SAMPLE QUESTION PAPER (2019-20)
ENGLISH – Language and Literature (Code 184)
CLASS-X

Time allowed: 3 Hrs.   **Maximum Marks : 80**

General Instructions:
1. This paper is divided into three sections: A, B and C. All questions are compulsory.
2. Separate instructions are given with each section and question, wherever necessary. Read these instructions very carefully and follow them.
3. Do not exceed the prescribed word limit while answering the questions.

		Section A: Reading	20 Marks
Q1		Read the passage carefully.	
		Red Cross: How Hope Evolved	
		On June 24, 1859, Emperors Napoleon III and Franz Joseph I engaged in the Battle of Solferino, commanding a combined total of about 270,000 troops onto the field for a single day of battle. Nearly 40,000 were either dead, injured, or missing, many of whom were simply left to die on the battlefield. Later, spectators crowded the fields, looking for loved ones, searching for items they could sell, or simply taking in the horrors of the battle .A Swiss businessman and social activist Jean Henri Dunant, who was traveling in Solferino witnessed all this.	
		Jean Henri Dunantwitnessed the atrocities of war as well as the countries not prepared or equipped to ease the suffering of those who had been injured in the Battle of Solferino. Dunant organized a group of volunteers to help bring water and food to the injured, to assist with medical treatment, or write letters to the families of those who were dying and he urged the public to create an organization which would assist the wounded, regardless of which side they fought for during times of war. After that moment, he wrote the book, *A Memory of Solferino*, which urged the public to create an organization which would assist the wounded, regardless of which side they fought for during times of war. His writing inspired countless others to rally behind him in the creation of the International Federation of the Red Cross.	
		The modern-day Red Cross began by devoting itself largely to disaster relief and epidemic treatment. This effort continues to this day. One of the easiest ways you can help the Red Cross is to make sure you are able to donate blood and make an appointment at the Red Cross website. But, donating blood isn't the only way you can help out—the Red Cross also encourages donating your time if you can. This is what the Red Cross wants everyone to know.	
		(https://www.rd.com/true-stories/red-cross-origin/)	

On the basis of your reading of the passage given above, answer the following questions-

1x8=8

a. How many soldiers fought in the battle of Solferino on June 24?

      i.   270,000   ii. 40,000   iii. 230,000   iv. 23,000

b. What is the correct order of the information given below:
   I. Dunant organised a camp of volunteers.
   II. Emperor Napoleon III and Franz Joseph I fought a battle.
   III. The book 'A Memory of Solferino was written.
   IV. Dunant travelled in Solferino.

   (i) IV, III, II, I   (ii) I, II, III, IV   (iii) II, I, IV, III   (iv) II, IV, I, III

c. The writer of 'A Memory of Solferino' was:

     i.   Emperor Napoleon III
     ii.   Franz Joseph I
     iii.   Jean Henri Dunant
     iv.   International Red Cross

d. The modern day Red Cross does not deal with:

     i.   Blood donation
     ii.   Disaster Relief
     iii.   Epidemic Treatment
     iv.   Writing a book

e. The most appropriate sub-heading to para 2 of the passage is:

     i.   How International Federation of Red Cross Evolved!
     ii.   Functions of Red Cross
     iii.   The Contributions of Jean Henri Dunant
     iv.   The Battle of Solferino

f. The aid provided by Dunant's volunteers during the battle of Solferino was:

    I. to help bring water and food to the injured
    II. to assist with medical treatment
   III. to write a book
   IV. to give relief in epidemic

   (i) I and III   (ii) III and IV (iii) I and II   (iv) II and III

g. You can donate your blood and your _____ to Red Cross.

h. Jean Henri Dunant participated in the war.(True/ False)

Q2	Read the passage carefully-	
	The Road to Success	
	1. The Road to success is not straight; there is a curve called failure, a loop called confusion, speed bumps called friends, caution lights called family, and you will have flats called jobs. But, if you have a spare called determination, an engine called perseverance, insurance called faith, and a driver called God, you will make it to a place called success!	
	2. In spite of all our planning and preparation, unexpected challenges are certain to arise. The bumps in the road are unavoidable, but you'll never get to your destination if you aren't willing to drive over them. The difference between a disaster and triumph lies in whether or not you're prepared and willing to weather the storm. If you're ready, those bumps will become stepping-stones.	
	3. The key thing to realize is that working harder is same as working smarter. How do you work smarter? You just need to have the right skills. People want improved circumstances and better life without an improved self. They want victory without paying the price or making efforts. It really cannot happen without the other. Any improvements that have not been generated by improving yourself are superficial and short-lived. If you want to have a better future, you have to change yourself. Stop worrying about the various challenges that will come your way. Just believe in yourself and use them as stepping-stones.	
	4. "Success" is getting whatever you want out of life without violating the rights of others." It is not an accident. Success is the result of our attitude and our attitude is a choice. Hence success is a matter of choice and not chance.	
	5. Today success represents a holistic and positive attitude to life. Attitude is everything. Success is not restricted within some kind of brick and mortar premises. It assumes the individuality of a complete act executed with perfection; material achievements do not define life. We don't remember sports stars for the products they endorse but the spirit of achievement they represent. In the abundance of positive attitude underline the grandeur of a truly rewarding rich life.	
	6. Success can be measured from two standpoints—the external and the internal. Externally it is the measure of a job well done and recognition. Internally it the feeling of achievement and wholeness derived from the completion of a task or fulfillment of desire.	
	2.1 On the basis of your reading of the above extract, answer the following questions in 30-40 words each:	2x4=8
	(a) What qualities lead one to the place called success? (b) What is the difference between disaster and triumph? (c) How can one have a better future? (d) Describe two ways to measure success.	
	2.2 On the basis of your reading of the above extract, answer the following:	1x4=4
	(a) The synonym of 'victory' as given in paragraph 2 is _____ (i) Planning (ii) Preparation (iii) Triumph (iv) Challenges	
	(b) The synonym of 'surplus' as given in paragraph 5 is _____ (c) The antonym of 'Defeat' as given in paragraph 6 is _____ (i) Recognition (ii) Achievement (iii) Completion (iv) Success	

	(d) The antonym of 'deep' as given in Paragraph 3 is _____		

	Section B: Writing & Grammar	**30 Marks**
Q3)	You are Neha/Nihal Singh, Computer In-charge of Army Public School. Your school wishes to buy 20 computers and computer accessories from Apple Inc., Nehru Place, New Delhi. Draft a letter placing an order for the same. (100-150 words) OR The government has urged the people of India to realize the dream of 'Clean India'. Write an article describing the measures that people can take for a cleaner and greener India. You are Anju/Amit Kumar (100-150 words)	(8)
Q4)	Complete the following story- (150-200 words) Once there was an old man. He had four sons. They always quarreled with one another. One fine day………………………… OR Taking cue from the picture given above, write a story in 150-200 words **For Visually Impaired candidates only-** **Kunal- good student- determined- scored good marks- examination- got late- helping an old man- teacher scolded- later appreciated- gave exam- stood first**	(10)
Q5)	Complete the paragraph given below by filling in the blanks choosing the correct option from those that follow- Elephants (a) _____ the largest land mammals. Three species of elephants (b) _____ living today. Elephants (c) _____other Elephantidae were once classified with other thick skinned . The elephant's gestation period is 22 months, (d) _____ longest for any land animal. (a) (i) is (ii) are (iii) was (iv) were (b) (i) are living (ii) have been living (iii) had been living (iv) will be living	1x4=4

	(c) (i) with (ii) also (iii) and (iv) but		
	(d) (i) a (ii) an (iii) which (iv) the		
Q6)	The following paragraph has not been edited. There is one error in each line. Write the incorrect word and the correction in your answer sheet against the correct blank number.	1x4=4	

Error   Correction

Tsunami is a series in waves   (a) _____ _____

generated in a body from water   (b) _____ _____

through an impulsive disturbance   (c) _____ _____

causing damage to property or loss of life. (d) _____ _____

Q7)	Rearrange the following sets of words and phrases to form meaningful sentences-
	    a. of/ the world's /sugar cane / in Asia / over 40 percent / is produced
	    b. can be /used as fuel / ethyl alcohol / for cars / extracted / sugar cane / from
	    c. not the /only thing / can power/ automobiles / gasoline is / that
	    d. can be / alternative /energy source / an / hydrogen/ also
		1x4=4

	Section C - Literature	**30 Marks**

Q8	Read the extract given below and answer the questions that follow.	1x4=4

"He should be lurking in shadow,
Sliding through long grass
Near the water hole
Where plump deer pass."

   a. The poem, "A Tiger in the Zoo" is written by
     (i) Leslie Norris   (ii) William Blake
     (iii) Peter Niblett(iv) Robert Frost

   b. The tiger should be lurking in the shadow
     (i) for his prey   (ii) for taking rest
     (iii) for leisure   (iv) for scaring others
   c. The deer frequents the water hole to _____
   d. The phrase 'lurking in the shadow' here means _____

OR

"I agreed that it was pretty disrespectful treatment. We did, however, search the house. Since it was only one storey high, Bill went round it, peering in at all the windows. We examined the barn and stable."

   a. Who does 'I' refer to-
     (i) Sinclair Lewis   (ii) Carol Lewis
     (iii) Oliver Lutkins(iv) Leslie Norris
   b. What was Bill's profession?
     (i) Lawyer   (ii) hack driver

		(iii) guide (iv) drama artist	
		c. The disrespectful treatment faced by the speaker was _____	
		d. The phrase 'peering in at all windows' here means _____	
Q 9		**Answer any five of the following questions in 30 to 40 words each.**	2x5=10
		a. Why did Hari Singh think that Anil's job was queer?	
		b. Bholi was a neglected child. Explain.	
		c. Why did Mr.Keesing call Anne 'an incorrigible chatterbox'?	
		d. Nelson Mandela speaks of 'Twin Obligations'. Elucidate	
		e. Why did Belinda tickle the dragon?	
		f. How is bread an important part of life in Goa?	
Q10		Lencho had faith in God but lacked faith in humanity. Elaborate with reference to 'A Letter to God'.(100-150 words)	8
		OR	
		Life is full of trials and tribulations which can be overcome by a human being through his own efforts. Explain with reference to Kisa Gotami's life.(100-150 words)	
Q11		Ostentation and vanity often land people in trouble. Matilda is an apt example of this. Justify.(100-150 words)	8
		OR	
		Valli shows extraordinary courage in taking a bus journey all alone. Explain how ability and courage are essential to fulfill one's dream. (100-150 words)	

प्रतिदर्श प्रश्न पत्र 2019-20

विषय - हिन्दी 'ब' (कोड-85)

कक्षा - 10

निर्धारित समय - 3 घंटे   **अधिकतम अंक-80**

सामान्य निर्देश :

1. इस प्रश्न-पत्र में चार खंड हैं - क, ख, ग और घ।
2. सभी खंडों के प्रश्नों के उत्तर देना अनिवार्य है।
3. यथासंभव प्रत्येक खंड के प्रश्नों के उत्तर क्रम से लिखिए।
4. एक अंक के प्रश्नों का उत्तर लगभग 15-20 शब्दों में लिखिए।
5. दो अंकों के प्रश्नों का उत्तर लगभग 30-40 शब्दों में लिखिए।
6. तीन अंकों के प्रश्नों का उत्तर लगभग 60-70 शब्दों में लिखिए।
7. पाँच अंकों के प्रश्नों का उत्तर लगभग 120-150 शब्दों में लिखिए।

		खंड - क (अपठित अंश)	अंक- 10
	(1)	**निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए।** आदमियों की तिजारत करना मूर्खों का काम है। सोने और लोहे के बदले मनुष्य को बेचना मना है। आजकल भाप की कलों का दाम तो हजारों रूपया है; परंतु मनुष्य कौड़ी के सौ-सौ बिकते हैं! सोने और चाँदी की प्राप्ति से जीवन का आनंद नहीं मिल सकता। सच्चा आनंद तो मुझे मेरे काम से मिलता है। मुझे अपना काम मिल जाए तो फिर स्वर्गप्राप्ति की इच्छा नहीं, मनुष्य-पूजा ही सच्ची ईश्वर-पूजा है। आज से हम अपने ईश्वर की तलाश किसी वस्तु, स्थान या तीर्थ में नहीं करेंगे। अब तो यही इरादा है कि मनुष्य की अनमोल आत्मा में ईश्वर के दर्शन करेंगे यही आर्ट है - यही धर्म है। मनुष्य के हाथ से ही ईश्वर के दर्शन कराने वाले निकलते हैं। बिना काम, बिना मजदूरी, बिना हाथ के कला-कौशल के विचार और चिंतन किस	

	काम के! जिन देशों में हाथ और मुँह पर मजदूरी की धूल नहीं पड़ने पाती वे धर्म और कला-कौशल में कभी उन्नति नहीं कर सकते। पद्मासन निकम्मे सिद्ध हो चुके हैं। वही आसन ईश्वर-प्राप्ति करा सकते हैं जिनसे जोतने, बोने, काटने और मजदूरी का काम लिया जाता है। लकड़ी, ईंट और पत्थर को मूर्तिमान करने वाले लुहार, बढ़ई, मेमार तथा किसान आदि वैसे ही पुरूष हैं जैसे कवि, महात्मा और योगी आदि। उत्तम से उत्तम और नीच से नीच काम, सबके सब प्रेमरूपी शरीर के अंग हैं।	
(क)	आदमियों की तिजारत से आप क्या समझते हैं?	2
(ख)	मनुष्य-पूजा को ही सच्ची ईश्वर-पूजा क्यों कहा गया है ?	2
(ग)	लेखक के अनुसार धर्म क्या है ?	2
(घ)	लुहार, बढ़ई और किसान की तुलना कवि, महात्मा और योगी से क्यों की गई है?	2
(ङ)	लेखक को सच्चा आनंद किससे मिलता है ?	1
(च)	गद्यांश का उचित शीर्षक लिखिए।	1
	खंड - ख **(व्यावहारिक व्याकरण)**	**16**
(2)	शब्द और पद के अंतर को उदाहरण द्वारा स्पष्ट कीजिए।	1
(3)	निम्नलिखित वाक्यों को निर्देशानुसार बदलिए	1×3=3
(क)	वामीरो कुछ सचेत हुई और घर की तरफ दौड़ी। (सरल वाक्य में)	
(ख)	सुभाष बाबू को पकड़कर लाल बाजार लॉकअप में भेज दिया गया। (संयुक्त वाक्य में बदलिए)	
(ग)	भाई साहब ने उछलकर पतंग की डोर पकड़ ली और छात्रावास की ओर दौड़ पड़े। (मिश्र वाक्य में)	
(4) (क)	निम्नलिखित समस्त पदों का विग्रह कीजिए तथा समास का नाम लिखिए - राजदूत, धूप-दीप	1×2=2

(ख)	निम्नलिखित विग्रहों के समस्त पद बनाकर समास का नाम लिखिए - मति के अनुसार, तीन गुणों का समूह	1×2=2
(5)	**निम्नलिखित वाक्यों को शुद्ध करके लिखिए**	1×4=4
(क)	घोड़े पर सिपाही सवार था।	
(ख)	कर्नल वजीर अली को नहीं पहचाना।	
(ग)	वह एक छह मंजिला इमारत थी।	
(घ)	वाह राम! यह क्या हो गया।	
(6)	**उचित मुहावरों द्वारा रिक्त स्थान को पूरा कीजिए -**	1×4=4
(क)	भाई साहब का रौद्र रूप देखकर .... जाते।	
(ख)	वजीर अली बरसों से हमारी .... झोंक रहा है।	
(ग)	गायन इतना प्रभावी था कि वह अपनी .... लगा।	
(घ)	जब हमारी कक्षा में आओगे लाला तब...........आएंगे।	
	खंड - ग **(पाठ्य पुस्तक एवं पूरक पाठ्य पुस्तक)**	**28**
(7)	**निम्नलिखित प्रश्नों में से किन्ही तीन के उत्तर लिखिए।**	2+2+2=6
(क)	बड़े बाजार के प्राय: मकानों पर राष्ट्रीय झंडा फहराने के क्या कारण थे? (30-40 शब्दों में)	
(ख)	तताँरा - वामीरों की प्रेमकथा निकोबारियों के घर-घर क्यों सुनाई जाती है ? (30-40 शब्दों में)	
(ग)	बड़े भाई साहब की स्वभावगत विशेषताओं का उल्लेख कीजिए।	
(घ)	अरब में लशकर को नूह के नाम से क्यों याद करते हैं ?	
(8)	समाज के पास अगर शाश्वत मूल्यों जैसा कुछ है तो वह आदर्शवादी लोगों का ही दिया हुआ है - 'गिन्नी का सोना पाठ' के आधार पर 80-100 शब्दों में कथन का विश्लेषण कीजिए। **अथवा**	5

		'मुट्ठीभर आदमी और ये दमखम' – कथन के आलोक में 80-100 शब्दों में वज़ीर अली का चरित्र-चित्रण कीजिए।	
(9)		निम्नलिखित प्रश्नों में से किन्हीं तीन के उत्तर लिखिए	2+2+2=6
(क)		कबीर निंदक व्यक्ति को अपने सामने रखने की बात क्यों करते हैं? (30-40 शब्दों में)	
(ख)		झरनों की तुलना किससे की गई है और क्यों? (30-40 शब्दों में)	
(ग)		पहले पद में मीरा ने हरि से अपनी पीड़ा हरने की विनती किस प्रकार की है ?	
(घ)		कंपनी बाग में रखी तोप क्या सीख देती है ?	
(10)		'आत्मत्राण' कविता का संदेश (80-100 शब्दों में) अपने शब्दों में लिखिए।	5
		अथवा	
		'मनुष्यता' कविता से हमें जीवन की सीख मिलती है – कैसे ? 80-100 शब्दों में स्पष्ट कीजिए ?	
(11) (क)		'हरिहर काका एक सीधे-सादे और भोले किसान की अपेक्षा चतुर हो चले थे' कथन के संदर्भ में 60-70 शब्दों में विचार व्यक्त कीजिए।	3
(ख)		स्कूल किस प्रकार की स्थिति में अच्छा लगने लगता है और क्यों ?	3
		खंड - घ **(लेखन)**	26
(12)		**निम्नलिखित में से किसी एक विषय पर 80-100 शब्दों में अनुच्छेद लिखिए।**	6
(क)		जंगल की सुरक्षा • सुरक्षा से अभिप्राय • सुरक्षा से लाभ • हानि • हमारी भूमिका	
(ख)		कैसे बदलेगी फुटपाथ की दुनिया • फुटपाथ क्या है	

	• फुटपाथ की समस्या • हमारी भूमिका • बदलाव के लिए सुझाव	
(ग)	सार-सार को गहि रहे, थोथा देय उड़ाय • सूक्ति का अर्थ • कथन का स्पष्टीकरण • समाज के लोगों से संबंध • वैचारिक अभिव्यक्ति	
(13)	कंप्यूटर लैब में हिन्दी में काम करने की सुविधा के लिए 'हिन्दी फॉन्ट' की व्यवस्था करवाने का आग्रह करते हुए प्राचार्य/प्राचार्या को 80-100 शब्दों में आवेदन पत्र लिखिए। **अथवा** समाज में बढ़ते अपराध को रोकने के लिए नागरिकों को जागरूक करने का आग्रह करते हुए किसी दैनिक अखबार के संपादक को 80-100 शब्दों में पत्र लिखिए।	5
(14)	आप अपने विद्यालय में साहित्य - क्लब 'शब्द-शिल्पी' के सचिव है। शनिवार को आगामी साहित्यिक गतिविधियों पर चर्चा हेतु बैठक बुलाई गई है, जिसकी सूचना 40-50 शब्दों में तैयार कीजिए। **अथवा** नेहरू युवा क्लब की ओर से मतदाता जागरूकता अभियान में शामिल होने के लिए युवाओं के साथ होने वाली बैठक की जानकारी देते हुए, अध्यक्ष की ओर से 40-50 शब्दों में सूचना लिखिए।	5
(15)	बीमार और डॉक्टर के बीच होने वाली बातचीत को लगभग 50-60 शब्दों में संवाद शैली में लिखिए। **अथवा** बढ़ती सड़क दुर्घटनाओं पर चिंता व्यक्त करते हुए पिता और पुत्र/पुत्री के बीच होने वाली बातचीत को लगभग 50-60 शब्दों में संवाद शैली में लिखिए।	5

(16)	आपके इलाके में एक पुस्तकालय की स्थापना हुई है। इस बात को जनसामान्य तक पहुँचाने के लिए 25-50 शब्दों में एक विज्ञापन तैयार कीजिए। **अथवा** आपके संसदीय क्षेत्र में प्रत्येक माह के अंतिम सप्ताह में स्वास्थ्य-शिविर का आयोजन होने जा रहा है। इसे जनता तक पहुँचाने के लिए 25-50 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए।	5

नोट:-

पाठ्यक्रम 2019 - 20 में दिए गए प्रश्न पत्र के प्रारूप तथा प्रतिदर्श प्रश्न पत्र में दिए गए प्रारूप में विभिन्नता होने की स्थिति में, प्रतिदर्श प्रश्न पत्र 2019 - 20 के प्रारूप को ही अंतिम माना जाये।

Class - X

Mathematics-Basic (241)

Sample Question Paper 2019-20

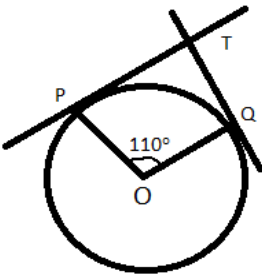**Max. Marks: 80**   **Duration: 3 hrs.**
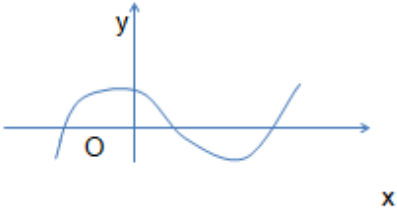

General Instructions:

a) All questions are compulsory

b) The question paper consists of 40 questions divided into four sections A, B, C & D.

c) Section A comprises of 20 questions of 1 mark each. Section B comprises of 6 questions of 2 marks each. Section C comprises of 8 questions of 3 marks each. Section D comprises 6 questions of 4 marks each.

d) There is no overall choice. However internal choices have been provided in two questions of 1 mark each, two questions of 2 marks each, three questions of 3 marks each and three questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.

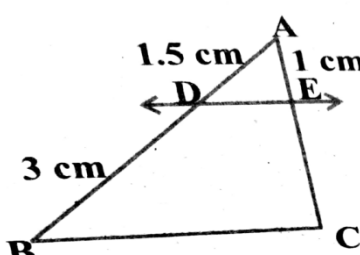*e) Use of calculators is not permitted.*

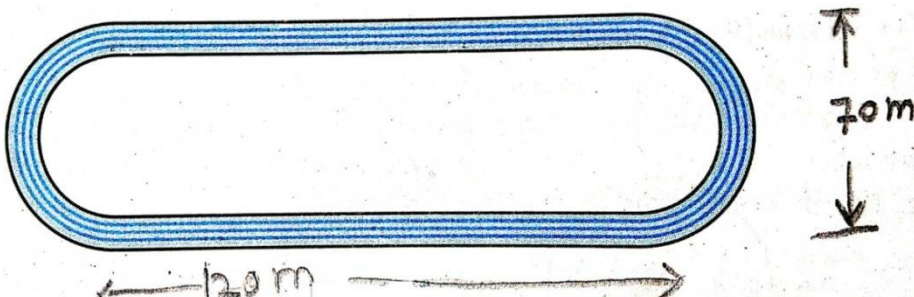|	**SECTION - A**	
Q 1- 10 are multiple choice questions. Select the most appropriate answer from the given options.		
1.	HCF of 168 and 126 is (a) 21 (b) 42 (c) 14 (d) 18	1
2.	Empirical relationship between the three measures of central tendency is	1

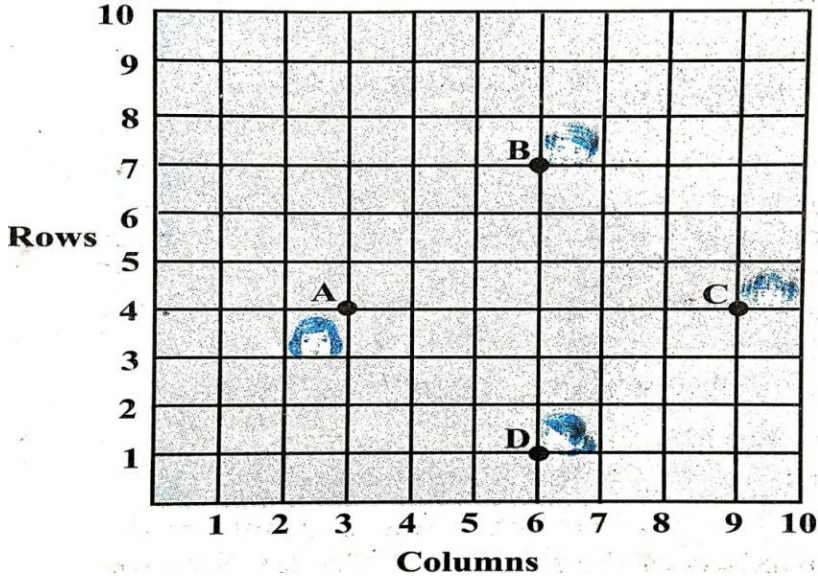|		
	(a) 2 Mean = 3 Median - Mode (b) 2 Mode = 3 Median - Mean (c) Mode = 2 Mean - 3 Median (d) 3 Median = 2 Mode + Mean	
3.	In the given figure, if TP and TQ are tangents to a circle with centre O, so that ∠POQ = 110°, then ∠PTQ is (a) 110° (b) 90° (c) 80° (d) 70°	**1**
4.	325 can be expressed as a product of its primes as (a) $5^2 \times 7$ (b) $5^2 \times 13$ (c) 5×13^2 (d) $2 \times 3^2 \times 5^2$	**1**
5.	One card is drawn from a well shuffled deck of 52 cards. The probability that it is black queen is (a) $\frac{1}{26}$ (b) $\frac{1}{13}$ (c) $\frac{1}{52}$ (d) $\frac{2}{13}$	**1**
6.	The sum of the zeroes of the polynomial $2x^2 - 8x + 6$ is (a) - 3 (b) 3 (c) - 4 (d) 4	**1**
7.	Which of the following is the decimal expansion of an irrational number (a) 4.561 (b) $0.\overline{12}$ (c) 5.010010001… (d) 6.03	**1**

8.	The following figure shows the graph of y = p(x), where p(x) is a polynomial in variable x. The number of zeroes of the polynomial p(x) is	1
	(a) 1 (b) 2 (c)3 (d) 4	
9.	The distance of the point P (3, - 4) from the origin is	1
	(a) 7 units (b) 5 units (c)4 units	
	(d) 3 units	
10.	The mid point of the line segment joining the points (- 5, 7) and (- 1, 3) is	1
	(a) (-3, 7) (b) (-3, 5) (c) (-1, 5)	
	(d) (5, -3)	

(11 - 15) Fill in the blanks:

11.	The point which divides the line segment joining the points A (0, 5) and B (5, 0) internally in the ratio 2:3 is _____	1
12.	The pair of lines represented by the equations 2x+y+3 = 0 and 4x+ky+6 = 0 will be parallel if value of k is _____.	1
	OR	
	If the quadratic equation $x^2 - 2x + k = 0$ has equal roots, then value of k	

	is _____.	
13.	The value of $\sin 60^\circ \cos 30^\circ + \sin 30^\circ \cos 60^\circ$ is_____.	**1**
14.	Value of cos 0°. Cos 30° .cos 45° . cos 60° . cos 90° is _____.	**1**
15.	The sides of two similar triangles are in the ratio 2:3, then the areas of these triangles are in the ratio _____	

(16 - 20) Answer the following :

16.	△PQR is right angled isosceles triangle, right angled at R. Find value of sin P. **OR** If 15 cot A = 8, then find value of cosec A.	**1**
17.	If area of quadrant of a circle is 38.5 cm^2 then find its diameter (use $\pi = \dfrac{22}{7}$)	**1**
18.	A dice is thrown once. Find the probability of getting a prime number.	**1**
19.	In the given fig. If DE ∥ BC Find EC. 	**1**

4

20.	Find the common difference of the A.P whose first term is 12 and fifth term is 0.	**1**
21.	If two coins are tossed simultaneously. Find the probability of getting 2 heads.	**2**
22.	A lot of 25 bulbs contain 5 defective ones. One bulb is drawn at random from the lot. What is the probability that the bulb is good. **OR** Two dice are thrown simultaneously at random. Find the probability of getting a sum of eight.	**2**
23.	Prove that the tangents drawn at the ends of a diameter of a circle are parallel.	**2**
24.	Show that $\tan 48^\circ \tan 23^\circ \tan 42^\circ \tan 67^\circ = 1$. **OR** Evaluate $\cos 48^\circ \cos 42^\circ - \sin 48^\circ \sin 42^\circ$	**2**
25.	Find the area of circle whose circumference is 22cm.	**2**
26	Read the following passage and answer the questions that follows: A teacher told 10 students to write a polynomial on the black board. Students wrote 1. $x^2 + 2$ 6. $x - 3$ 2. $2x + 3$ 7. $x^4 + x^2 + 1$ 3. $x^3 + x^2 + 1$ 8. $x^2 + 2x + 1$ 4. $x^3 + 2x^2 + 1$ 9. $2x^3 - x^2$	**2**

	5. $x^2 - 2x + 1$ 10. $x^4 - 1$ (i) How many students wrote cubic polynomial (ii) Divide the polynomial $(x^2 + 2x + 1)$ by $(x + 1)$.	
	SECTION C	
27.	Find the zeroes of the quadratic polynomial $x^2 - 3x - 10$ and verify the relationship between the zeroes and coefficient.	**3**
28.	Draw a circle of radius 4 cm. From the point 7 cm away from its centre, construct the pair of tangents to the circle. **OR** Draw a line segment of length 8 cm and divide it in the ratio 2:3	**3**
29.	Following figure depicts a park where two opposite sides are parallel and left and right ends are semi-circular in shape. It has a 7m wide track for walking Two friends Seema and Meena went to the park. Meena said that area of the track is 4066m². Is she right? Explain.	**3**
30.	Prove that $\dfrac{\cot A - \cos A}{\cot A + \cos A} = \dfrac{\operatorname{cosec} A - 1}{\operatorname{cosec} A + 1}$ **OR** Prove that: $\dfrac{\tan A + \sin A}{\tan A - \sin A} = \dfrac{\sec A + 1}{\sec A - 1}$	**3**

31.	Prove that 5 - $\sqrt{3}$ is irrational, given that $\sqrt{3}$ is irrational. **OR** An army contingent of 616 members is to march behind an army band of 32 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march ?	**3**
32.	Prove that the lengths of tangents drawn from an external point to a circle are equal.	**3**
33.	Read the following passage and answer the questions that follows: In a class room, four students Sita, Gita, Rita and Anita are sitting at A(3,4), B(6,7), C(9,4), D(6,1) respectively. Then a new student Anjali joins the class	**3**
	(i) Teacher tells Anjali to sit in the middle of the four students. Find the coordinates of the position where she can sit.	**1**
	(ii) Calculate the distance between Sita and Anita.	**1**
	(iii) Which two students are equidistant from Gita.	**1**

34.	Solve $2x + 3y = 11$ and $x - 2y = -12$ algebraically and hence find the value of 'm' for which $y = mx + 3$.	3
	SECTION D	
35.	Find two consecutive positive integers sum of whose squares is 365.	4
36.	If the sum of first 14 terms of an A.P. is 1050 and its first term is 10, find the 20 th term. **OR** The first term of an A.P. is 5, the last term is 45 and sum is 400. Find the number of terms and the common difference.	4
37.	As observed from the top of a 75m high light house above the sea level, the angles of depression of two ships are 30° and 45° respectively If one ship is exactly behind the other on the same side of the light house and in the same straight line, find the distance between the two ships. (use $\sqrt{3}$ = 1.732)	4
38.	If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, then prove that the other two sides are divided in the same ratio. **OR** State and prove the Pythagoras theorem.	4
39.	A copper rod of diameter 1 cm and length 8 cm is drawn in to a wire of length 18 m of uniform thickness. Find the thickness of wire. **Or**	4

A metallic sphere of radius 4.2 cm is melted and recast into the shape of a cylinder of radius 6 cm. Find the height of the cylinder.

40. The following distribution gives the daily income of 50 workers of a factory

Daily income	400-420	420-440	440-460	460-480	480-500
Number of workers	12	14	8	6	10

Convert this distribution to less than type of cumulative frequency distribution and draw its ogive.

4

Class X
Mathematics –Standard (041)
Sample Question Paper 2019-20

Max. Marks: 80   **Duration : 3 hrs**

General Instructions:

(i)   All the questions are compulsory.

(ii)   The question paper consists of 40 questions divided into 4 sections A, B, C, and D.

(iii)   Section A comprises of 20 questions of 1 mark each. Section B comprises of 6 questions of 2 marks each. Section C comprises of 8 questions of 3 marks each. Section D comprises of 6 questions of 4 marks each.

(iv)   There is no overall choice. However, an internal choice has been provided in two questions of 1 mark each, two questions of 2 marks each, three questions of 3 marks each, and three questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.

(v)   Use of calculators is not permitted.

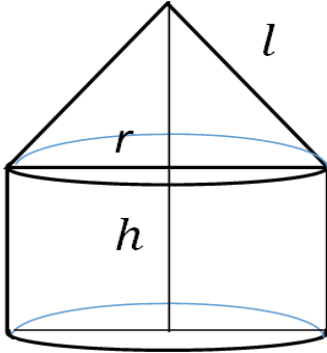| SECTION A	
Q 1- Q 10 are multiple choice questions. Select the most appropriate answer from the given options.	

1   The decimal representation of $\frac{11}{2^3 \times 5}$ will
 	
     a) terminate after 1 decimal place
     b) terminate after 2 decimal places
     c) terminate after 3 decimal places
     d) not terminate
	1

2	Consider the following frequency distribution of the heights of 60 students of a class	1

Height (in cm)	150-155	155-160	160-165	165-170	170-175	175-180
No of students	15	13	10	8	9	5

The upper limit of the median class in the given data is

   a) 165
   b) 155
   c) 160
   d) 170

3	The LCM of smallest two digit composite number and smallest composite number is	1

   a) 12
   b) 4
   c) 20
   d) 44

4	For which value(s) of p, will the lines represented by the following pair of linear equations be parallel	1

$$3x - y - 5 = 0$$
$$6x - 2y - p = 0$$

   a) all real values except 10
   b) 10
   c) 5/2
   d) 1/2
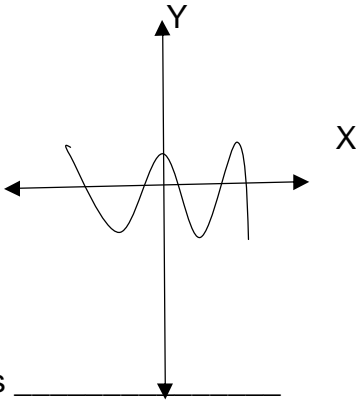
5	If triangle ABC is right angled at C, then the value of sec (A+B) is	1

	a) 0
	    b) 1
	    c) $\frac{2}{\sqrt{3}}$
	    d) not defined	

6	If $sin\theta + cos\theta = \sqrt{2}cos\theta$, $(\theta \neq 90°)$ then the value of $tan\theta$ is	1

	a) $\sqrt{2} - 1$
	    b) $\sqrt{2} + 1$
	    c) $\sqrt{2}$
	    d) $-\sqrt{2}$	

7	Given that $sin\alpha = \frac{\sqrt{3}}{2}$ and $cos\beta = 0$, then the value of $\beta - \alpha$ is	1

	a) $0°$
	    b) $90°$
	    c) $60°$
	    d) $30°$	

8	The point which divides the line segment joining the points $(8, -9)$ and $(2, 3)$ in ratio 1 : 2 internally lies in the
	    a) I quadrant
	    b) II quadrant
	    c) III quadrant
	    d) IV quadrant
		1

9	The distance of the point P $(-3, -4)$ from the *x*-axis (in units) is
	    a) 3
	    b) -3
	    c) 4
	    d) 5
		1
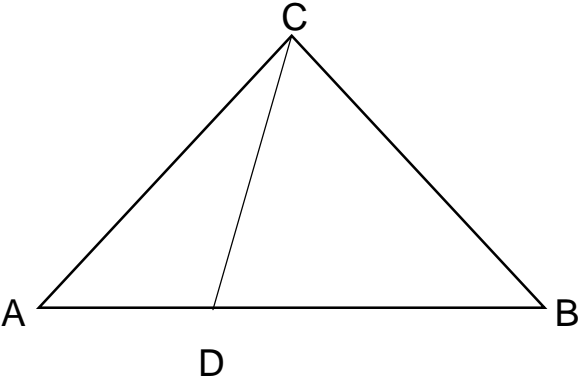
10	If $A(\frac{m}{3}, 5)$ is the mid-point of the line segment joining the points Q (– 6, 7) and R (– 2, 3), then the value of m is a) −12 b) −4 c) 12 d) −6	1

(Q 11- Q 15) Fill in the blanks

11	The total surface area of the given solid figure is _____	1
12	If one root of the equation $(k-1)x^2 - 10x + 3 = 0$ is the reciprocal of the other, then the value of k is_____ **OR** The graph of $y = p(x)$, where $p(x)$ is a polynomial in variable x, is as follows: The number of zeroes of $p(x)$ is _____	1
13	The perimeters of two similar triangles ΔABC and ΔPQR are 35cm and 45cm respectively, then the ratio of the areas of the two triangles is_____	1

4

14	Fill the two blanks in the sequence 2, _____ , 26, _____ so that the sequence forms an A.P	1
15	A number is chosen at random from the numbers -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5. Then the probability that square of this number is less than or equal to 1 is _____	1

(Q 16- Q 20) Answer the following

16	Write one rational and one irrational number lying between 0.25 and 0.32	1
17	In the figure, if $\angle ACB = \angle CDA, AC = 6$ cm and $AD = 3$ cm, then find the length of AB	1

18	If the angle between two tangents drawn from an external point 'P' to a circle of radius 'r' and centre O is 60^0, then find the length of OP.	1
	OR	
	If the radii of two concentric circles are 4 cm and 5 cm, then find the length of each chord of one circle which is tangent to the other circle.	
19	If the first three terms of an A.P are b, c and 2b, then find the ratio of b and c	1
20	Find the value(s) of k for which the quadratic equation $x^2 + 2\sqrt{2}kx + 18 = 0$ has equal roots	1

<div align="center">

Section – B

</div>

21	Find the number of natural numbers between 102 and 998 which are divisible by 2 and 5 both.	2
22	Prove that the rectangle circumscribing a circle is a square.	2

23	In the given figure, DEFG is a square and $\angle BAC = 90^0$. Show that $FG^2 = BG \times FC$	2
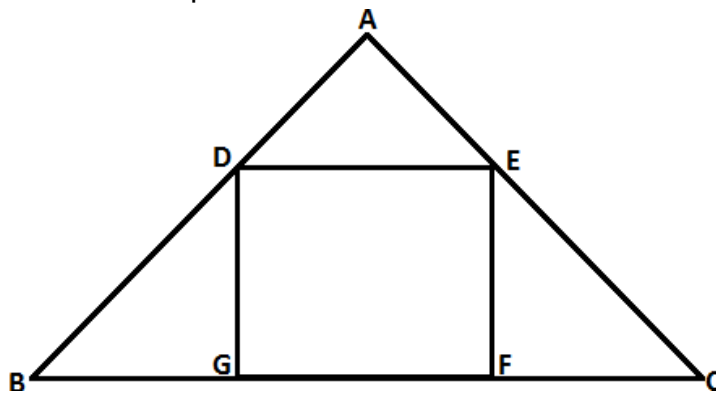
<div align="center">**OR**</div>

In an equilateral triangle, prove that three times the square of one side is equal to four times the square of one of its altitudes.

24	'Skysails' is that genre of engineering science that uses extensive utilization of wind energy to move a vessel in the sea water. The 'Skysails' technology allows the towing kite to gain a height of anything between 100 metres – 300 metres. The sailing kite is made in such a way that it can be raised to its proper elevation and then brought back with the help of a 'telescopic mast' that enables the kite to be raised properly and effectively. Based on the following figure related to sky sailing, answer the questions:	2
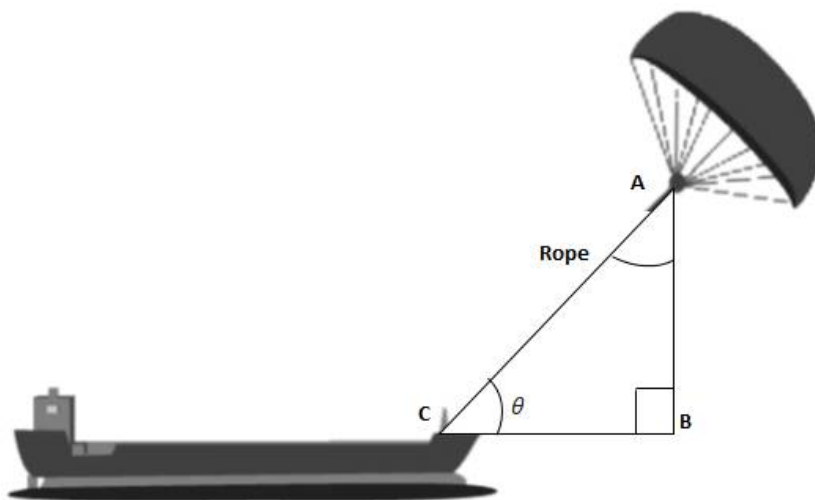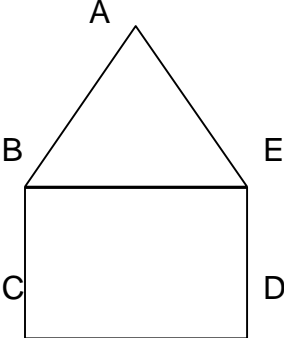
(i)   In the given figure, if $\sin \theta = \cos (3\theta - 30^0)$, where θ and $3\theta - 30^0$ are acute angles, then find the value of θ.

(ii) What should be the length of the rope of the kite sail in order to pull the ship at the angle θ (calculated above) and be at a vertical height of 200 m?

25	Jayanti throws a pair of dice and records the product of the numbers appearing on the dice. Pihu throws 1 dice and records the squares the number that appears on it. Who has the better chance of getting the number 36? Justify? **OR** An integer is chosen between 70 and 100, Find the probability that it is (a) a prime number (b) divisible by 7	2
26	Isha is 10 years old girl. On the result day, Isha and her father Suresh were very happy as she got first position in the class. While coming back to their home, Isha asked for a treat from her father as a reward for her success. They went to a juice shop and asked for two glasses of juice. Aisha, a juice seller, was serving juice to her customers in two types of glasses. Both the glasses had inner radius 3cm. The height of both the glasses was 10cm. First type: A Glass with hemispherical raised bottom. Second type: A glass with conical raised bottom of height 1.5 cm. Isha insisted to have the juice in first type of glass and her father decided to have the juice in second type of glass. Out of the two, Isha or her father Suresh, who got more quantity of juice to drink and by how much?	2
	Section C	
27	Given that $\sqrt{5}$ is irrational, prove that $2\sqrt{5} - 3$ is an irrational number. **OR** If HCF of 144 and 180 is expressed in the form 13m-16. Find the value of m.	3

28	If the sum of first m terms of an AP is the same as the sum of its first n terms, show that the sum of its first (m+n) terms is zero.	3
29	In the figure, ABCDE is a pentagon with BE||CD and BC||DE. BC is perpendicular to CD. AB= 5cm, AE=5cm, BE= 7cm, BC= x-y and CD= x+y. If the perimeter of ABCDE is 27cm. find the value of x and y, given x, y ≠ 0.	3

OR

Solve the following system of equations:

$$\frac{21}{x} + \frac{47}{y} = 110$$

$$\frac{47}{x} + \frac{21}{y} = 162, \quad x, y \neq 0$$

30	Obtain all the zeros of the polynomial $x^4+4x^3-2x^2-20x-15$, if two of its zeroes are $\sqrt{5}$ and $-\sqrt{5}$.	3
31	Two friends Seema and Aditya work in the same office at Delhi. In the Christmas vacations, both decided to go to their hometowns represented by Town A and Town B respectively in the figure given below. Town A and Town B are connected by trains from the same station C (in the given figure)in Delhi.Based on the given situation, answer the following questions:	3
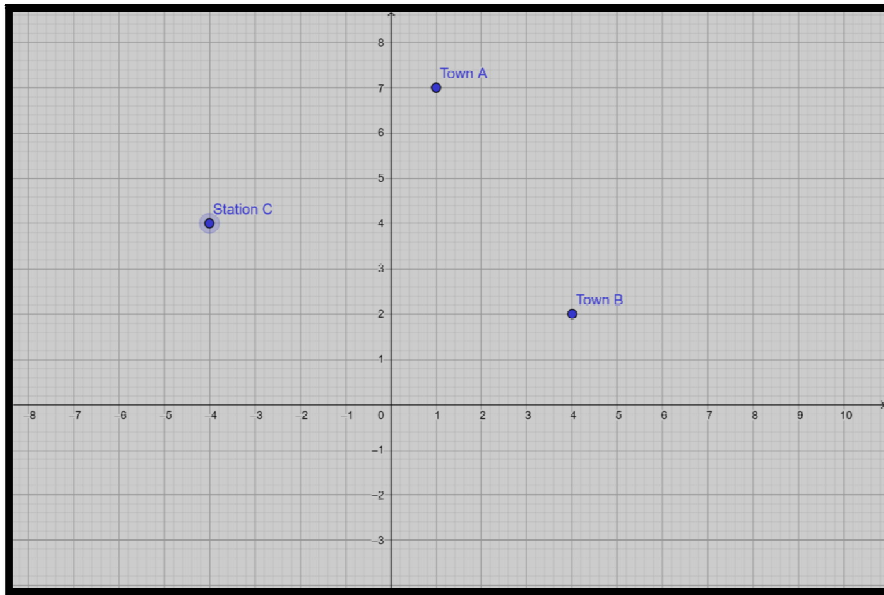
(i)   Who will travel more distance, Seema or Aditya, to reach to their hometown?
(ii)   Seema and Aditya planned to meet at a location D situated at a point D represented by the mid-point of the line joining the points represented by Town A and Town B. Find the coordinates of the point represented by the point D
(iii)   Find the area of the triangle formed by joining the points represented by A, B and C.

32	If sin θ + cos θ = $\sqrt{3}$, then prove that tan θ + cot θ =1 **OR** Evaluate: $\frac{cos^2(45°+\theta)+cos^2(45°-\theta)}{\tan(60°+\theta)\times \tan(30°-\theta)}$ + $(cot30° + sin\ 90°) \times (tan60° - sec\ 0°)$	3

33	Sides of a right triangular field are 25m, 24m and 7m. At the three corners of the field, a cow, a buffalo and a horse are tied separately with ropes of 3.5 m each to graze in the field. Find the area of the field that cannot be grazed by these animals.	3

34	A TV reporter was given a task to prepare a report on the rainfall of the city Dispur of India in a particular year. After collecting the data, he analyzed the data and prepared a report on the rainfall of the city. Using this report, he drew the following graph for a particular time period of 66 days	3
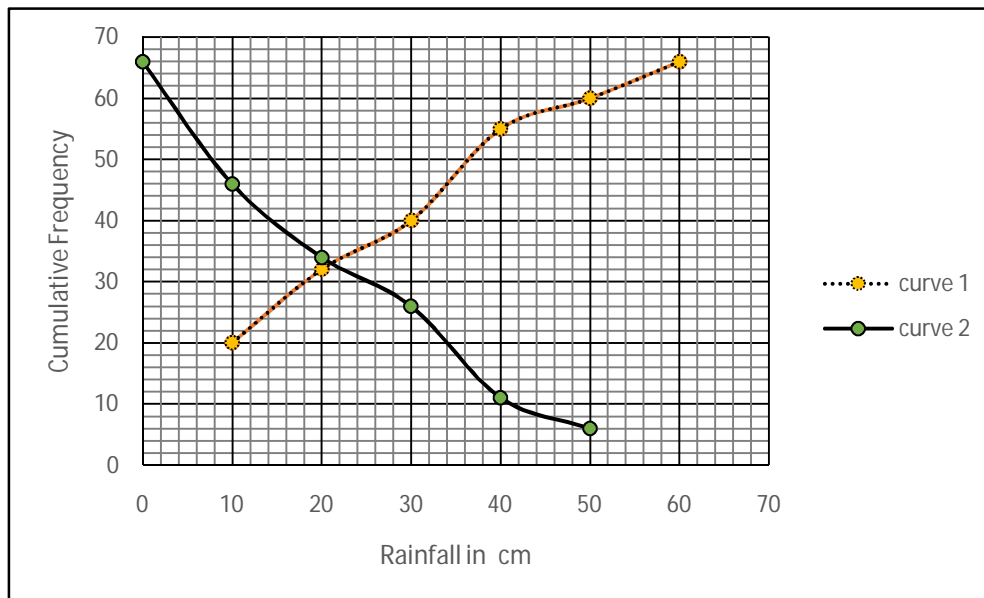
Based on the above graph, answer the following questions:

(i) Identify less than type ogive and more than type ogive from the given graph.
(ii) Find the median rainfall of Dispur
(iii) Obtain the Mode of the data if mean rainfall is 23.4cm

Section - D

35	Draw a triangle ABC with side BC=6.5cm, ∠B=30°, ∠A =105°. Then construct another triangle whose sides are $\frac{3}{4}$ times the corresponding sides of the triangle ABC. **OR** Construct a pair of tangents to a circle of radius 3 cm which are inclined to each other at an angle of 60°	4

36	Prove that if a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, then the other two sides are divided in the same ratio.	**4**
37	A train covers a distance of 360 km at a uniform speed. Had the speed been 5km/hour more, it would have taken 48 minutes less for the journey. Find the original speed of the train. **OR** Solve the following equation: $\frac{1}{x} - \frac{1}{x-2} = 3, x \neq 0, 2$	**4**
38	A petrol tank is in the form of a frustum of a cone of height 20 m with diameters of its lower and upper ends as 20 m and 50 m respectively. Find the cost of petrol which can fill the tank completely at the rate of Rs. 70 per litre. Also find the surface area of the tank. **OR** Water is flowing at the rate of 15km/hour through a pipe of diameter 14cm into a cuboidal pond which is 50m long and 44m wide. In what time will the level of water in the pond rise by 21cm?	**4**
39	The angle of elevation of an airplane from a point on the ground is 60^0. After a flight of 30 seconds, the angle of elevation becomes 30^0. If the airplane is flying at a constant height of $3000\sqrt{3}$ m, find the speed of the airplane.	**4**
40	Daily wages of 110 workers, obtained in a survey, are tabulated below:	**4**

Daily Wages (in Rs.)	100-120	120-140	140-160	160-180	180-200	200-220	220-240
Number of Workers	10	15	20	22	18	12	13

Compute the mean daily wages and modal daily wages of these workers.

SOCIAL SCIENCE (CODE 087)
CLASS X – SESSION 2019-20
SAMPLE QUESTION PAPER

Time Allowed: 3 Hours   **Maximum Marks: 80**

General Instructions:

i.   *The question paper has 35 questions in all.*
ii. *Marks are indicated against each question.*
iii. *Questions from serial number 1 to 20 are objective type questions. Each question carries one mark. Answer them as instructed.*
iv. *Questions from serial number 21 to 28 are 3 marks questions. Answer of these questions should not exceed 80 words each.*
v.   *Questions from serial number 29 to 34 are 5 marks questions. Answer of these questions should not exceed 120 words each.*
vi. *Question number 35 is a map question of 6 marks with two parts - 35 a. from History (2 marks) and 35b. from Geography (4 marks).*

SECTION – A VERY SHORT ANS. QUESTIONS

1   Match the following items given in column A with those in column B. Choose the correct   1
answer from the options given below:

COLUMN A	COLUMN B
A. Rashsundari Debi	1. Chhote Aur Bade Ka Sawal
B. Sudarshan Chakr	2. Kesari
C. Kashibaba	3. Amar Jiban
D. Bal Gangadhar Tilak	4. Sacchi Kavitayen

2   Identify the appropriate reason for the formation of the Swaraj party from the options given   1
below:
   A. Wanted members of Congress to return to Council Politics
   B. Wanted members of Congress to ask for Poorna Swaraj for Indians
   C. Wanted members of Congress to ask Dominion State for India
   D. Wanted members of Congress to oppose Simon Commission

3   Study the picture and answer the question that follows   1

Which of the following aspect best signifies this image of 'Germania'?
- A. Heroism and Justice
- B. Folk and Cultural Tradition
- C. Austerity and Asceticism
- D. Revenge and Vengeance

Note: This question is in lieu of Q3 for Visually Impaired Candidates only
Q-3 What does the crown on allegory of 'Germania' signify?

4 Who was called as the architect of Germany's unification?   1

5 Which one of the following is an example of Cultivable Wasteland?   1
- A. Gross cropped Area
- B. Uncultivable Land
- C. Barren Wasteland
- D. Current fallow Land

6 Complete the following table with correct information with regard to cultivation of Rice: 1

Rice	Annual rain fall required	Cropping season	Temperature required for its growth (in degrees)
	100 cm	(A) - ?	(B) - ?

7 Being a tropical country, India has enormous possibilities of tapping solar energy. Suggest any 1
one way to popularize its maximum use.
OR
A concerted effort has to be made for sustainable development.Suggest any one step in
conserving our mineral resources for the future.

8 Correct the following statement and rewrite: 1

In Srilanka, an Act was passed in 1956 to recognise Tamil as the only official language,
disregarding Sinhala.

OR

Correct the following statement and rewrite:

Belgium is a small country in Europe and share borders with France, Italy, Germany and Luxembourg.

9.   1

Which one of the following option best signifies this cartoon?

    A. Demand for separate state from Democratic Government
    B. Democratic Government is facing territorial issues with the bordering states
    C. Democratic Government is coping with multiple pressures through accommodation
    D. Democratic Government accepts demands based on separate state

Note: This question is in lieu of Q9 for visually impaired candidates
Q9. Give any one example of Social Democracy.

10   The representation of women in Indian Parliament is still low as compared to European 1
    countries because _____.
                          OR
    The Constitution of India provides to all individuals and communities freedom to profess,
    practice and propagate any religion because _____.

11   Who presides over the meeting of the Municipal Corporation? 1
                          OR
    Which government has the power to legislate on 'Residuary' subjects in India?

12   Mention the formula to calculate the BMI (Body Mass Index). 1

13 Which of the following statement defines Sustainable Development?   1

    A. Sustainable use of natural resources without considering the need of the future generation.

    B. Present generation fulfils its needs while considering the needs of the future generation as well.

    C. It means utilization of natural resources by the past, present and forthcoming future generation.

    D. To meets the needs of the future generations even if the needs of the present generation go unmet.

14 One of the best ways to reduce over usage of ground water is _____.   1

15 Which of the following profession belongs to the Tertiary Sector of economy?   1

    A. Fisherman
    B. Farmer
    C. Factory worker
    D. Teacher

16 The number of deaths of children less than one year of age per 1000 live births is referred as   1
_____.

OR

The total number of children of age group 14 and 15 years attending school as a percentage of total number of children in the same age group is referred as _____.

17 Find the Incorrect option   1

    A. Demand deposit share the essential features of money
    B. With demand deposit payments can be made without cash
    C. Demand deposits are safe way of money transformation
    D. Demand deposit facility is like cheque

18 Arrange the following in the correct sequence –   1

    i.   Transporting cloth to the workshops
    ii.   Sale in shops and showrooms
    iii.   Spinning the yarn
    iv.   Weaving of the fabric

Options –
    A. i--iv--iii--ii
    B. iii –iv—i--ii
    C. iv—i--ii--iii
    D. iii—iv--ii--i

19 In the question given below, there are two statements marked as Assertion (A) and Reason 1
(R). Read the statements and chose the correct option:

Assertion (A): Not every good or service that is produced and sold needs to be counted to
know the total production in each sector.
Reason (R): The value of final goods already includes the value of all the intermediate goods.

Options:
   a. Both A and R are true and R is the correct explanation of A.
   b. Both A and R are true but R is not the correct explanation of A.
   c. A is correct but R is wrong.
   d. A is wrong but R is correct.

20 Rita has taken a loan of Rs. 7 lakhs from the bank to purchase a car. The annual interest rate on 1
the loan is 14.5 per cent and the loan is to be repaid in 3 years in monthly instalments.
The bank retained the papers of the new car as collateral, which will be returned to Rita
only when she repays the entire loan with interest.

Analyse the loan information given above, considering one of the following correct option.
   a. Mode of re-payment
   b. Terms of credit
   c. Interest on loan
   d. Deposit criteria

SECTION – B   SHORT ANSWER QUESTIONS

21 Describe the incidence of Jallianwala Bagh Massacre.   3

OR

Describe the role of Alluri Sitaram Raju in Andhra Pradesh during 1920s.

22 Why did Europeans flee to America in nineteenth century? Explain.   3

OR

Why did merchants moved to the countryside Europe during the seventeenth and eighteenth
centuries? Explain.

23 Read the sources given below and answer the questions that follows-   1
                                                                                                            +
Source A-Religious Debates and the Fear of Print   1
                                                                                                            +
Print created the possibility of wide circulation of ideas, and introduced a new world of debate   1
and discussion. Even those who disagreed with established authorities could now print and   =

circulate their ideas. Through the printed message, they could persuade people to think 3
differently, and move them to action. This had significance in different spheres of life.

Source B-The Reading Mania

The ideas of scientists and philosophers now became more accessible to the common people. Ancient and medieval scientific texts were compiled and published, and maps and scientific diagrams were widely printed. When scientists like Isaac Newton began to publish their discoveries, they could influence a much wider circle of scientifically minded readers. The writings of thinkers such as Thomas Paine, Voltaire and Jean Jacques Rousseau were also widely printed and read. Thus their ideas about science, reason and rationality found their way into popular literature.

Source C --- Print Culture and the French Revolution

Print popularised the ideas of the Enlightenment thinkers. Collectively, their writings provided a critical commentary on tradition, superstition and despotism. They argued for the rule of reason rather than custom, and demanded that everything be judged through the application of reason and rationality. They attacked the sacred authority of the Church and the despotic power of the state, thus eroding the legitimacy of a social order based on tradition. The writings of Voltaire and Rousseau were read widely; and those who read these books saw the world through new eyes, eyes that were questioning, critical and rational.

Source A-Religious Debates and the Fear of Print

23.1 Evaluate the effectiveness of Print in the transmission of ideas and cultures.   1

Source B-The Reading Mania

23.2 To what extent do you agree that scientific ideas were circulated through Print.? Give only one aspect.   1

Source C --- Print Culture and the French Revolution

23.3To what extent did print culture create conditions for French Revolution ?. Cite any one evidence to support your answer.   1

24   "Energy saved is energy produced". Support the statement with suitable examples.   3

<div align="center">

OR

</div>

"India has fairly rich and varied mineral resources across different regions". Support the statement with examples.

25   Describe any three features of Indian Federalism.   3

26   Describe the role of Political Parties in India.   3

27   Why do we need to expand formal sources of credit in India? Explain.   3

<center>**OR**</center>

Why do banks and cooperative societies need to lend more? Explain.

28   Underemployment continues to be rampant in the rural areas. Suggest any three ways through   3
which employment for rural people can be generated.

<center>**SECTION – C   LONG ANS. QUESTIONS**</center>

29   Highlight the reasons for the growth of nationalist tensions in the Balkan region before the   5
First World War.

<center>**OR**</center>

Why was the period of 1848 considered as phase of the revolution of the Liberals in Europe?
Explain.

30   Read the extract and answer the questions that follows: 1
+
Today, the world has been converted into a large village with the help of efficient and fast   2
moving transport. Transport has been able to achieve this with the help of equally developed +
communication system. Therefore, transport, communication and trade are complementary to   2
each other. =
5
Today, India is well-linked with the rest of the world despite its vast size, diversity and
linguistic and socio-cultural plurality. Railways, airways, waterways, newspapers, radio,
television, cinema and internet, etc. have been contributing to its socio-economic progress in
many ways.

The trades from local to international levels have added to the vitality of its economy. It has
enriched our life and added substantially to growing amenities and facilities for the comforts
of life. It is thus, evident that a dense and efficient network of transport and communication is
a prerequisite for local, national and global trade of today.

30.1-Why is there a need to interlink with the world?

30.2-Infer the importance of means of transportation and communication for socio- economic
progress?

30.3- How does trade strengthen the economy of a country?

31   'The challenge of sustainable development requires control over industrial   5
pollution.' Substantiate the statement with examples.

32   Explain with examples the accommodative experience of Belgium for peace and harmony.   5

33   'Democracy is based on the idea of deliberation and negotiation'.Examine the statement.   5

<center>**OR**</center>

'Respect and equal treatment of women are necessary ingredients of a democratic society'.

Examine the statement.

34   Describe the role of technology in promoting globalisation process.   5

MAP SKILL BASED QUESTION

35   (a) Two places A and B have been marked on the given outline map of India.   2
Identify them and write their correct names on the lines drawn near them   +
4
A)   The place where Indian National Congress session was held in December 1920   =
B)   The place where Salt Law was broken by Mahatma Gandhi   6

b) On the same outline map of India locate and label **any four** of the following with suitable Symbols.

    i.   Paradwip- Major Sea Port
    ii.   Noida- Software Technology Park
    iii.   Salem- Iron and Steel industry
    iv.   Kalpakkam- Nuclear Power Plant
    v.   Bhakra Nangal– Dam
    vi.   Chattrapati Shivaji International Airport

Note: The following questions are for the Visually Impaired candidates only in lieuof Q. No. 35. ANY SIX to be attempted: 1X6 =6

    i.   Name the state where Indigo planters organized Satyagraha.
    ii.   Name the place where Non- Cooperation Movement ended abruptly due to violence.
    iii.   Name the state where Jallianwala Bagh incidence took place.
    iv.   Name the state where Chhatrapati ShivajiAirport is located.
    v.   Name the state where Salem Iron and Steel Plant is located.
    vi.   Name the state where Kalpakkam Nuclear Power Plant is located.
    vii.   Name the Software Technology Park located in Uttar Pradesh.
    viii.   Name the state where Haldia Seaport is located.

Outline Map of India (Political)

QUESTION- 35(9)

300 km

200 mi

B

A

Central Board of Secondary Education

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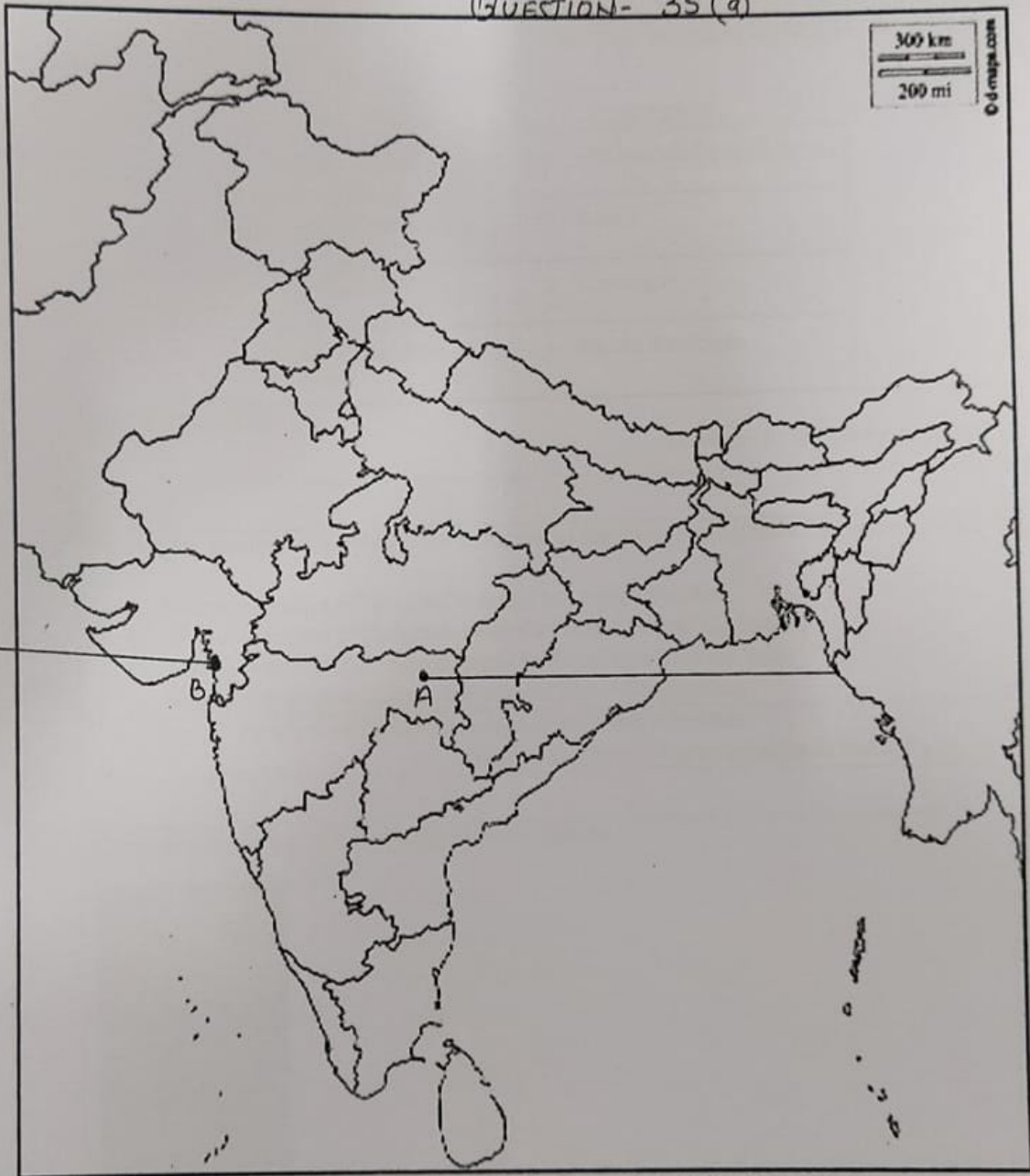
Class-X

Science-086

SAMPLE QUESTION PAPER 2019-20

</div>

TIME: 3 Hrs.   **M.M.: 80**

General Instructions:

1. The question paper comprises three sections – A, B and C. Attempt all the sections.
2. All questions are compulsory.
3. Internal choice is given in each section.
4. All questions in Section A are one-mark questions comprising MCQ, VSA type and assertion-reason type questions. They are to be answered in one word or in one sentence.
5. All questions in Section B are three-mark, short-answer type questions. These are to be answered in about 50 - 60 words each.
6. All questions in Section C are five-mark, long-answer type questions. These are to be answered in about 80 – 90 words each.
7. This question paper consists of a total of 30 questions.

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SECTION A

</div>

1   Define catenation.   1

2   How does valency of an element vary across a period?   1

3   **Answer question numbers 3(a) - 3(d) on the basis of your understanding of the following paragraph and the related studied concepts.**

Renewable energy sources such as wind energy are vital for the Indian economy, not only from the point of view of supply, but also from the perspective of environmental and social benefits. India is the world's fifth largest wind-power producer and the largest windmill facilities in India are installed in Tamil Nadu. Muppandal is a small village of Tamil Nadu and one of the most important sites of wind-farm in the state. It uses wind from the Arabian Sea to produce renewable energy. The suitability of Muppandal as a site for wind farms stems from its geographical location as it has access to the seasonal monsoon winds.


The electrical generators used on wind turbines in sites like Muppandal, produce an output AC of 240 V and a frequency of 50 Hz even when the wind speed is fluctuating. A

<div align="center">1</div>

transformer may be required to increase or decrease the voltage so it is compatible with the end usage, distribution or transmission voltage, depending on the type of interconnection.

3(a)   State the principle behind electric generator.   1

3(b)   The output frequency of wind turbine is 50 Hz. What is meant by this statement?   1

3(c)   Why do you think Muppandal is at an advantageous position for this project?   1

3(d)   Based on the data represented in the graph below, which of the two cities A or B would be   1
an ideal location for establishing a wind-farm and why?
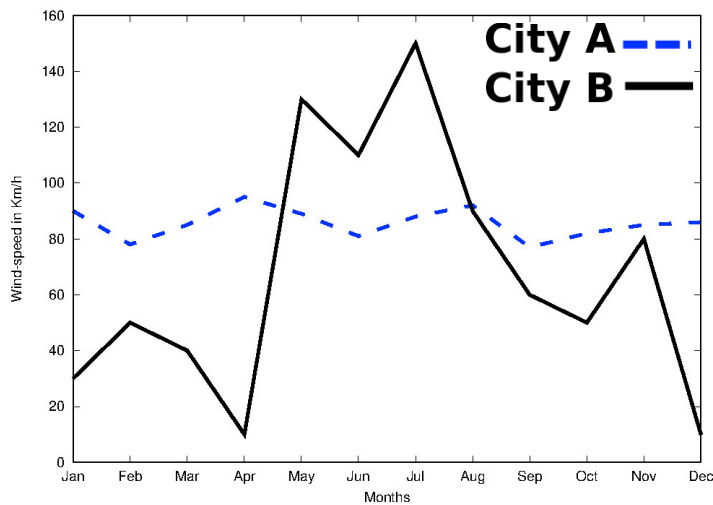
4   **Question numbers 4(a) - 4(d) are based on the two tables given below. Study these tables related to blood sugar levels and answer the questions that follow.**

Table A (Blood glucose chart)

	Mean Blood Glucose Level (mg/dL)
Doctor's advice needed	380
	350
	315
	280
	250
	215
Good	180
	150
Excellent	115
	80
	50

Table B (Blood Report of Patient X and Y)

Time of check	Blood Glucose ranges (mg/dL)	
	Patient X	Patient Y
Before breakfast (Fasting)	< 100	70 – 130
Before lunch, supper and snack	< 110	70 – 130
Two hours after meals	< 140	< 180
Bedtime	< 120	90- 15

4(a) Refer to Table B showing the blood report of the levels of glucose of patients X and Y.   1
Infer the disease which can be diagnosed from the given data.

4(b) Identify the hormone whose level in the blood is responsible for the above disease.   1

4(c) Which one of the following diets would you recommended to the affected patient?   1

i) High sugar and low fat diet.

ii) Low sugar and high protein diet.

iii) High Fat and low fiber diet.

iv) Low sugar and high fiber diet.

4(d) Refer to the Table A and suggest the value of the mean blood glucose level beyond which   1
doctor's advice is necessary:

i) 180 mg/dL

ii) 115 mg/dL

iii) 50 mg/dL

iv) 80 mg/dL

5   When we enter a dark room coming from outside, immediately the things inside the room   1
do not appear clear to our eyes. This is because

i) pupils do not open at all in the dark.

ii) pupils take time to adjust.

iii) light travels slower in a dark room.

iv) pupils open very quickly in the dark.

OR

The phenomena of light responsible for the working of the human eye is
i) reflection
ii) refraction
iii) power of accommodation
iv) persistence of vision

1

6   When a 4V battery is connected across an unknown resistor there is a current of 100 mA in the circuit. The value of the resistance of the resister is:

    i) $4\,\Omega$

    ii) $40\,\Omega$

    iii) $400\,\Omega$

    iv) $0.4\,\Omega$

7   Unit of electric power may also be expressed as: 1

    i) volt-ampere

    ii) kilowatt-hour

    iii) watt-second

    iv) joule-second

8   It was found that water from a river was contaminated with Coliform bacteria. Which one   1
of the following pollutant might have got mixed with the water?

    i) Fertilizer run off

    ii) Industrial waste

    iii) Pesticides

    iv) Human faecal matter

OR

Which one of the following stakeholders of forests causes the maximum damage to forest?

    i) People who live in or around the forest

    ii) The forest department of the government

    iii) The wildlife and native enthusiasts

    iv) The industrialists

9   Which one of the following green house gases is a contributor due to incomplete   1
combustion of coal and petroleum?

    i) Oxides of nitrogen

    ii) Methane

    iii) Carbon monoxide

    iv) Carbon dioxide

10   Which of the following reactions is an endothermic reaction?   1

    i) Burning of coal.

    ii) Decomposition of vegetable matter into compost.

    iii) Process of respiration.

    iv) Decomposition of calcium carbonate to form quick lime and carbon dioxide.

11   Identify the basic salt from the following salts: 1

    i) Na_2CO_3

ii) NH_4Cl

iii) $NaNO_3$

iv) KCl

12   The positions of four elements A, B, C and D in the modern periodic table are shown   1
below. Which element is most likely to form an acidic oxide?

i)   A

ii)   B

iii)   C

iv)   D

OR

Elements P, Q, R and S have atomic numbers 11, 15, 17 and 18 respectively. Which of them are reactive non-metals?

i) P and Q

ii) P and R

iii) Q and R

iv) R and S

For question numbers 13 and 14, two statements are given- one labeled *Assertion* (A) and the other labeled *Reason* (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

    i)   Both A and R are true and R is correct explanation of the assertion.

    ii)   Both A and R are true but R is not the correct explanation of the assertion.

    iii) A is true but R is false.

    iv) A is false but R is true.

13   **Assertion:** Following are the structural isomers of butane.   1
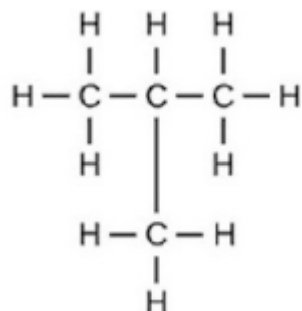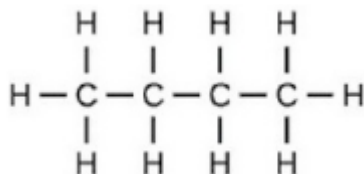
Reason: Structural isomers have the same molecular formula but they differ in their structures.

14 **Assertion:** A fuse wire is always connected in parallel with the mainline. 1

Reason: If a current larger than the specified value flows through the circuit, fuse wire melts.

SECTION B

15 (i) Write two observations when lead nitrate is heated in a test tube. 3

(ii) Name the type of reaction.

(iii) Write a balanced chemical equation to represent the above reaction.

16 A compound 'X' of sodium is used as an antacid and it decomposes on strong heating. 3

(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.

OR

You are provided with 90 mL of distilled water and 10 mL of concentrated sulphuric acid to prepare dilute sulphuric acid.

(i) What is the correct way of preparing dilute sulphuric acid? Give reason.

(ii) How will the concentration of H_3O^+ ions change on dilution?

17 Two elements X and Y have atomic numbers 12 and 16 respectively. To which period of the modern periodic table do these two elements belong? What type of bond will be formed between them and why? Also give the chemical formula of the compound formed. 3

18 (i) Create a terrestrial food chain depicting four trophic levels. 3

(ii) Why do we not find food chains of more than four trophic levels in nature?

OR

How will you create an artificial aquatic ecosystem, which is self-sustainable?

6

19   Explain the processes of aerobic respiration in mitochondria of a cell and anaerobic   3
      respiration in yeast and muscle with the help of word equations.

20   In a pea plant, the trait of flowers bearing purple colour (PP) is dominant over white   3
      colour (pp). Explain the inheritance pattern of F1 and F2 generations with the help of a
      cross following the rules of inheritance of traits. State the visible characters of F1and F2
      progenies.

21   Explain giving reasons the bending of the shoot tip of a plant towards light source coming   3
      from one side of the plant.

22   It is desired to obtain an erect image of an object, using concave mirror of focal length of   3
      12 cm.

      (i) What should be the range of the object distance in the above case?

      (ii) Will the image be smaller or larger than the object? Draw a ray diagram to show the
      formation of image in this case.

      (iii) Where will the image of this object be, if it is placed 24 cm in front of the mirror?

23   Suppose your parents have constructed a two room house and you want that in the living   3
      room there should be a provision of one electric bulb, one electric fan, a refrigerator and a
      plug point for appliances of power up to 2 kilowatt. Draw a circuit diagram showing
      electric fuse and earthing as safety devices.

24   In the figure given below, a narrow beam of white light is shown to pass through a   3
      triangular glass prism. After passing through the prism, it produces a spectrum XY on the
      screen.
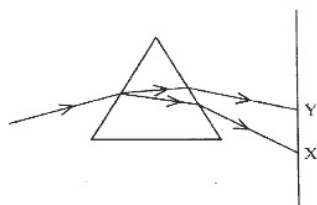
      (i) Name the phenomenon.

      (ii) State the colours seen at X and Y.

      (iii)Why do different colours of white light bend at different angles through a prism?

                                          OR

       (i) What is visible spectrum?

      (ii) Why is red used as the stopping light at traffic signals?

      (iii)Two triangular glass prisms are kept together connected through their rectangular
      side. A light beam is passed through one side of the combination. Will there be any
      dispersion? Justify your answer.

                                      SECTION C

25   Metal X is found in nature as its sulphide XS. It is used in the galvanisation of iron   5
      articles. Identify the metal X. How will you convert this sulphide ore into the metal?
      Explain with equations.

OR

State the reason for the following:

(i)   Aluminium oxide is called an amphoteric oxide.

(ii)   An iron strip dipped in a blue copper sulphate solution turns the blue solution pale green.

(iii)   Hydrogen gas is not evolved when most metals react with nitric acid.

(iv)   Calcium does not occur in free state in nature.

(v)   Sodium or potassium metals are kept immersed under kerosene.

26   The formulae of four organic compounds are given below:

A	B	C	D
C_2H_4	CH_3COOH	C_2H_5OH	C_2H_6

5

(i) Which one of these compounds A, B, C or D is a saturated hydrocarbon?

(ii) Identify the organic acid and give its structural formula.

(iii) Which of the above compounds when heated at 443K in the presence of concentrated H_2SO_4 forms ethene as the major product? What is the role played by concentrated H_2SO_4 in this reaction? Also write the chemical equation involved.

(iv) Give a chemical equation when B and C react with each other in presence of concentrated H_2SO_4. Name the major product formed and mention one of its important use.

27
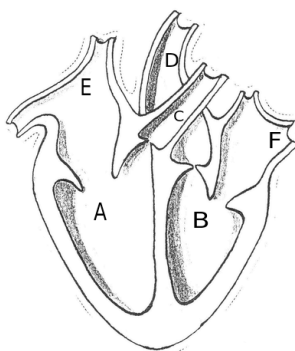
5

(i) Identify any two parts from the above diagram which carry oxygenated and deoxygenated blood.

(ii) Explain the process of double circulation with the help of a flow chart.

28   (i) Describe the various steps involved in the process of binary fission with the help of a diagram.

(ii) Why do multicellular organisms use complex way of reproduction?

5

OR

(i) Describe the role of prostate gland, seminal vesicle and testes in the human male reproductive system.

(ii) How is the surgical removal of unwanted pregnancies misused?

(iii) Explain the role of oral contraceptive pills in preventing conception.

29 (i) Consider a conductor of resistance 'R', length 'L', thickness 'd' and resistivity 'ρ'. Now this conductor is cut into four equal parts. What will be the new resistivity of each of these parts? Why?   5

(ii) Find the resistance if all of these parts are connected in:

    (a) Parallel

    (b) Series

(iii) Out of the combinations of resistors mentioned above in the previous part, for a given voltage which combination will consume more power and why?

30 (i) A lens produces a magnification of -0.5. Is this a converging or diverging lens? If the focal length of the lens is 6 cm, draw a ray diagram showing the image formation in this case.   5

(ii) A girl was playing with a thin beam of light from a laser torch by directing it from different directions on a convex lens held vertically. She was surprised to see that in a particular direction, the beam of light continues to move along the same direction after passing through the lens. State the reason for her observation. Draw a ray diagram to support your answer.

OR

(i) On entering in a medium from air, the speed of light becomes half of its value in air. Find the refractive index of that medium with respect to air?

(ii) A glass slab made of a material of refractive index n_1 is kept in a medium of refractive index n_2.

A light ray is incident on the slab. Draw the path of the rays of light emerging from the glass slab, if (i) $n_1 > n_2$ (ii) $n_1 = n_2$ (iii) $n_1 < n_2$

****

Central Board of Secondary Education