



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
आवधिक परीक्षण / Periodic Test 1 (2025-26)
विद्यालय/School: Atomic Energy Central School No. 2
केंद्र/Centre: Rawatbhata

कक्षा /Class: 10

विषय /Subject: English

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: Literature- F-1, P-1 &2 , Writing- Application & Descriptive Paragraph, Grammar-Unit-1&2

विद्यार्थी का नाम/Name of the student: _____
 अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

	Section A	
1	<p>Read the text carefully and answer the questions:</p> <ol style="list-style-type: none"> Sleep is crucial to maintaining one's health. Without it, we increase our susceptibility to an astonishing array of health problems, including heart disease, stroke, diabetes, obesity and depression. Not sleeping enough can compromise your immune system, says Stanley Coren, noted professor of psychology and author of the very popular book 'Sleep Thieves'. You eat well and exercise in order to keep your immune system up, Coren goes on to explain, but if you aren't sleeping, you undo all that good work. "The immune system works best when you are sleeping," he says. "That's when your natural killer cells are generated." Natural killer cells are produced in the bone marrow and found in the blood and lymph fluid. They are part of the body's defence mechanism against viruses, bacteria, even cancer and they do not work properly in the persons who are sleep - deprived. It's not just our immune system that gets adversely affected when we cut down on sleep. According to Dr. Michael Sole, a Canadian cardiologist, there is a higher rate of heart failure among people with sleep disorders and sleep disturbances. He goes on to emphasise that there is increased evidence of C - reactive protein, an indicator of heart disease risk, in people suffering from sleep loss. Sleep disturbances increase the likelihood of a prediabetic state of glucose intolerance and insulin resistance. Both these are also markers for heart ailments. Dietician Ramona Josephson notes that 	[10]

	<p>insufficient sleep may affect three hormones that can contribute to obesity.</p> <p>6. There's a decrease in leptin, the appetite - suppressing hormone found in our fat tissue, she says. Ghrelin, the hormone controlling hunger pangs increases with lack of sleep causing greater feelings of hunger.</p> <p>"The less you sleep, the more your chances of obesity," Josephson concludes.</p> <p>7. Sleep is important in keeping not only our waistline trim, but also ensuring a balanced brain activity. During sleep, brain neurotransmitters - the chemicals that deliver messages between nerve cells in the brain - are replenished. When we do not sleep well, our brain chemicals deplete which leads to emotional disturbances like depression, anxiety and general feelings of sadness, anger and irritation.</p> <p>MCB Theme: Health and Medicine</p> <p>1. What does lack of sleep do?</p> <p>a) Weakens the body's capacity to combat diseases</p> <p>b) Helps youngsters do well in their examinations</p> <p>c) Prevents a person from gaining weight</p> <p>d) Decreases laziness</p> <p>2. How does sleep promote immunity?</p> <p>3. What does Natural Killer cells do?</p> <p>a) Are produced in large numbers when we stay awake.</p> <p>b) Work well even for sleep - deprived people.</p> <p>c) Make a person look old pretty quickly.</p> <p>d) Help us fight viruses and bacteria.</p> <p>4. How does sleep deprivation affect one's immunity?</p> <p>5. Sleep deprivation can lead to long - term effects. Elaborate.</p> <p>6. Substitute the underlined word in the sentence with the word from the passage which means the same.</p> <p>They have <u>found</u> the pathway that leads to the river.</p> <p>7. How does C - reactive protein affect our body?</p>	
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	<p>a) Helps us to sleep peacefully.</p> <p>b) When produced more in the body causes heart failure.</p> <p>c) Prevents us from having a good night’s sleep.</p> <p>d) Assists in destroying natural killer cells.</p> <p>8. Complete the sentence appropriately.</p> <p>If we sleep well, _____.</p> <p>9. Complete the sentence appropriately.</p> <p>Lack of sleep increases the chances of _____.</p> <p>10. State whether the given statement is True or False:</p> <p>Sleep is essential for a proper physical and mental growth of an individual.</p>																									
	Section B																									
2	Your school has recently built a new computer room and installed five new machines. Write a factual description of the computer, in about 100 words.	[4]																								
	Section C																									
3	Write an e - mail to the Principal of your school requesting her to introduce classes for some foreign languages.	[3]																								
4	Fill in the blanks with appropriate forms of the verb. 1. My friend and guide (is/ are/ were) speaking now. 2. The Jury (is/ are/ were) unanimous in approach.	[2]																								
5	<p>The following passage has not been edited. There is ONE error in each line. Write the incorrect word and the correction in the space provided against</p> <table><tr><td></td><td></td><td>Error</td><td>Correction</td></tr><tr><td>Once there was the guru communicating</td><td>e.g.</td><td>the</td><td>a</td></tr><tr><td>wisdom to people that came for his</td><td>(a)</td><td>_____</td><td>_____</td></tr><tr><td>darshan with flowers or fruits. One</td><td>(b)</td><td>_____</td><td>_____</td></tr><tr><td>day, as the offerings was in plenty, he</td><td>(c)</td><td>_____</td><td>_____</td></tr><tr><td>called an disciple and asked him to cut fruits and arrange for the distribution of prasad.</td><td>(d)</td><td>_____</td><td>_____</td></tr></table> <p>the correct blank number:</p>			Error	Correction	Once there was the guru communicating	e.g.	the	a	wisdom to people that came for his	(a)	_____	_____	darshan with flowers or fruits. One	(b)	_____	_____	day, as the offerings was in plenty, he	(c)	_____	_____	called an disciple and asked him to cut fruits and arrange for the distribution of prasad.	(d)	_____	_____	[4]
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	Section D																									
6	<p>Read the extract carefully and answer the questions that follow:</p> <p>The two boys were seated at the bedside of a girl of about twenty, who, propped up on pillows, wearing a pretty lace jacket, was listening to their chatter, her eyes soft and tender. One could see at a glance her resemblance</p>	[4]																								

	<p>to her brothers.</p> <ol style="list-style-type: none"> 1. Who was seeing the scene described here? 2. What is the relation between the girl and the two boys? 3. What was the villa being used as? 4. The word _____ in the extract means, sensitive . 	
7	How did the boys make themselves useful to the narrator? Answer to the context of the chapter Two Gentlemen of Verona .	[2]
8	Lack of confidence and her gullible nature led the nightingale to her unfortunate end. Elucidate.	[2]
9	What does the dilapidated state of the statue suggest? Answer to the context of the poem Ozymandias .	[2]
	Section E	
10	<p>Well, poor bird - she should have known that your song must be your own. That's why I sing with panache.</p> <p>Though the nightingale is an excellent and naturally talented singer, she is called a poor singer and a stupid animal by the frog. Explain how the nightingale lacked worldly wisdom which led to her miserable demise.</p> <p>OR</p> <p>The Frog and the Nightingale is actually a fable, conveying a moral lesson. Discuss.</p>	[7]



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कक्षा/Class: X

विषय/Subject: ENGLISH

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दिया गया पाठ्यक्रम/Portion covered: Literature- F-1, P-1 &2 , Writing- Application & Descriptive Paragraph, Grammar-Unit-1&2

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ANSWER KEY

Q.1 i- a

ii- Because when we sleep the natural killer cells are generated to combat diseases.

iii- d- Helps us fight viruses and bacteria.

iv- Sleep deprivation can significantly weaken the immune system, making individuals susceptible to infections and potentially worsening existing health conditions.

v- Yes this statement is right that sleep deprivation can lead to a range of diseases, diabetes, obesity, etc

vi- discovered

vii- a) helps us to sleep peacefully

viii- If we sleep well, we can combat diseases well.

ix- heart failure, obesity, and many more diseases.

x- true

Q.2- Paragraph writing

Q.3 Email Writing

Q.4-i- is

ii- is

Q.5 Error Correction

i- that who

ii- or and

iii- all as

iv-the a



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केंद्र/Centre: Rawatbhata

कक्षा /Class: 10

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अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: chapter 1 and 2 ,Kritika – chapter 1 and grammar

विद्यार्थी का नाम/Name of the student: _____

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खंड क	
1	<p>निम्नलिखित वाक्यों में से किन्हीं चार वाक्यों का निर्देशानुसार वाच्य परिवर्तन कीजिए - (1x4=4)</p> <ol style="list-style-type: none"> नवाब साहब ने जेब से चाकू निकाला और खीरे छीलने शुरू कर दिए। (कर्मवाच्य में बदलिए।) आओ ! वहाँ बैठें। (भाववाच्य में बदलिए।) उन्हें आराम करने के लिए कहा गया। (कर्तृवाच्य में बदलिए।) वह गिने - चुने फ्रेमों को नेताजी की मूर्ति पर फिट कर देता है। (कर्मवाच्य में परिवर्तित कीजिए।) भाववाच्य में प्रधानता कौन होती है? भाव वाच्य में किस की प्रधानता होती है?
2	गोपियों द्वारा उद्धव को भाग्यवान कहने के पीछे क्या व्यंग्य निहित है ? [3]
3	गोपियाँ कृष्ण को हारिल की लकड़ी क्यों मानती हैं? [3]
4	कस्बे में घुसने से पहले हालदार साहब के मन में क्या ख्याल आया और क्यों? [3]
5	हालदार साहब सदा उस कस्बे के चौराहे पर क्यों रुकते थे? एक दिन न रुकने का निर्णय लेकर भी अचानक क्यों रुक गए? [3]
6	दो उदाहरण दीजिए जिनसे आपको लगा हो कि बालगोबिन भगत सामाजिक रूढ़ियों से न बँधकर प्रगतिशील विचारों का परिचय देते हैं। [3]
7	बालगोबिन भगत गृहस्थ जीवन में भी संन्यासी थे। सोदाहरण टिप्पणी कीजिए। [3]
8	माता का ऑचल पाठ में ग्राम्य संस्कृति के जिस रूप का चित्रण है - वह आधुनिक युग में पर्याप्त अंशों में परिवर्तित हो चुका है। परिवर्तित रूप से कुछ उदाहरण देते हुए इस कथन के [4]

	समर्थन में अपने विचार लिखिए।	
9	सबेरे 'बाबूजी' किस ग्रंथ का पाठ किया करते थे और उस समय भोलानाथ कहाँ बैठते थे और क्या किया करते थे? बाबूजी की इस दिनचर्या से हमें क्या प्रेरणा मिलती है? "माता का आँचल" पाठ के आधार पर लिखिए।	[4]
10	<p>अनुच्छेद को ध्यानपूर्वक पढ़कर निम्नलिखित प्रश्नों के उत्तर दीजिये: ऊधौ, तुम हौ अति बड़भागी।</p> <p>अपरस रहत सनेह तगा तैं, नाहिन मन अनुरागी। पुरइनि पात रहत जल भीतर, ता रस देह न दागी। ज्यौं जल माहँ तेल की गागरि, बूँद न ताकौं लागी। प्रीति - नदी में पाउँ न बोर्यौ, दृष्टि न रूप परागी। 'सूरदास' अबला हम भोरी, गुर चाँटी ज्यौं पागी॥</p> <ol style="list-style-type: none"> उपर्युक्त पद में वक्ता और श्रोता क्रमशः हैं: क) गोपियाँ - उद्धव ख) उद्धव - गोपियाँ ग) सूरदास - उद्धव घ) सूरदास - गोपियाँ ऊधौ, तुम हौ अति बड़भागी पंक्ति में बड़भागी विशेषण द्वारा उद्धव को क्या कहा जा रहा है? क) उद्धव गोपियों के पास आने के कारण बहुत भाग्यशाली है। ख) उद्धव को भाग्यशाली कहने में व्यंग्य निहित है। ग) उद्धव श्रीकृष्ण के पास रहने के कारण बहुत भाग्यशाली है। घ) प्रेम रूपी बंधनों से मुक्त रहने के कारण उद्धव भाग्यशाली है। अपरस रहत सनेह तगा तैं, नाहिन मन अनुरागी पंक्ति का भावार्थ है: क) प्रेम के बंधन में नहीं बँधने पर भी उनका मन अनुरागी है। ख) प्रेम रूपी धागे में बंधकर ही उद्धव का मन अनुरागी है। ग) उद्धव अनुरागी होने के कारण गोपियों की वेदना नहीं समझ सकते। घ) प्रेम रूपी बंधन में न बँधने के कारण उद्धव गोपियों की वेदना नहीं समझ सकते। प्रीति - नदी में पाउँ न बोर्यौ, दृष्टि न रूप परागी पंक्ति के संदर्भ में लिखिए कि किसके रूप पर मुगध होने की बात की जा रही है? 	[5]

	<p>क) प्रेम रूपी नदी के</p> <p>ख) श्रीकृष्ण के रूप पर</p> <p>ग) उद्धव के रूप पर</p> <p>घ) श्रीकृष्ण की दृष्टि पर</p> <p>5. उद्धव के व्यवहार की तुलना किससे की गई है?</p> <p>क) तेल की मटकी से</p> <p>ख) (b) और (c) दोनों</p> <p>ग) कमल के पत्ते से</p> <p>घ) चींटी से</p>	
11	<p>अनुच्छेद को ध्यानपूर्वक पढ़कर निम्नलिखित प्रश्नों के उत्तर दीजिये: हालदार साहब को पानवाले द्वारा एक देशभक्त का इस तरह मज़ाक उड़ाया जाना अच्छा नहीं लगा। मुड़कर देखा तो अवाक रह गए। एक बेहद बूढ़ा मरियल - सा लँगड़ा आदमी सिर पर गाँधी टोपी और आँखों पर काला चश्मा लगाए, एक हाथ में एक छोटी - सी संदूकची और दूसरे हाथ में एक बाँस पर टंगे बहुत - से चश्मे लिए अभी - अभी एक गली से निकला था और अब एक बन्द दुकान के सहारे अपना बाँस टिका रहा था। तो इस बेचारे की दुकान भी नहीं! फेरी लगाता है! हालदार साहब चक्कर में पड़ गए। पूछना चाहते थे, इसे कैएन क्यों कहते हैं? क्या यही इसका वास्तविक नाम है? लेकिन पानवाले ने साफ़ बता दिया था कि अब वह इस बारे में और बात करने को तैयार नहीं। ड्राइवर भी बेचैन हो रहा था।</p> <p>1. पानवाले की कौन - सी बात हालदार साहब को अच्छी नहीं लगी?</p> <p>क) पानवाले द्वारा एक देशभक्त का मज़ाक उड़ाया जाना।</p> <p>ख) मूर्ति बनाने वाले का अपमान।</p> <p>ग) मूर्ति की बनावट पर टीका - टिप्पणी।</p> <p>घ) मूर्ति बनाने में धन के अपव्यय का मज़ाक उड़ाया जाना।</p> <p>2. हालदार साहब ने मुड़कर देखा तो अवाक क्यों रह गए?</p> <p>क) चश्मे वाले की वेशभूषा और दयनीय दशा देखकर।</p> <p>ख) सभी विकल्प सही हैं।</p> <p>ग) एक बेहद बूढ़े - मरियल से चश्मे वाले को देखकर।</p> <p>घ) उसके हाथ में एक छोटी - सी संदूकची और दूसरे हाथ में बाँस पर टंगे चश्मों को देखकर।</p> <p>3. चश्मेवाला एक बंद दुकान के सहारे अपना बाँस क्यों टिका रहा था?</p>	[5]

	<p>क) क्योंकि वह दुकान उसके जानने वाली की थी।</p> <p>ख) क्योंकि वह दुकान बंद थी।</p> <p>ग) यह दुकान बाजार के बीचों - बीच थी।</p> <p>घ) उसकी अपनी कोई दुकान नहीं थी।</p> <p>4. हालदार साहब पानवाले से कैप्टन चश्मे वाले के बारे में क्या पूछना चाहते थे?</p> <p>क) क्या लोग उसके चश्मे पसंद करते हैं?</p> <p>ख) इसे कैप्टन क्यों कहते हैं और इसका असली नाम क्या है?</p> <p>ग) उसकी दुकान कहाँ है?</p> <p>घ) वह कहाँ रहता है?</p> <p>5. पानवाले ने हालदार साहब को कौन - सी बात साफ़ बता दी?</p> <p>क) वह उसका असली नाम नहीं जानता।</p> <p>ख) वह कैप्टन के बारे में अधिक नहीं जानता।</p> <p>ग) उसे जितना पता था उसने बता दिया।</p> <p>घ) वह इस बारे में और बात करने को तैयार नहीं।</p>	
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कक्षा /Class:10

विषय /Subject: Hindi

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: chapter 1 and 2 ,Kritika – chapter 1 and grammar

विद्यार्थी का नाम/Name of the student: _____
अनुक्रमांक /Roll No.__ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Answer key

- उत्तर -1.(१) नवाब साहब के द्वारा जेब से चाकू निकाल कर खीरे छीलने शुरू कर दिए/गए।
२. आइए वहां बैठा जाए।
३. उन्हें आराम करने को कहा गया ।
४. उसके द्वारा गिने चुने फ्रेमों को नेताजी की मूर्ति पर फिट कर दिया जाता है
५. भाव की।
२. गोपियां प्रत्यक्ष रूप से उद्धव को कटु वचन ना कहकर व्यंग्य का सहारा लेती हैं । और उद्धव को भाग्यशाली कहकर प्रशंसा करती हैं कि वे श्री कृष्ण के सानिध्य में रहकर भी उनके प्रेम से वंचित हैं। गोपियों के अनुसार कृष्ण के निकट रहकर प्रेम के महत्व तथा वियोग की पीड़ा को न समझ पाना उद्धव का दुर्भाग्य है ।
३. गोपियों ने श्री कृष्ण के प्रति अनन्य प्रेम को हारिल पक्षी का उदाहरण देकर अभिव्यक्त किया है। वे हारिल पक्षी की तरह कृष्ण प्रेम रूपी लकड़ी को मजबूती से थामे हुए हैं। जिस प्रकार हारिल पक्षी लकड़ी को अपने पंजों में मजबूती से जकड़े रहता है उसे कभी छोड़ता नहीं है। उसी प्रकार श्री कृष्ण भी उनके जीवन का एक मात्र सहारा हैं गोपियां उन्हें छोड़ना नहीं चाहती हैं।
४. कस्बे में घुसने से पहले हालदार साहब के मन में यह ख्याल आया कि सुभाष जी की प्रतिमा तो चौराहे पर अवश्य होगी पर उनकी आंखों पर चश्मा नहीं होगा क्योंकि मास्टर जी बनाना भूल गए और कैप्टन मर गया था।
५. हालदार साहब उस कस्बे के चौराहे पर सदा इसलिए रुकते थे क्योंकि उन्हें चौराहे पर नेताजी की सुंदर मूर्ति को जिस पर वास्तविक चश्मा बदलता रहता था उसे देखना चाहते थे और वहां पर पान की दुकान

पर पान भी खाते थे । कैप्टन के निधन के बाद हालदार साहब ने वहां न रुकने का निर्णय लिया लेकिन एक दिन मूर्ति की आंखों पर सर कंडे का लगा हुआ चश्मा जब उन्होंने देखा तो वे अचानक रुक गए।

6. १. बालगोबिन भगत ने अपने इकलौते पुत्र की मौत पर उसकी चिता को अग्नि अपनी पतोहू द्वारा दिलवाई थी।

२. अपनी पतोहू के भाई को बुलाकर उसका दूसरा विवाह करने का आदेश दिया था।

7. वे कबीर को साहब मानते थे ,उन्हीं के पदों को गाते थे खरा व्यवहार रखते थे कभी झूठ नहीं बोलते थे ।

8. उनकी सब चीज साहब की थी जो कुछ खेत में पैदा होता था उसे सिर पर लादकर पहले साहब के दरबार में ले जाते और वहां से जो मिलता उसे प्रसाद रूप में लाकर घर का गुजारा करते थे।

8. १. बच्चों के खेल और खिलौने में अंतर।

२. कृषि के सभी साधनों में बदलाव।

३. खानपान और जीवन शैली में अंतर।

४. शैक्षणिक पद्धति में बदलाव।

9. सवेरे जब बाबूजी रामायण का पाठ करते थे उस समय भोलानाथ उनकी बगल में बैठते थे। तो लेखक उनकी बगल में बैठकर शीशे में अपना मुंह देखा करते थे। बाबूजी की इस दिनचर्या से हमें यह प्रेरणा मिलती है कि हमें भी सुबह के समय जल्दी जागना चाहिए और पाठ पूजा करनी चाहिए जिससे हमारा आध्यात्मिक उत्थान हो सके और जीवन में सकारात्मकता आ सके।

10. १.क २.ख ३.घ ४.ख ५.ख

11. १.क २.ख ३.घ ४.ख ५.घ



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
आवधिक परीक्षण / Periodic Test 1 (2025-26)
विद्यालय/School: Atomic Energy Central School No. 1
केंद्र/Centre: Rawatbhata

कक्षा /Class: X

विषय /Subject: Mathematics

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: chapter 1,2,3,4 and 5

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

	Section A	
1	The least positive integer divisible by 20 and 24 is a) 240 b) 360 c) 120 d) 480	[1]
2	If two positive integers m and n can be expressed as $m = x^2 y^5$ and $n = x^3 y^2$, where x and y are prime numbers, then $HCF(m, n) =$ a) $x^3 y^2$ b) $x^2 y^2$ c) $x^3 y^3$ d) $x^2 y^3$	[1]
3	The sum and the product of zeroes of the polynomial $p(x) = x^2 + 5x + 6$ are respectively a) 5, - 6	[1]

	b) - 2, - 3 c) - 5, 6 d) 2, 3	
4	A quadratic polynomial, one of whose zeroes is $2 + \sqrt{5}$ and the sum of whose zeroes is 4, is: a) $x^2 - 4x - 1$ b) $x^2 + 4x + 1$ c) $x^2 - 4x + 1$ d) $x^2 + 4x - 1$	[1]
5	If a pair of linear equations in two variables is consistent, then the lines represented by two equations are a) always coincident b) intersecting or coincident c) always intersecting d) parallel	[1]
6	3 chairs and 1 table cost ₹ 900; whereas 5 chairs and 3 tables cost ₹ 2,100. If the cost of 1 chair is ₹ x and the cost of 1 table is ₹ y, then the situation can be represented algebraically as a) $3x + y = 900, 3x + 5y = 2100$ b) $3x + y = 900, 5x + 3y = 2100$ c) $x + 3y = 900, 3x + 5y = 2100$ d) $x + 3y = 900, 5x + 3y = 2100$	[1]
7	Which of the following quadratic equations has sum of its roots as 4? a) $2x^2 - 4x + 8 = 0$ b) $4x^2 - 4x + 4 = 0$ c) $\sqrt{2}x^2 - \frac{4}{\sqrt{2}}x + 1 = 0$ d) $-x^2 + 4x + 4 = 0$	[1]
8	The discriminant of the quadratic equation $2x^2 + x - 1 = 0$ is: a) 7 b) 9	[1]

	c) - 9 d) - 7	
9	Two APs have the same common difference. The first term of one of these is - 1 and that of the other is - 8. Then the difference between their 4th terms is a) - 9 b) - 8 c) 7 d) - 1	[1]
10	The 21st term of the AP whose first two terms are -3 and 4 is a) -143 b) 17 c) 137 d) 143	[1]
	Section B	
11	Given that $\text{HCF}(306, 1314) = 18$. Find $\text{LCM}(306, 1314)$.	[2]
12	Find the zeroes of quadratic polynomial $3x^2 - x - 4$ and verify the relationship between the zeroes and their coefficients.	[2]
13	State whether the quadratic equation has two distinct real roots. Justify your answer. $2x^2 + x - 1 = 0$.	[2]
	Section C	
14	Solve the system of the equation: $99x + 101y = 499$ $101x + 99y = 501$	[3]
15	Find the sum of first 16 terms of the A.P. whose n^{th} term is given by $a_n = 5n - 3$.	[3]
	Section D	
16	Draw the graphs of the following equations: $2x - y - 2 = 0$ $4x + 3y - 24 = 0$ $y + 4 = 0$	[5]

	Obtain the vertices of the triangle so obtained. Also, determine its area.	
17	A train travels a distance of 90 km at a constant speed. Had the speed been 15 km/h more, it would have taken 30 minutes less for the journey. Find the original speed of the train.	[5]
	Section E	
18	<p>Read the following text carefully and answer the questions that follow:</p> <p>February 14 is celebrated as International Book Giving Day and many countries in the world celebrate this day. Some people in India also started celebrating this day and donated the following number of books of various subjects to a public library:</p> <p>History = 96, Science = 240, Mathematics = 336.</p> <p>These books have to be arranged in minimum number of stacks such that each stack contains books of only one subject and the number of books on each stack is the same.</p> <ol style="list-style-type: none"> How many books are arranged in each stack? (1) How many stacks are used to arrange all the Mathematics books? (1) Determine the total number of stacks that will be used for arranging all the books. (2) <p>OR</p> <p>If the thickness of each book of History, Science and Mathematics is 1.8 cm, 2.2 cm and 2.5 cm respectively, then find the height of each stack of History, Science and Mathematics books. (2)</p>	[4]
19	<p>Read the following text carefully and answer the questions that follow:</p> <p>Sumanis celebrating his birthday. He invited his friends. He bought a packet of toffees/candies which contains 360 candies. He arranges the candies such that in the first row there are 3 candies, in second there are 5 candies, in third there are 7 candies and so on.</p> <ol style="list-style-type: none"> Find the total number of rows of candies. (1) How many candies are placed in last row? (1) If Aditya decides to make 15 rows, then how many total candies will be placed by him with the same arrangement? (2) <p>OR</p> <p>Find the number of candies in 12th row. (2)</p>	[4]



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आवधिक परीक्षण / Periodic Test 1 (2025-26)
विद्यालय/School: Atomic Energy Central School No. 2
केंद्र/Centre: Rawatbhata

कक्षा /Class:

विषय /Subject: Mathematics

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: chapter 1,2,3,4 and 5

विद्यार्थी का नाम/Name of the student: _____
 अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Answer key

1. C	6. B
2. B	7. D
3. C	8. B
4. A	9. B
5. B	10. C

Section B

11. HCF (306,1314) = 18 LCM (306,1314) = ?

Let, a = 306 b

= 1314

LCM (a, b) × HCF (a,b) = a × b or,

LCM (a, b) × 18 = 306 × 1314 or

LCM(a,b) = $\frac{306 \times 1314}{18} = 22338$

Therefore, LCM(306,1314)= 22338

12. The quadratic equation is given as: $3x^2 - x - 4$

(Now we will factorize 1 in such a way that the product of factors is equal to -12 and the sum is equal to 1)

$$= 3x^2 - 4x + 3x - 4$$

$$= x(3x - 4) + 1(3x - 4) = (3x - 4)(x + 1)$$

The value of $3x^2 - x - 4$ is zero when $3x - 4 = 0$ or $x + 1 = 0$, when $x = \frac{4}{3}$ or $x = -1$

Therefore, the zeroes of $3x^2 - x - 4$ are $\frac{4}{3}$ and -1

$$\text{Sum of } \frac{4}{3} \text{ zeroes } \frac{1}{3} = \frac{-(-1)}{3} = -\frac{\text{coefficient of } x}{\text{coefficient of } x^2}$$

$$\text{Product of zeroes} = \frac{4}{3}(-1) = \frac{-4}{3} = \frac{\text{constant term}}{\text{coefficient of } x^2}$$

Hence verified.

13. We have, $2x^2 + x - 1 = 0$ Here

$$a = 2, b = 1, c = -1$$

$$\begin{aligned} \therefore D &= b^2 - 4ac = (1)^2 - 4(2)(-1) \\ &= 1 + 8 = 9 > 0 \end{aligned}$$

Hence, the given equation has real roots.

Section C

14. Given, $99x + 101y = 499$ (i)

$$101x + 99y = 501 \dots (ii)$$

Adding eqn. (i) and (ii),

$$(99x + 101y) + (101x + 99y) = 499 + 501$$

$$99x + 101y + 101x + 99y = 1000$$

$$200x + 200y = 1000$$

$$x + y = 5 \dots (iii)$$

Subtracting eqn. (ii) from eqn. (i), we get

$$(99x + 101y) - (101x + 99y) = 499 - 501$$

$$99x + 101y - 101x - 99y = -2$$

$$-2x + 2y = -2$$

$$\text{or, } x - y = 1 \dots (iv)$$

Adding equations (iii) and (iv) $x +$

$$y + x - y = 5 + 1$$

$$2x = 6$$

$$\therefore x = 3$$

Substituting the value of x in eqn. (iii), we get

$$3 + y = 5$$

$$y = 2$$

Hence the value of x and y of given equation are 3 and 2 respectively.

15. N^{th} term $a_n = 5n - 3$

$$a_1 = (5 \times 1) - 3 = 2$$

$$a_2 = (5 \times 2) - 3 = 7$$

$$a_{16} = (5 \times 16) - 3 = 77$$

$$\text{Common difference, } d = 7 - 2 = 5$$

$$S_n = \frac{n}{2} (2a + (n - 1)d)$$

$$S_{16} = \frac{16}{2} (2a + (16 - 1)d)$$

$$S_{16} = 8 (2a + (16 - 1)d)$$

$$S_{16} = 8 (2 \times 2 + 15 \times 5)$$

$$S_{16} = 8 (4 + 75)$$

$$S_{16} = 8 (79)$$

$$S_{16} = 632$$

Section D

16. Given equations,

$$2x - y - 2 = 0 \quad 4x +$$

$$3y - 24 = 0 \quad y + 4 =$$

0

We have, $2x - y - 2 = 0$ or $x = \frac{y+2}{2}$

When $y = 0$, we have $x = \frac{0+2}{2} = 1$

When $x = 0$, we have $y = -2$.

Thus, we obtain the following table giving coordinates of two point on the line represented by the equation $2x - y - 2 = 0$ and its graph is shown below.

x	1	0
y	0	-2

Now we have, $4x + 3y - 24 = 0 \Rightarrow y = \frac{24-4x}{3}$

When $y = 0$, we have $x = 6$

When $x = 0$, we have $y = 8$

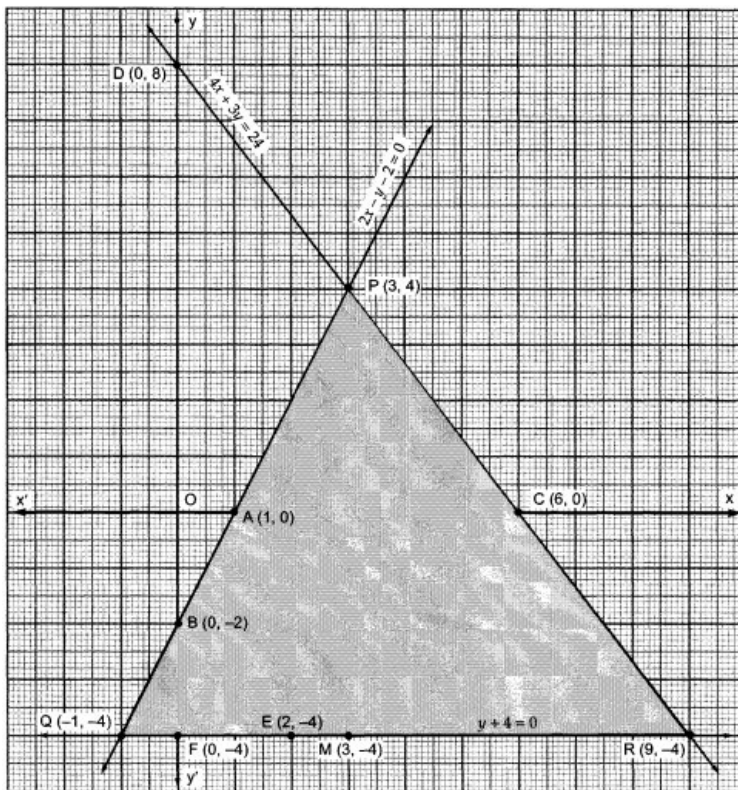
Thus, we obtain the following table giving coordinates of two points on the line represented by the equation $4x + 3y - 24 = 0$ and its graph is shown below.

x	6	0
y	0	8

Also we have $y + 4 = 0$

Clearly, $y = -4$ for every value of x .

So, let $E(2, -4)$ and $F(0, -4)$ be two points on the line represented by $y + 4 = 0$. Plotting these points on the same graph and drawing a line passing through them, we obtain the graph of the line represented by the equation $y + 4 = 0$ as shown in Figure.



From Fig. we have $\triangle PQR$ having vertices $P(3, 4)$, $Q(-1, -4)$ and $R(9, -4)$.

Also, $PM = 8$ and $QR = 10$.

\therefore Area of $\triangle PQR = \frac{1}{2}(\text{Base} \times \text{Height})$

\Rightarrow Area of $\triangle PQR = \frac{1}{2}(QR \times PM) = \frac{1}{2}(10 \times 8) \text{sq. units} \Rightarrow$ Area of $\triangle PQR = 40 \text{sq. units.}$

17. Let the original speed of the train be x km/hr.

We know that time taken to cover 'd' km with speed 's' km/h $= \frac{d}{s}$. \therefore time taken to cover 90 km $= \frac{90}{x}$ hours

& Time taken to cover 90 km when the speed is increased by 15 km/hr $= \frac{90}{x+15}$ hours

According to the question ;

$$\frac{90}{x} - \frac{90}{x+15} = \frac{30}{60} \text{ (time reduced by 30 minutes with increased speed)}$$

$$\Rightarrow \frac{90x - x+9015}{2} = \frac{1}{2}$$

$$\Rightarrow \frac{90x + x21350 + 15 - x90x}{2} = \frac{1}{2}$$

$$\Rightarrow \frac{x21350 + 15x}{2} = \frac{1}{2}$$

$$\Rightarrow 2700 = x^2 + 15x$$

$$\Rightarrow x^2 + 15x - 2700 = 0$$

$$\Rightarrow x^2 + 60x - 45x - 2700 = 0$$

$$\Rightarrow x(x + 60) - 45(x + 60) = 0$$

$$\Rightarrow (x + 60)(x - 45) = 0$$

$$\Rightarrow x + 60 = 0 \text{ or } x - 45 = 0$$

$$\Rightarrow x = -60 \text{ or } x = 45$$

Since the speed cannot be negative, $x \neq -60$.

$$\Rightarrow x = 45$$

Thus, the original speed of the train is 45 km/hr.

Section E

18. i. HCF (96, 240, 336) = 48 ii. Number of stacks $= \frac{336}{48} = 7$

$$\text{iii. Total number of stacks} = \frac{96}{48} + \frac{240}{48} + \frac{336}{48} = 14$$

OR

$$\text{Height of each stack of History} = 48 \times 1.8 = 86.4 \text{ cm}$$

$$\text{Height of each stack of Science} = 48 \times 2.2 = 105.6 \text{ cm}$$

$$\text{Height of each stack of Mathematics} = 48 \times 2.5 = 120 \text{ cm}$$

19. i. Let there be 'n' number of rows

Given 3, 5, 7... are in AP

First term $a = 3$ and common difference $d = 2$

$$S_n = \frac{n}{2} [2a + (n - 1)d]$$

$$\Rightarrow 360 = \frac{n}{2} [2 \times 3 + (n - 1) \times 2]$$

$$\Rightarrow 360 = n[3 + (n - 1) \times 1]$$

$$\Rightarrow n^2 + 2n - 360 = 0$$

$$\Rightarrow (n + 20)(n - 18) = 0 \Rightarrow n = -20 \text{ reject } n = 18 \text{ accept ii. Since there are 18}$$

rows number of candies placed in last row (18th row) is

$$a_n = a + (n - 1)d$$

$$\Rightarrow a_{18} = 3 + (18 - 1)2$$

$$\Rightarrow a_{18} = 3 + 17 \times 2$$

$$\Rightarrow a_{18} = 37 \text{ iii. If there are 15 rows with}$$

same arrangement

$$S_n = \frac{n}{2} [2a + (n - 1)d]$$

$$\Rightarrow S_{15} = \frac{15}{2} [2 \times 3 + (15 - 1) \times 2]$$

$$\Rightarrow S_{15} = 15[3 + 14 \times 1]$$

$$\Rightarrow S_{15} = 255$$

There are 255 candies in 15 rows.

OR

The number of candies in 12th row.

$$a_n = a + (n - 1)d$$

$$\Rightarrow a_{12} = 3 + (12 - 1)2$$

$$\Rightarrow a_{12} = 3 + 11 \times 2$$

$$\Rightarrow a_{12} = 25$$



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विद्यालय/School: Atomic Energy Central School No. 2
केंद्र/Centre: Rawatbhata

कक्षा /Class: X

विषय /Subject: Science

अंक/Marks: 40

दिया गया पाठ्यक्रम/ portion covered : Chapter:1,2,6 and 9

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Time Allowed: 1 hour and 30 minutes **Maximum Marks :** 40

	Section A	
1	<p>Consider the following cases:</p> <ol style="list-style-type: none"> 1. $\text{CaSO}_4 + \text{Al} \rightarrow$ 2. $\text{CuSO}_4 + \text{Ca} \rightarrow$ 3. $\text{FeSO}_4 + \text{Cu} \rightarrow$ 4. $\text{ZnSO}_4 + \text{Mg} \rightarrow$ <p>The cases in which new products will form are -</p> <ol style="list-style-type: none"> a) (b) and (c) b) (c) and (d) c) (a) and (b) d) (b) and (d) 	[1]
2	<p>A, B, C, D are samples of liquids having pH values of 14, 7, 1, 5 respectively. Which of these could be that of NaOH solution?</p> <ol style="list-style-type: none"> a) Sample B b) Sample C c) Sample A 	[1]

	d) Sample D	
3	<p>Sodium carbonate is a basic salt because it is a salt of</p> <p>a) Weak acid and strong base</p> <p>b) Strong acid and weak base</p> <p>c) Weak acid and weak base</p> <p>d) Strong acid and strong base</p>	[1]
4	<p>The energy - rich compound produced through respiration is</p> <p>a) ADP</p> <p>b) Pyruvic acid</p> <p>c) ATP</p> <p>d) AMP</p>	[1]
5	<p>The inner lining of stomach is protected by one of the following from hydrochloric acid. Choose the correct one</p> <p>a) Bile</p> <p>b) Salivary amylase</p> <p>c) Mucus</p> <p>d) Pepsin</p>	[1]
6	<p>The pancreas pour the secretions into the:</p> <p>a) Stomach</p> <p>b) Large intestine</p> <p>c) Liver</p> <p>d) Small intestine</p>	[1]
7	<p>Cramps are caused by heavy exercise resulting in the accumulation of</p> <p>a) Lactic acid</p> <p>b) Ethanol</p> <p>c) Carbon dioxide</p> <p>d) Heat</p>	[1]
8	<p>The angle between an incident ray and the plane mirror is 30°. The total angle between the incident ray and reflected ray will be:</p>	[1]

	a) 60° b) 90° c) 30° d) 120°	
9	<p>Consider four mediums P, Q, R and S whose refractive indices are 2.14, 1.99, 2.98, and 2.16 respectively. Assume that if light travels from one medium to another. Calculate the rate of change will be utmost in which medium.</p> <p>a) R to S b) P to Q c) Q to R d) S to P</p>	[1]
10	<p>A ray of light is incident on a glass slab at an angle of incidence of 60 degree. If the angle of refraction be 32.7 degree. What will be refractive index of glass assuming $\sin 60^\circ = 0.866$ and $\sin 32.7^\circ = 0.540$?</p> <p>a) 1.240 b) 1.540 c) 1.327 d) 1.603</p>	[1]
	Section B	
11	Give one example of combustion reaction. Is it exothermic or endothermic?	[2]
12	<p>Write the balanced equations for the following reactions, add the state and symbols:</p> <ol style="list-style-type: none"> Magnesium carbonate reacts with hydrochloric acid to produce magnesium chloride, carbon dioxide and water. Sodium hydroxide reacts with sulphuric acid to produce sodium sulphate and water. 	[2]
13	<ol style="list-style-type: none"> What property do acids and bases have in common? Explain it with an example. A compound which is prepared from gypsum has the property of hardening when mixed with water. <p>Identify the compound and write its formula. How is this compound prepared? Describe it in the form of a chemical equation only.</p>	[2]
14	State differences between artery, vein and capillary.	[2]

15	<p>Draw a ray diagram to represent the nature, position and size of the image formed by a convex lens for the object placed at</p> <ol style="list-style-type: none"> infinity Between F_1 and optical centre (O) 	[2]
	Section C	
16	<ol style="list-style-type: none"> Why are the chips packets puffed when we buy them from market? Paint is applied on articles made up of iron, why? 	[3]
17	<p>A chemical compound X is prepared using sodium chloride as starting material. The compound X is used for faster cooking. It also finds use as an ingredient in medicine to treat indigestion.</p> <ol style="list-style-type: none"> Identify the compound X. Give an equation for the chemical reaction which takes place upon heating X during cooking. Which quality of compound X makes it suitable for treating indigestion? 	[3]
18	<p>Name the following</p> <ol style="list-style-type: none"> The process in plants that links light energy with chemical energy. Organisms that can prepare their own food. The cell organelle where photosynthesis occurs. Cells that surround a stomatal pore. Organisms that cannot prepare their own food. An enzyme secreted from gastric glands in the stomach that act on proteins. 	[3]
19	<p>How are the power and focal length of a lens related? You are provided with two lenses of focal length 20 cm and 40 cm respectively. Which lens will you use to obtain more convergent light?</p>	[3]
	Section D	
20	<ol style="list-style-type: none"> Define excretion. Name the basic filtration unit present in the kidney. Draw excretory system in human beings and label the following organs of excretory system which perform following functions; <ol style="list-style-type: none"> form urine. 	[4]

	<p>b. is a long tube which collects urine from kidney.</p> <p>c. store urine until it is passed out.</p>	
21	<p>1. Name the type of mirror that should be used to obtain the following types of images:</p> <p>a. A magnified and virtual image of an object</p> <p>b. A diminished and virtual image of an object</p> <p>2. Draw labelled ray diagrams to justify your answers in each case mentioned above.</p> <p>3. Which of these mirrors can also be used to obtain a magnified and real image of an object? State the position of the object in this case.</p>	[4]



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
आवधिक परीक्षण / Periodic Test 1 (2025-26)
विद्यालय/School: Atomic Energy Central School No. 2
केंद्र/Centre: Rawatbhata

कक्षा /Class: X

विषय /Subject: Science

अंक/Marks: 40

दिया गया पाठ्यक्रम/ portion covered : Chapter:1,2,6 and 9

विद्यार्थी का नाम/Name of the student: _____
 अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Answer Key

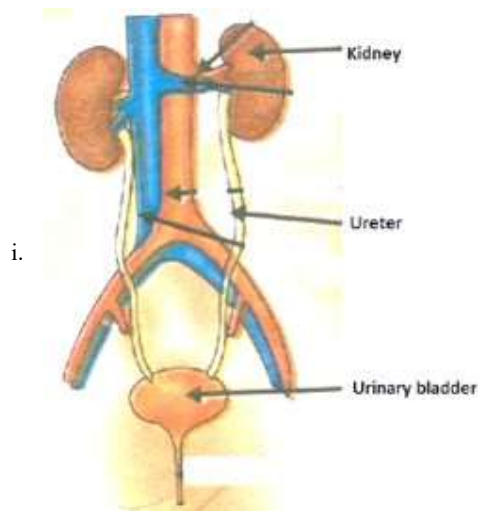
1.	D	6.	A
2.	C	7.	A
3.	A	8.	D
4.	C	9.	C
5.	C	10.	D

- 11) Louis XVI called together an assembly of the Estates-General on 5th May 1789 to pass proposals for new taxes. The first and second estates sent 300 representatives each, while the third estate sent 600 members. Louis XVI wanted to continue with the old voting system in which each estate had one vote. But members of the third estate wanted a new voting system, where each member has one vote But the king rejected their proposal and on 20th June 1789 third rejected their proposal and on 20th June 1789 third estate declared themselves as National Assembly.
- 12) A. The eighteenth century witnessed the emergence of social groups, termed as the middle class.
 B. They earned their wealth through an expanding overseas trade and manufacture of goods such as woolen silk textiles that were exported or bought by the richer members of society.
 C. In addition to merchants and manufacturers the third estate included professionals such as lawyers or administrative officials. People of Middle class were educated and believed that no privilege should be given by birth, rather position of a person in society should be merit based.
- 13) (i) 1.Lakshadweep, 2.Andaman and Nicobar group of islands.

- (ii) 1. Russia, Canada, China, USA, Brazil and Australia. 2. Maldives, Sri Lanka.
- 14) A. The tropic of cancer is the most important latitude of the country.
 B. It is situated at $23\frac{1}{2}^{\circ}$ N.
 C. The tropic of cancer divides the country into two equal parts.
 D. It also divides the country into two climatic zones. Torrid and Temperate Zones.
- 15) Source of irrigation are rain, wells, tanks, tube-wells, canals, etc. Irrigation facilities are important in increasing production because due to well-developed system of irrigation the farmers were able to enjoy the benefits of multiple cropping. Further modern farming methods are possible only through dependable irrigation and can be used for increasing productivity of land.
- 16) Mirabeau was born in a noble family but was convinced to do away with feudal privileges. On 20 June, the third estate assembled in the hall of an indoor tennis court in the grounds of Versailles. Mirabeau brought out a journal and delivered powerful speeches to the crowds assembled at Versailles.
- 17) A. Throughout the eighteenth century there was little criticism of slavery in France.
 B. There were long debates in the National Assembly about whether the right of man should be extended to all French subjects including those in the colonies. But now law was made fearing opposition from business community.
 C. It was finally the conventions which in 1794 legislative to free all slaves in the French overseas possessions. But ten years later, Napoleon again started slavery. Slavery was finally abolished in French colonies in 1848.
- 18) A. West Bengal
 B. Odisha
 C. Telangana
 D. Andhra Pradesh
 E. Tamil Nadu
- 19) A. Multiple cropping is the method by which intensive use of the same piece of the land is possible.
 B. To grow more than one crop on a piece of land during the year is known as multiple cropping.
 C. It is the most common way of increasing production on a given piece of land.
 D. By doing multiple cropping the yield per hectare increases and the farmers earn huge profit.
- 20) A. **Constitutional Monarchy:** The new constitution made France a constitutional Monarchy.
 B. **National Assembly:** It had 745 members and was indirectly elected and could legislate.
 C. **Right to Vote:** Only men above the age of 25 who paid taxes has equal to 3 day of a labourer's wage were active citizens and can vote.
 D. **Powers of National Assembly:** This body had the organs- legislature, Executive and Judiciary.
 E. **The Declaration of Rights and Man and Citizens:** The Constitution began with this declaration and included rights like rights to life, freedom of speech and freedom of opinion.
- 21) A. The large land boundaries of India have helped to develop links with her neighboring countries.
 B. It contributed in the exchange of ideas and commodities since ancient times. The spices, muslin and other merchandise were taken from India to different countries. On the other hand, the influence of Greek sculpture, and the architectural styles of dome and minarets from West Asia can be seen in different parts of our country.
 C. The ideas of the Upanishads, the Ramayana, and the Geeta etc have become known to the world.

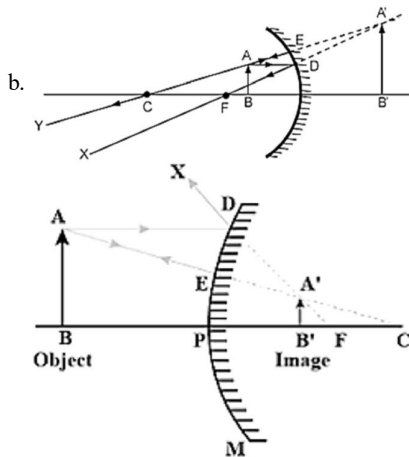
D. The Indian Numerals as well as decimal system long back cross the border, Arabs took these ideas to the west.

E. The long coast line on the Arabian Sea and Bay of Bengal has helped India to develop close maritime contact with West Asia, Africa and Europe from the western coast and with East Asia and the south East Asia from the eastern coast.



1. a. Type of mirror

- i. A magnified and virtual image of the object - concave mirror can form a virtual magnified image.
- ii. A diminished and virtual image of an object - Convex mirror can form a virtual and diminished image.



- c. Concave mirrors can also be used to obtain a magnified and real image of an object. When an object is placed anywhere between infinity to focus we get a real and magnified image.

a) Rs 3000

b)Rs 6000

c)Rs 7500

d)Rs 2000

7. Which of the following states has the highest infant mortality rate (according to 2015-16 survey)?

[1]

a) Haryana

b)Kerala

c)Jammu and Kashmir

d)Bihar

Section B

8. Identify the person depicted in the caricature from the options given below.

[1]



a) Garibaldi

b)Napoleon

c)Mazzini

d)Bismarck

9. Which of the following option best describes the given picture?

[1]



a) Splash erosion

b)Dry erosion

c)Gully Erosion

d)Sheet erosion

10. In the given picture people are demonstrating against which project?

[1]



a) Hirakud Dam on Mahanadi River

b)Sardar Sarovar Dam on Narmada River

c)Bhakra Nangal on Sutlej River

d)UkaiDamonTapi River

Section C

11. How did the local people in the areas conquered by Napoleon react to French rule? Explain.

[2]

12. Explain the political situation of Italy before its unification.

[2]

13. Explain the three features of the class of landed aristocracy of Europe.

[2]

14. Describe any three measures of controlling land degradation.

[2]

15. Why is the issue of sustainability important for development? Explain with examples.

[2]

Section D

16. “Napoleon had destroyed democracy in France, but in the administrative field he had incorporated revolutionary principles.” Justify the statement with suitable arguments. [3]
17. What is the reason behind the availability of land used for only 93 percent of the total geographical area of India? [3]
18. 'Indiscriminate use of resources had led to numerous problems. Justify this statement. [3]
19. Why is literacy essential for the economic development? Explain. [3]

Section E

20. Describe the unification process of Germany. [4]
21. Why is soil considered as a resource? Explain with five arguments. [4]



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
आवधिक परीक्षण / Periodic Test 1 (2025-26)
विद्यालय/School: Atomic Energy Central School No. 2
केंद्र/Centre: Rawatbhata

कक्षा /Class: x

विषय /Subject: Social Science

अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: his- chapter 1 (The rise of nationalism), Geo-Chapter- 1 (resources and Development) , Eco-Chapter 1 (Development)

विद्यार्थी का नाम/Name of the student: _____
 अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Answer Key

PART- 1

1.	D	6.	B
2.	C	7.	D
3.	A	8.	D
4.	D	9.	C
5.	A	10.	B

- 11) i. At the very beginning, the artisans, businessmen and peasants enjoyed the newly-found freedom.
 ii. They welcomed the standardised weights and measures, uniform laws and a common currency for the entire nation as they realised that these would be more helpful in trade and in facilitating the movement and exchange of goods and capital from one area to another.
 iii. An outweighing of the advantages of administrative changes were witnessed in the Increase in taxes, censorship and forced conscription in French armies.
- 12) 1. The greatest problem in the unification of Italy was its fragmentation into several political units, each under a different authority.
 2. Italians were scattered over several dynastic states as well as the multi-national Habsburg Empire.
 3. Italy was divided into seven states during the middle of the 19th century. Out of seven, only one Sardinia-Piedmont was ruled by an Italian Princely House. The North was under Austrian

Habsburgs. The Centre was ruled by the Pope. Southern regions were under the Bourbon kings of Spain.

4. The Italian language had many regional and local variations and had not acquired one common form.
- 13) During the mid-eighteenth century, a landed aristocracy was dominant class in Europe both politically and socially.
 - i. The members of this landed aristocracy were united by a common way of life that cut across regional division.
 - ii. They owned huge properties both in rural and urban areas.
 - iii. Their families were tied together by matrimonial relations and they wielded much power in their respective countries.
- 14)
 - i. Afforestation and proper management of grazing can help to some extent.
 - ii. Crop Rotation: It is one of the agricultural practice in which different crops are grown in same area following a rotation system which helps in replenishment of the soil.
 - iii. Contour ploughing is another step to conserve land. The fields are ploughed, harrowed and sown along the natural contour of the hills.
- 15)
 - Sustainability is important for development because it results in protecting the people against pollution ensuring their quality of life and health.
 - Conserving the environment which is necessary for development.
 - Development can be sustained in any economy by using renewable resources such as groundwater, wind energy and solar energy.
 - Overusing a resource means that future generations won't have access to it. Sustainability, therefore, ensures that the resource is not overused and aids in ensuring that subsequent generations receive a fair share.
 - Groundwater is an example of a renewable resource. These resources are replenished by nature as in the case of crops and plants. However, even these resources may be overused. For example, in the case of groundwater, if we use more than what is being replenished by rain then we would be overusing this resource.
 - Non-renewable resources are those which will get exhausted after years of use. We have a fixed stock on earth which cannot be replenished. Overusage of resources needs to be checked.
 - We do discover new resources that we did not know of earlier. New sources in this way add to the stock. However, over time, even this will get (depleted used)

16) Following were the reforms brought by Napoleon in the administrative system:

- i. The Civil Code of 1804, usually known as the Napoleonic Code, did away with all privilege based on birth.
- ii. It established equality before law and secured the right to property.
- iii. Napoleon simplified administrative division, abolished the feudal system and freed peasants from serfdom and manorial dues.
- iv. In the towns too, guild restrictions were removed.
- v. Transportation and communication system was improved.

17) The total geographical area of India is 3.28 million sq km. However, the Land use data is available only for 93 per cent of the total geographical area. The reason behind it are as follows:

- i. Because the land use reporting for most of the nor-east states except Assam has not been done fully.
- ii. Some areas of Jammu and Kashmir occupied by Pakistan and China have also not been surveyed.

18) **Resources are vital for human survival and it is believed that resources are a free gift of nature.**

The indiscriminate use of resources has led to the following problems:

- i. To satisfy the greed of a few individuals, the depletion of resources has continued.
- ii. Accumulation of resources in a few hands which in turn, divided the society into rich and poor.
- iii. Indiscriminate use of resources causing various global ecological crises such as global warming,

depletion of the ozone layer, environmental pollution & land degradation.

19) Literacy is an essential element for the economic development since-

- i. Only education gives us vast knowledge.
- ii. A literate person is eligible to get suitable employment.
- iii. Education develops the ability to implement modern technology.
- iv. With the knowledge of professionals, technology can develop and help in the development of the country.
- v. Literate people understand the importance of remaining healthy and stay away from the deadly disease.

20) The Process of Unification of Germany is as follows:

- i. By 1848, the popular effort of political associations failed in installing a constitutional monarchy in Germany.
- ii. The Failure of the Frankfurt Parliament made it clear that German unification had to come through the combined effort of monarchy and army supported by large landowners.
- iii. From then on, Prussia took on the leadership in the unification of Germany. The architect of the process was the Chief Minister of Prussia, Otto von Bismarck. He took the help of bureaucracy and the military.

- iv. He fought three wars in seven years with Austria, Denmark, and France which ended in Prussian victory and completed the process of German unification.
 - v. The Prussian King William-1 was proclaimed German Emperor in January 1871.
- 21)
- i. Soil is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on the earth.
 - ii. Soil is one of the world's most important natural resources. Together with air and water it is the basis for life on planet earth. It has many important functions which are essential for life.
 - iii. Not only does it play the major part in allowing us to feed the world's population, but it also plays a major role in the recycling of air, water, nutrients, and maintaining a number of natural cycles, thereby ensuring that there will be a basis for life in generations to come.
 - iv. Soils provide a direct source of minerals and other resources. The most significant raw materials are sand, gravel, stone, ore, coal and peat. Sand, gravel, stone are the raw materials of building, ore is the raw material of industry, coal and peat are the raw materials of heating. Soils can cover or be built up on many of these raw materials.
 - v. Soil is the vital thing for animals, vegetations and all living creatures. Soil is formed slowly, however, it can be easily demolished. For these reasons, we must protect it well.

केंद्र/Centre: Rawatbhata

अंक/Marks: 25

अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:____ दिनांक /Date: _____

slower and smaller in size as compared to SRAM and also has a short data life. It consumes less power and is less expensive as compared to SRAM.

C. Long Answers type questions

3X3=9

Q.14 What is a flash drive?

Ans. A flash drive is a small, portable storage device which can be connected to computers and other devices via a USB port. Flash drives are popularly known as pen drives. It is an electrically erasable memory which can be used again and again and range in size from 2 GB to 1 TB.

Q.15 Discuss the advantages of an e-mail.

Ans. There are many advantages of an e-mail over the traditional mailing system. Some of the advantages are as follows:

- As compared to other systems, e-mail is an economical and effective mode of communication and also consumes less time.
- Any type of files and attachments can be sent and received through an e-mail.
- There are negligible chances of a message being lost.
- It can be used as a medium to access and use other web services. For example, If we want to sign up for an account like Twitter or order products from services like Flipkart, we will need an e-mail address, so we can be safely identified and contacted.
- We can even send the same e-mail to multiple people at the same time, which results in saving time.

Q.16 List and explain any three challenges in using ICT.

Answer:

Digital Illiteracy – Many people don't know how to use digital devices.

Lack of Infrastructure – Rural areas may lack internet or electricity.

Cybersecurity – Risk of hacking, data leaks, and online fraud.

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अंक/Marks: 25

विद्यार्थी का नाम/Name of the student: _____
 अनुक्रमांक /Roll No.____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Page 1 of 3

- a. E-commerce
- b. Telemedicine
- c. Gaming
- d. Tourism

7. The device used to project a computer screen is:

- a) Scanner
- b) Printer
- c) Projector
- d) Modem

8. Which of the following is an example of ICT in governance?

- a. ATM Machine
- b. Railway e-ticket system
- c. Library
- d. Mobile camera

9. WhatsApp is an example of:

- a. Word processing software
- b. Social media platform
- c. Communication tool
- d. Web browser

Answer: c)

10. Which of the following is the collection of a huge number of interconnected web pages?

- a. Hyperlink
- b. Web page
- c. Website
- d. WWW

B. Short Answers type questions

2X3=6

Q11. Mention any two advantages of using ICT in daily life.

Answer:

Faster and easier communication (e.g., video calls, emails)

Access to information and online services anytime

Q. 12 How has ICT impacted the healthcare sector?

Answer: Use of telemedicine for remote consultations

Online booking of appointments and access to digital health records

Q.13 How is SRAM different from DRAM?

Ans. Static RAM (SRAM): Static RAM continues to hold the data and instructions consistently till the power is supplied. There is no need to refresh this memory like DRAM. SRAM consumes more power and is expensive too. But, it is also the fastest memory and has a long life. Dynamic RAM (DRAM): DRAM, unlike SRAM, needs to be refreshed continuously in order to retain the data and instructions. DRAM is

slower and smaller in size as compared to SRAM and also has a short data life. It consumes less power and is less expensive as compared to SRAM.

C. Long Answers type questions

3X3=9

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