeroes are twice and thrice the zeroes of $2x^2 + 3x + 5$.

9. Prove that $\sqrt{\frac{1+\sin x}{1-\sin x}} + \sqrt{\frac{1-\sin x}{1+\sin x}} = 2 \sec x$.

10. A boat goes 16 km downstream in 2 hours and returns in 4 hours. Find the speed of the boat in still water and of the stream.

11. A fraction becomes 1/3 when 2 is subtracted from the numerator and 1 is subtracted from the denominator. It becomes 1/2 when 1 is added to both. Find the fraction.

12. The perimeter of a rectangle is 60 m. Its length is twice its breadth. Find its length and breadth algebraically and graphically.

13. Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds, they meet in 5 hours. If they travel towards each other, they meet in one hour. What are the speeds of the two cars?

14. The distance between Mumbai and Pune is 192 km. Travelling by Deccan Queen, it takes 48 minutes less than another train. Calculate the speed of the Deccan Queen if the speed of the two trains differ by 20 km/h.

15. The area of a rectangle is 180 m^2. If its length is 5 m more than twice its breadth, find the dimensions.

16. The sum of the reciprocals of a number and its successor is 15/56. Form the quadratic equation and find the numbers

17. Find the sum of the first 20 terms of the A.P. whose nth term is 3n + 4.

18. The sum of first n terms of an A.P. is $3n^2 + 5n$. Find its nth term and the sum of first 20 terms. State the first term and the common difference if the sum of first n terms of an AP is written (**$s_n = an^2 + bn$**).

19. The 4th term of an A.P. is 15 and the 8th term is 31. Find the A.P. and the sum of first 20 terms.

20. A sum of ₹8000 is paid in 20 installments, each installment being ₹100 less than the preceding one. Find the first and the last installment.

21. If the angle of elevation of a cloud from a point *h* meters above a lake is α and the angle of depression of its reflection in the lake is β, prove that the height of the cloud is $\frac{h(\tan\beta + \tan\alpha)}{(\tan\beta - \tan\alpha)}$.

22. The angle of elevation of the top of a tower as observed from a point on the ground is 'α' and on moving "a" meters towards the tower, the angle of elevation is 'β'. Prove that the height of the tower is $\frac{a\tan\alpha\tan\beta}{\tan\beta - \tan\alpha}$.

23.From a window 9 m above the ground of a house in a street, the angles of elevation and depression of the top and foot of another house on the opposite side of the street are 30° and 60° respectively. Find the height of the opposite house and the width of the street. [$Use\ \sqrt{3}$=1.73]

24. ABCD is a trapezium in which AB || DC. P and Q are points on the sides AD and BC such that PO || AB. If PD = 18, BQ = 35 and QC = 15, find AD.

25. If the coordinates of mid-points of the sides of a triangle are (1,2), (0,-1) and (2,-1). Find the coordinates of it's vertices.

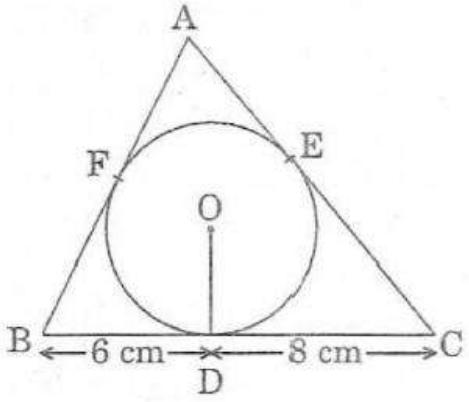
26. The angle of elevation of the top Q of a vertical tower PQ from a point X on the ground is 60°. From a point Y, 40 m vertically above X, the angle of elevation of the top Q of tower is 45°. Find the height of the tower PQ and the distance PX. [Use √3=1.73]

27. If (1,-2), (2,3), (-3,2) and (-4,-3) are 4 vertices of the parallelogram ABCD in the respective order, then assuming the base as BD , find the height of the parallelogram.

28. Show that the points A(7, 10), B(–2, 5), and C(3, –4) are vertices of an isosceles triangle.

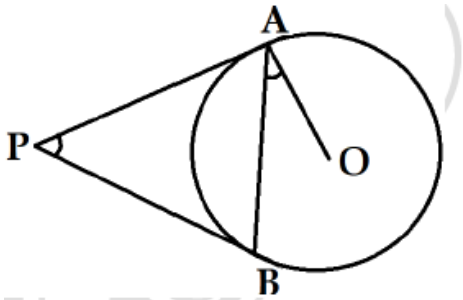
29. If PAB is a secant to a circle intersecting the circle at A and B and PT is the tangent segment then prove that $PA \times PB$ = PT^2.

30. In figure, a triangle ABC is drawn to circumscribe a circle of radius 3 cm, such that the segments BD and DC into which BC is divided by the point of contact D are of lengths 6 cm and 8 cm respectively. Find the side AB if the area of Δ ABC = 63 $cm2$.



31. Prove: (1 + cot A - cosecA).(1 + tan A + sec A) = 2.

32. Two tangents PA and PB are drawn to a circle with center O from an external point P. Prove that
$\angle APB$=2 $\angle OAB$



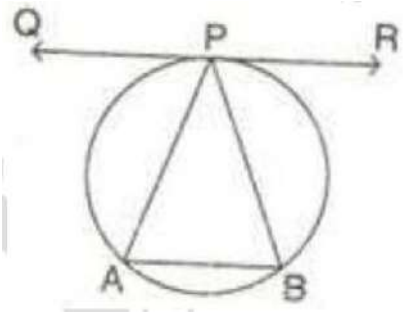
33. To an observer at the top of a lighthouse, 100m above the sea level, the angle of depression of a ship, sailing directly towards it, changes from 30^0 to 45^0 in 2 minutes. Determine the speed of the ship in Kmph.

34. The angle of elevation of a cloud from a platform built 60m above a lake is 30^0 and the angle of depression of it's reflection in the lake's water is 60^0. Find the height of the cloud.

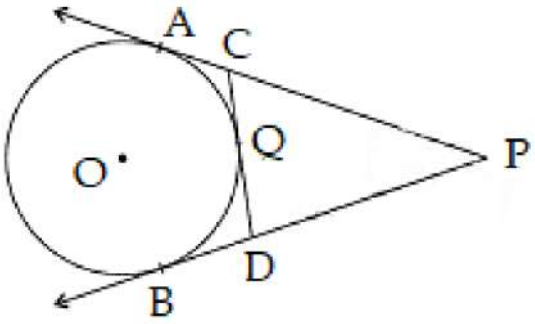
35. A ladder of length 6 m makes an angle of 45° with the floor while leaning against one wall of a room. If the foot of the ladder is kept fixed on the floor and it is made to lean against the opposite wall of the room, it makes an angle of 60° with the floor. Find the distance between these two walls of the room.

36. An aeroplane is flying at a height of 300 m above the ground. Flying at this height, the angles of depression from the aeroplane of two points on both banks of a river in opposite directions are 45° and 60° respectively. Find the width of the river.

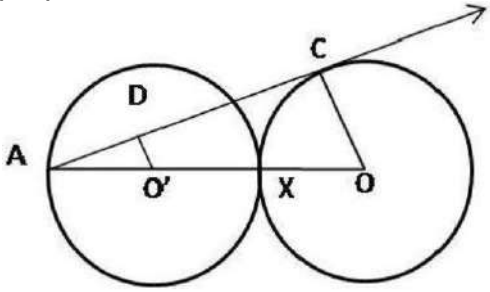
37. To If a line touches a circle and from the point of contact a chord is drawn, prove that the angles which this chord makes with the given line are equal respectively to the angles formed in the corresponding alternate segments.
Using the above theorem, prove the following: P is mid-point of arc APB. Prove that tangent QR drawn at P to the circle is parallel to AB.



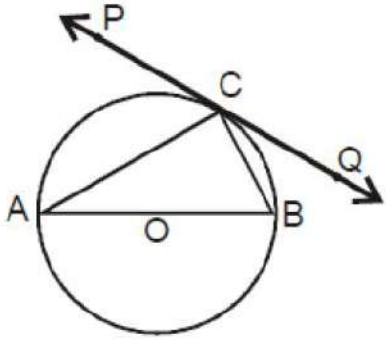
38. In the given figure, PA and PB are tangents to the circle from an external point P. CD is another tangent touching to circle at Q. If PA = 12 cm, QC = QD = 3 cm, then find $PC + PD$.



39. In figure, two equal circles, with centers O and O', touch each other at X. OO' produced meets the circle with center O' at A. AC is tangent to the circle with center O, at the point C. O'D is perpendicular to AC. Find the value of (DO'/CO) .



40. In figure, PQ is a tangent at a point C to a circle with center O. If AB is a diameter and $\angle CAB$ = 30°, find $\angle PCA$.



SUBJECT- SOCIAL SCIENCE

HISTORY-

1) What was an accordion book?
2) Describe how did print come to Europe from China?
3) Who was Marco Polo? Write his contribution to print culture?
4) Write the features Gutenberg printed books?
5) Describe how did a new reading public emerge with the printing press?
6) How did print help to debate and discussion?
7) Why everyone did not welcome the printed book?
8) Martin Luther was in favour of print and spoke out in praise of it. Write it's reasons
9) Highlight innovations that improved the printing technology from 19th century onwards.
10) Explain any three factors responsible for the invention of new printing technique.
11) Who was Menocchio? Mention any two contributions of him in the field of print culture in the sixteenth century.
12) What led the colonial government to pass the Vernacular Press Act in 1878? How did it affect the vernacular newspapers?
13) Why did James Augutus Hickey claim that the Bengal Gazette was “a commercial paper open to all but influence by none”? Explain.

GEOGRAPHY-

CHAPTER 5

MINERALS AND ENERGY RESOURCES

Q1. How do minerals occur in igneous and metamorphic rocks?
Q2. How is energy an indispensable requirement of our modem life? Explain with three examples.
Q3. Why is there a pressing need to use non-conventional sources of energy in India? Explain any three reasons.
Q4. Explain the use of petroleum as an energy resource and as an industrial raw material.
Q5. Distinguish between conventional and non-conventional sources of energy.

ECONOMICS-

CHAPTER 3
MONEY AND CREDIT

Q1. How does money solve the problem of double coincidence of wants? Explain with an example.
Q2. Why do we need to expand formal sources of credit in India?
Q3. What is the basic idea behind the SHGs for the poor?
Q4. In what ways does the Reserve Bank of India supervise the functioning of banks? Why is this necessary?
Q5. In situations with high risks, credit might create further problems for the borrower. Explain?

GEOGRAPHY: MAP PRACTICE

TERM II

Ch 5. Minerals and Energy Resources
Identify:
a. Iron Ore mines

- Mayurbhanj
- Durg

- Bailadila
- Bellary
- Kudremukh

b. Coal Mines

- Raniganj
- Bokaro
- Talcher
- Neyveli

c. Oil Fields

- Digboi
- Naharkatia
- Mumbai High
- Bassien
- Kalol
- Ankaleshwar

Locate & label: Power Plants

a. Thermal

- Namrup
- Singrauli
- Ramagundam

b. Nuclear

- Narora
- Kakrapara
- Tarapur Kalpakkam

Ch 6. Manufacturing Industries

I.Manufacturing Industries (Locating and Labelling only)

Cotton Textile Industries:

a. Mumbai
b. Indore
c. Surat
d. Kanpur
e. Coimbatore

Iron and Steel Plants:

a. Durgapur
b. Bokaro
c. Jamshedpur
d. Bhilai
e. Vijayanagar
f. Salem

Software Technology Parks:

a. Noida
b. Gandhinagar
c. Mumbai
d. Pune
e. Hyderabad
f. Bengaluru
g. Chennai
h. Thiruvananthapuram

Ch 7. Lifelines of National Economy

Locating and Labelling:

a.Major sea ports

- Kandla
- Mumbai
- Marmagao
- New Mangalore
- Kochi
- Tuticorin
- Chennai
- Vishakhapatnam
- Paradip
- Haldia

b.International Airports:

- Amritsar (Raja Sansi - Sri Guru Ram Dass jee)
- Delhi (Indira Gandhi)
- Mumbai (Chhatrapati Shivaji)
- Chennai (Meenam Bakkam)
- Kolkata (Netaji Subhash Chandra Bose)
- Hyderabad (Rajiv Gandhi)

SUBJECT- SCIENCE

- ***Class X A & B - It's compulsory to solve question 1 to 10 of each subject Physics, Chemistry and Biology.***
- ***Classes X C to L - It's compulsory to solve all questions of Physics ,Chemistry and Biology.***

PHYSICS-

1. Draw a labelled ray diagram to show the path of the reflected ray corresponding to an incident ray of light parallel to the principal axis of a convex mirror. Mark the angle of incidence and angle of reflection on it.
2. Explain why the sky appears dark to astronauts in space
3. Describe how atmospheric refraction leads to the apparent early sunrise and delayed sunset.
4. Draw a neat diagram to show the refraction of light through a glass prism.
5. What causes the dispersion of white light?
6. Why is the sky blue?
7. Why do stars appear to twinkle?
8. Why is the danger signal light red?
9. State Snell's law of refraction.
10. Define a) absolute refractive index, b) Power of a lens.
11. A person has a near point of 100 cm and a far point of 200 cm. What type of lenses will be required to correct his vision? Support with calculations.
12. A student wants to project the image of a candle flame on the walls of the school laboratory by using a mirror.
    (a) Which type of mirror should he use and why?
    (b) At what distance in terms of focal length 'f' of the mirror should he place the candle flame to get the magnified image on the wall?
    (c) Draw a ray diagram to show the formation of the image in this case.
    (d) Can he use this mirror to project a diminished image of the candle flame on the same wall? State 'how' if your answer is 'yes' and 'why not' if your answer is 'no'
13. What is the principle of reversibility of light? Show that the incident of light is parallel to the emergent ray of light when light falls obliquely on a side of a rectangular glass slab.

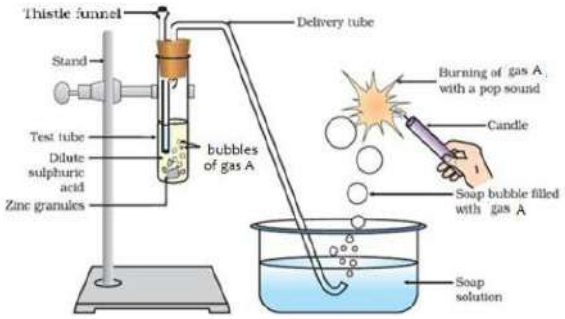
14. A security mirror used in a big showroom has a radius of curvature of 5 m. If a customer is standing at a distance of 20 m from the cash counter, find the position and nature of the image formed in the security mirror.
15. A student focuses the image of a well-illuminated distant object on a screen using a convex lens. After that, he gradually moves the object towards the lens and each time focuses its image on the screen by adjusting the lens.
(i) In which direction-towards the screen or away from the screen, does he move the lens?
(ii) What happens to the size of the image-does it decrease or increase?
(iii) What happens to the image on the screen when he moves the object very close to the lens?
16. State two positions in which a concave mirror produces a magnified image of a given object. List two differences between the two images.
17. An object of height 4.0 cm is placed at a distance of 30 cm from the optical centre 'O of a convex lens of focal length 20 cm. Draw a ray diagram to find the position and size of the image formed. Mark the optical centre 'O' and principal focus 'F' on the diagram. Also find the approximate ratio of size of the image to the size of object.
18.An object is placed at a distance of 60 cm from a concave lens of focal length 30 cm.
(i) Use the lens formula to find the distance of the image from the lens.
(ii) List four characteristics of the image (nature, position, size, erect/inverted) formed by the lens in this case.
(iii) Draw a ray diagram to justify your answer to part (ii).
19. Nia looked at an object X that was kept near her. She could see it clearly. She then looked at object Y which was kept farther away. She could see object Y also clearly.
(a) Which part of the eye enables a person to see clearly, both, near objects and those that are far away? Why?
(b) Describe the eye changes that enable nearby objects to be seen clearly.
(c) Describe the eye changes that enable far-away objects to be seen clearly.
20. Roopa conducts an experiment with light. She notices that when light rays fall on the surface of a certain object, the light rays change direction. When the light leaves the object from another surface, the light rays bend again.
(a) What could be the object that Roopa used to conduct this experiment?
(b) Why does the light bend twice? Explain with two points.

CHEMISTRY-

1. In the electrolysis of water,

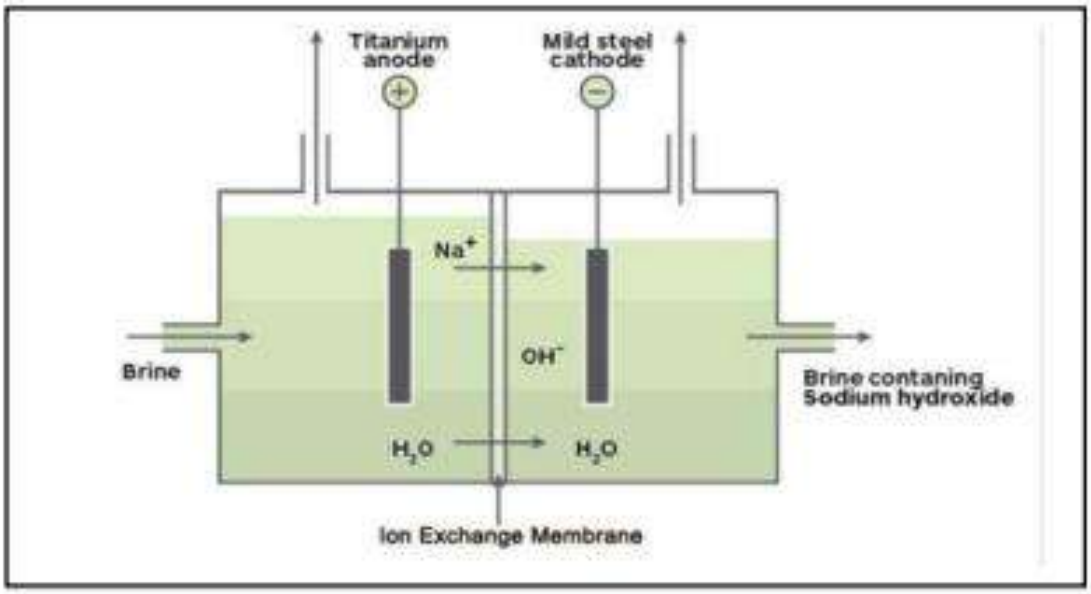
a) Name the gas collected at anode and cathode
b) Why is the volume of gas collected at one electrode double than the other?
c) What would happen if dil. H_2SO_4 is not added to water?

2. A compound which is prepared from gypsum has the property of hardening when mixed with a proper quantity of water. Identify the compound and write its chemical formula. Write the chemical equation for its preparation. Mention any one use of the compound.
3 What do you observe when you drop a few drops of acetic acid to a test tube containing: a) Phenolphthalein c) distilled water b) Universal indicator d) sodium hydrogen carbonate.
4. (i) Write two observations when lead nitrate is heated in a test tube. (ii) Name the type of reaction. (iii) Write a balanced chemical equation to represent the above reaction
5. Reema took 5ml of Lead Nitrate solution in a beaker and added approximately 4ml of Potassium Iodide solution to it. What would she observe? Write the type of reaction? Also write balanced chemical equation.
6. A. Identify gas A in the following experiment.



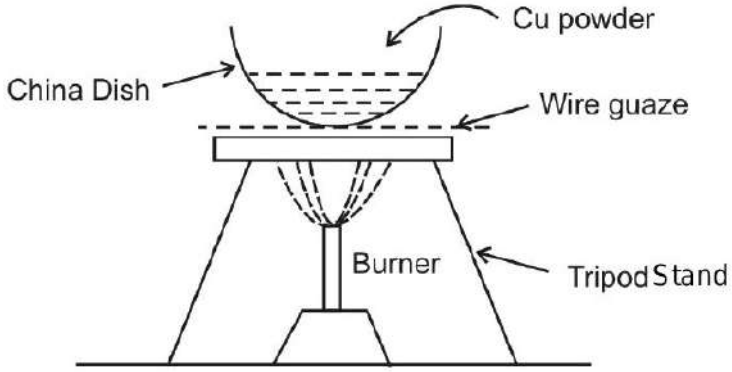
B. Name the type of reaction.
C. Write a balanced chemical equation if magnesium metal ribbon reacts in the above reactions.

7. List any two observations when Ferrous Sulphate is heated in a dry test tube? Also write a balanced chemical equation and type of reaction.
8. Four samples A, B, C and D change the colour of pH paper or solution to Green, Reddish-pink, Blue and Orange. Their pH was recorded as 7, 2, 10.5 & 6 respectively. Which of the samples has the highest amount of Hydrogen ion concentration? Arrange the four samples in the decreasing order of their pH.
9.



(a) Identify the gases evolved at anode and cathode in the above experimental set up.
(b) Name the process that occurs. Why is it called so?
(c) Illustrate the reaction of the process with the help of a chemical equation.

10. Amit and Rita decided to bake a cake and added baking soda to the cake batter. Explain the role of baking soda with a balanced chemical equation. Mention any other use of baking soda.
11. A compound 'X' of sodium is used as an antacid and it decomposes on strong heating.
    (i) Name the compound 'X' and give its chemical formula.
    (ii) Write a balanced chemical equation to represent the decomposition of 'X'.
    (iii) Give one use of compound 'X' besides an antacid.
12. In the given diagram below , copper powder is heated in a china dish , the reddish brown surface of copper powder becomes coated with a black substance



13.
A. Why has this black substance formed?.
B. Name the black substanceand its formula.
C. Write the chemical equation of the reaction that takes place.

13. A student observes that freshly cut apple slices turn brown when exposed to air, but remain white if lemon juice is added immediately.
(a) What type of chemical reaction causes the browning?
(b) Identify the nature of the chemical species in air responsible for this reaction.
(c) How does lemon juice prevent the browning?
(d) Write the overall reaction type and relate it to corrosion prevention.

14. State the reason for the following:
(i) Aluminium oxide is called an amphoteric oxide.
(ii) Hydrogen gas is not evolved when most metals react with nitric acid.
(iii) Calcium does not occur in free state in nature.

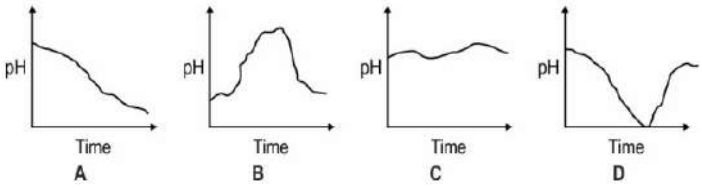
15. A clear solution of slaked lime is made by dissolving $Ca(OH)_2$ in an excess of water. This solution is left exposed to air. The solution slowly goes milky as a faint white precipitate forms. Explain why a faint white precipitate forms, support your response with the help of a chemical equation.

16. A metal ‘M’ reacts with dilute hydrochloric acid to form a gas ‘G’ which burns with a pop sound. When the same metal reacts with oxygen, it forms a white solid ‘S’.
(a) Identify M, G, and S.
(b) Write all balanced chemical equations.
(c) Classify each reaction as combination, displacement, or oxidation-reduction.
(d) What do these reactions indicate about the reactivity of M?

17. A sample of bleaching powder when exposed to air loses its chlorine smell gradually.
(a) Write the chemical equation for the decomposition.
(b) Why does this happen?
(c) Which component of bleaching powder acts as a disinfectant?
(d) How does its effectiveness depend on environmental conditions?

18. Tina finds a paper covered with a white substance in a chemistry lab. She keeps the paper near the window of the lab and comes back to pick it up after five hours to take it home. She noticed that the white substance had turned grey.
(a) What could be the most likely substance on the paper that Tina found?
(b) The substance changed from white to grey, write the chemical equation for this reaction.
(c) State one application of this property of the substance seen in daily life.

19.Which of these graphs shows how the pH of milk changes as it forms curd?



Explain the reason to support your answer.
20.Dipti has three flasks containing dilute hydrochloric acid, dilute sulphuric acid and dilute sodium hydroxide respectively. The flasks are not labelled and she does not have any pH indicator.
(a) Which of the solutions will she be able to identify just by making mixtures of pairs of the substances.
(b) what observation will help her to make this identification?

BIOLOGY-

Q1 What do you mean by Autotrophic nutrition and Heterotrophic nutrition? Name the different types of heterotrophic nutrition and give examples of each.
Q2 What is photosynthesis? What are the raw materials required for photosynthesis?
Q3 What are the steps involved in holozoic nutrition? Show holozoic nutrition in Amoeba using suitable diagrams.
Q4 Write the role of the following in the digestion of food in our body – Saliva, Gastric juice, Bile juice.
Q5 How does exchange of gases take place in fish? Why is the ratr of respiration faster in fishes than the terrestrial animals?
Q6 What is anaerobic respiration? Where do you find anaerobic respiration in animals?
Q7. Compare between Aerobic and Anaerobic respiration in points.
Q8 How is the small intestine designed to absorb digested food?
Q9 Name the respiratory pigment in human beings? What isitsrole?
Q10 What is excretion? Name some parts in our body involved in excretion.
Q11 What are the strategies of plants to get rid of their wastes?
Q12 What is Lymph? How is it different from blood?
Q13 Differentiate between respiration and breathing.
Q14 How is oxygen and carbon dioxide exchanged between blood and tissue? How are the gases transported in human being?
Q15 Explain how the air is inhaled and exhaled during breathing in humans?
Q16 How is food transported in a plant?
Q17 Leaves of a healthy potted plant were coated with Vaseline to block the stomata. Will this plant remain healthy for long? Stage three reasons for your answer.
Q18 How are water and minerals absorbed and transported in the plants?
Q19 Describe double circulation in human beings. Name the group of animal with double circulation? How is it important for them?
Q20 Draw neat and labelled diagram of nephron and describe the process of urine formation.

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