

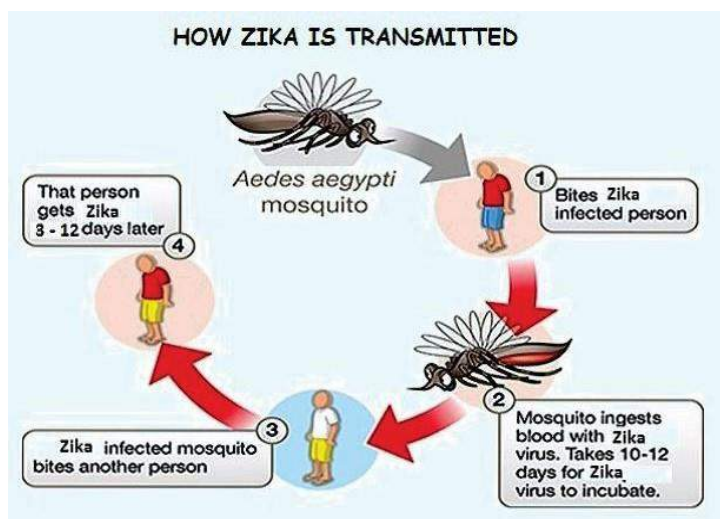
SECTION-A (READING)

1. Read the passage given below and answer the questions that follow:

8 Marks

Zika virus disease is an emerging viral disease transmitted through the bite of an infected *Aedes* mosquito. This is the same mosquito that is known to transmit infections like dengue and chikungunya. Zika virus was first identified in Uganda in 1947. Outbreaks of Zika virus disease have been recorded in Africa, the Americas, Asia and the Pacific. World Health Organization has reported 22 countries and territories in America from where local transmission of Zika virus has been reported. During large outbreaks in French Polynesia and Brazil in 2013 and 2015 respectively, national health authorities reported potential neurological and auto-immune complications of Zika virus disease. Microcephaly in the newborn and other neurological syndromes (Guillain Barre Syndrome) have been found temporally associated with Zika virus infection. However, there are a number of genetic and other causes for microcephaly and neurological syndromes like Guillain Barre Syndrome.

Zika virus disease has the potential for further international spread given the wide geographical distribution of the mosquito vector, a lack of immunity among population in newly affected areas and the high volume of international travel. The mosquito that transmits Zika virus, namely *Aedes aegypti* is widely prevalent in India.



A majority of those infected with Zika virus disease either remain asymptomatic (up to 80%) or show mild symptoms of fever, rash, conjunctivitis, body ache, joint pains. Zika virus infection should be suspected in patients reporting with acute onset of fever, maculo-papular rash and arthralgia, among those individuals who travelled to areas with ongoing transmission during the two weeks preceding the onset of illness.

Zika virus is diagnosed through PCR (polymerase chain reaction) and virus isolation from blood samples. Diagnosis by serology is not recommended. *Aedes* mosquitoes and their breeding sites pose a

significant risk factor for Zika virus infection. Prevention and control relies on reducing mosquitoes through source reduction (removal and modification of breeding sites) and reducing contact between mosquitoes and people.

- a) In this passage, the author chiefly tends to be
 - i) Suggestive
 - ii) Indicative
 - iii) Informative
 - iv) Evocative
- b) Based on information in the passage, how is *Aedes* mosquito very dangerous?
 - i) It transmits Zika virus disease
 - ii) It not only transmits Zika virus disease, but also dengue and chikungunya.
 - iii) It is found almost everywhere in the world
 - iv) Its breeding cannot be controlled
- c) What is the incubation period of the Zika virus
 - i) 3-12 days
 - ii) 8-12 days
 - iii) 10-12 days
 - iv) Cannot be determined from the passage
- d) After reading the passage we understand about

- A. The spread, cause and symptoms of the Zika virus disease
- B. Prevention and control of the Zika virus disease
- C. Detail life of Aedes aegypti mosquito
- D. The spread of dengue and chikungunya
 - i) A and B are correct
 - ii) B and C are correct
 - iii) C and D are correct
 - iv) A and C are correct

- a) From the passage what do you understand about the possible threat of Zika virus disease in India?
- b) Explain whether Microcephaly is primarily associated with Zika virus infection or not.
- c) In the image, why do you think out of three human figures, two figures are portrayed with heads bowed down?
- d) Which sentence in the passage indicates that the Zika virus disease has a worldwide occurrence?

2. Read the passage given below and answer the questions that follow: 12 Marks

1. Junk food is a term describing food that is perceived to be unhealthy or having poor nutritional value, according to Food Standard Agency. The term is believed to have been coined by Michael Jacobson, Director of the Centre for Science in the public interest, in 1972. The term has since become common usage.

2. Junk food typically contains high level of fat, salt or sugar and numerous food additives such as monosodium glutamate and tartrazine; at the same time it is lacking in proteins, vitamins and fibre, among others. It is popular among suppliers because it is relatively cheap to manufacture, has a long shelf life and may not require refrigeration. It is popular as it has lots of consumers because it is easy to purchase, requires little or no preparation, convenient to consume and has lots of flavours. Consumption of junk food is associated with obesity, heart disease, Type 2 diabetes and dental cavities. There is also concern about the targeting of the marketing at children.

3. What constitutes a junk food may be confusing and according to critics, include elements of class snobbery and moral judgment. For example, fast foods such as hamburgers and French fries supplied by companies such as McDonald's, KFC and Pizza Hut are often perceived as junk foods whereas same meals supplied by more up-market outlets such as Pizza Express or Nando's are not despite often having the same or worse nutritional content. Other foods such as Foie Gras, roast potatoes and bread are not considered junk food despite having limited nutritional content. Similarly, breakfast cereals are often regarded as healthy but may have high level of sugar, salt and fat. Many critics believe that junk food is not harmful when consumed as part of balanced diet and some believe that the term should not be used at all.

4. Should a child start consuming junk foods exclusively, as opposed to having a balanced diet, their intake a high-protein-vitamins-roughage diet would substantially decrease and intake of milk and healthy fruit juices would likely to be replaced by soft drinks. This would potentially lead to a deficiency of calcium, milk being a rich source of calcium, resulting in weakening bones. Some type of chips that are said to be "junk foods" may actually be.

I. Choose the correct option 1x4=4M

1. Find the word from the passage which refers to the "**opinion of the people**"

(Para 1)

- a) Public interest
- b) Coined
- c) Perceived
- d) Common usage

2. Which word from the option does not give the meaning of the phrase

"lot of money" (Para 2)

- a) exorbitant
- b) Costly
- c) Expensive
- d) Cheap

3. The word "**snobbery**" refers to **(Para 3)**

- a) Liking only high class society people and things
- b) Respecting only rich people
- c) Not satisfied by the things that ordinary people like
- d) All of the above

4. Which word among the options is not similar in meaning to the word "**deficiency**"

(Para 4)

- a)Decrease b)inadequate c)balanced d)insufficient

Answer the following Questions

2X4=8M

5. Why is junk food considered unhealthy?
6. Mention the health issues related to consumption of junk food?
7. What reasons are attributed to the popularity of junk food?
8. What has snobbery to do with junk food?

SECTION-B (WRITING AND GRAMMAR)

3. You are Biki/Binita, a student of Tulip Public School, Guwahati. You have noticed that while many people take care of animals keeping them as pets, many treat the stray animals with lot of cruelty. Write an article in about 100-150 words highlighting the need for treating the animals with love and care. **8**

OR

During the winter vacation, you went to your maternal uncle's village. There you got the opportunity to meet Mr. Das who has been an excellent swimmer even though he is differently abled. You have felt a deep admiration for him. Make a diary entry, writing down your feelings as you spent the day with him in about 100-150 words.

4. Complete the story in about 150-200 words using the outline given below:

10 Marks

An old man sitting near the gate of a house at night.....returning home from a distant village.....still a long way to go.....tired and hungrydogs bark at him.....some people take him for a thief.....the owner of the house gives food and shelter.

OR

Read the beginning of the story given below and complete it in about 150-200 words.

Bidyut was on his way to school in a hurry as he had English unit test. Suddenly he noticed that one old lady had been hit by a bike and she had fallen on the ground by the roadside. He decided.....

5. Choose the most appropriate options from the ones given below to complete the paragraph. Write the answers against the correct blank numbers. Do not copy the entire passage.

1/2x8=4 Marks

I saw that that the boy killed the bird (a) _____ a stone. I knew that (b) _____ all the students, only that boy could do so. I sent (c) _____ him immediately as I knew that he was blind (d) _____ his fault. He started quivering in fear (e)..... I asked him about the incident. I talked to him in a friendly manner (f)..... that he could shed his fear. I counseled him to behave (g)..... a good boy. He promised that he would not harm any bird or animal (h).....in future.

- | | | | |
|--------------|----------|------------|------------|
| a)i) by | ii) with | iii) for | iv) in |
| b)i) between | ii) for | iii) among | iv) on |
| c)i) on | ii) of | iii) for | iv) into |
| d)i) of | ii) in | iii) to | iv) with |
| e)i) while | ii) when | iii) if | iv) though |
| f)i) after | ii) as | iii) so | iv) before |
| g)i) than | ii) for | iii) as | iv) proper |
| h) i) never | ii) ever | iii) for | iv) more |

6. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correction in your answer sheet as given below against the correct blank number. **1/2x8=4 Marks**

Incorrect

Correct

- a) After reaching the airport a passenger may used
- b) trolleys to transport his luggage. Then they must show
- c) his ticket to the clerk, who issues a boarding pass. Than he can wait
- d) at the waiting room. He can also do some shopping in the stalls.
- e) He need not carries his luggage with him as
- f) it is be taken care of by the airline.
- g) He must follow the airport regulations or
- h) should behave cordial with his co-passengers.

7. Rearrange the following jumbled words and phrases to form meaningful sentences. **1x4=4**

- a) Kerala/went/my/to visit/last year/brother
- b) Beautiful / india / Kerala / states / of / one / the / is / most / in
- c) Famous / backwaters / lagoons / and / kerala / for / its / is
- d) Also / few / a / kerala / in / there / are / hill stations /

SECTION-C (LITERATURE)

8. Read one of the extracts given below and answer the questions that follow: 1x4=4 Marks

On Sunday afternoons Grandmother sent her down to the drawing-room to have a “nice talk with Father and Mother”. But the little girl always found Mother reading and Father stretched out on the sofa, his handkerchief on his face, his feet on one of the best cushions, sleeping soundly and snoring.

- a) Why do you think Grandmother sent the little girl to talk to parents on Sunday afternoons?
- b) What does the sound sleep of Father signify?
- c) How do you think the little girl reacted to the situation?
- d) In your opinion, what would be the proper response to the little girl by her parents?

OR

Now in memory comes my mother,
As she used in years ago,
To regard the darling dreamers
Ere she left them till the dawn:
O! I feel her fond look on me
As I list to this refrain
Which is played upon the shingles
By the patter of the rain.

- (a) Why do you think that the poet's mother only comes in his memory?
- (b) In what state of mind do you think the mother was in years gone by?
- (c) Why does the poet feel the fond look of mother while listening to the patter of the rain?
- (d) What message about motherly affection does the poet want to convey?

9. Answer the following questions in not more than 30-40 words (Any Five) : 2x5=10 Marks

- a) Why did Margie think that the old kind of school must have been fun?
- b) What was Jerome's real intention when he offered to pack?
- c) What was the dream that kept Maria going?
- d) Why does the poet feel that no men are foreign?
- e) Why did Mahendra not feel the absence of a TV in his quarter in presence of Iswaran?
- f) Why did the narrator feel his first year of high school awkward?
- g) How was Olga responsible for a positive change in Lushkoff?

10. Answer the following question in about 100-150 words:

8 Marks

How was Bismillah Khan's fame as the Shehnai maestro not just confined to India, but widespread throughout the whole world.

OR

How did the parents, teachers and elders of Abdul Kalam help him to realize the greatest values of life?

11. Answer the following question in about 100-150 words:

8 Marks

Though Prashant himself faced a lot of problems during the storm, he was firm to help other storm victims. Describe how he not only demonstrated the true fellow feeling but also helped the storm victims to survive and settle.

OR

How did Behrman set an example of humanity and sacrifice by saving the life of Johnsy?

नवोदय विद्यालय समिति

वार्षिक परीक्षा 2020

कक्षा- नवम
पाठ्यक्रम (ब)

विषय - हिंदी

अंक -80
समय - 3 घंटे

निर्देश :

1. इस प्रश्न-पत्र के चार खंड हैं- क, ख, ग और घ
2. सभी खंडों के प्रश्न अनिवार्य हैं ।
3. प्रत्येक प्रश्न के अंक प्रश्न के सम्मुख अंकित हैं ।

सेट - 1

खंड -क (अपठित अंश)

1. निम्न लिखित गद्यांश ध्यान पूर्वक पढ़कर दिए हुए प्रश्नों के उत्तर लिखिए

हम जीवन में क्या चाहते हैं ? सुख, समृद्धि, शांति यही न ? किंतु ये चीजें तभी मिल सकती हैं जब हम इसको पाने का निरंतर प्रयास करते चले । यदि हम व्यायाम के लिए चिंतन के लिए अध्ययन के लिए समय नहीं निकाल पायेंगे तो हमारा तन -मन कैसे स्वस्थ और सबल बन सकेगा ? विषम परिस्थितियों में भी हम अपना संतुलन कैसे बनाए रख सकेंगे ? अतः जीवन को सही अर्थों में सफल बनाने के लिए यह आवश्यक है कि हम इन सभी की साधना में रोज कुछ समय लगवाएँ और यह तभी संभव हो सकेगा, जब हम अपने समय का ठीक विभाजन कर लें । रोज उसका लेखा- जोखा करते रहें । वस्तुतः जो समय की कद्र करना सीख गया, वह सफलता का रहस्य समझ गया । हम अपने सुख, अपनी समृद्धि के लिए अपना समय विभाजन जितना शीघ्र कर लें उतना ही अच्छा होगा , क्योंकि किसी मनीषी ने यह चेतावनी पहले ही दे रखी है कि समय और लहरें किसी की प्रतीक्षा में खड़ी नहीं रहती ।

प्रश्न

- | | |
|--|---|
| क.जीवन को पूर्णतया सफल बनाने के लिए क्या आवश्यक है ? | 2 |
| ख.जीवन में समय विभाजन की आवश्यकता है क्यों ? | 2 |
| ग.मनीषी ने पहले ही क्या चेतावनी दी है ? | 2 |
| घ.मनुष्य जीवन में क्या क्या चाहते हैं ? | 2 |
| ड.इस गद्यांश के लिए उचित शीर्षक दीजिए | 1 |

2. निम्न लिखित काव्यांश ध्यान पूर्वक पढ़ कर दिए हुए प्रश्नों के उत्तर लिखिए

बंधन छोड़ आज उड़ जाओ ।
विहग, मुक्ति का गाना गाओ ।
अपनी ही इच्छा से हम तुम ,
मुक्त और बंदी बन जाते ,
अपने ही सुख-दुख में भूले ,
नित्य स्वप्न के महल बनाते ॥
अश्रु बिखर चुके तुम अपने ,
अब पलभर मुसकाओ ।
सागर की गर्जन देखी ,
देखा निर्झर का बहना ,
मध्य निशा में देखा झिलमिला ।
तारों का कुछ कहना ।
तुम भी अपने मधुर कंठ से
जीवन की गति सुनाओ ।
आकुल कर देती है मुझको
यह पथ की दुर्बलता ।

प्रश्न :

- क. कवि बंधन छोड़ने के लिए किससे कह रहा है ? क्यों कह रहा है ? 2
ख. कवि ने किन-किन प्राकृतिक तत्वों को देखा -काव्यांश से स्पष्ट कीजिए 2
ग. कवि को कौन सी बातें दुर्बल बनाती हैं - स्पष्ट कीजिए 2

खंड - ख

3. क. निम्न लिखित शब्दों का वर्ण विच्छेद कीजिए

(अ) पुस्तक (आ) चेतावनी 2

ख. निम्न लिखित शब्द में उचित स्थान पर अनुस्वार का प्रयोग कीजिए

(अ). घमड (आ) पकज 1

ग. निम्न लिखित शब्द में उचित स्थान पर अनुनासिक का प्रयोग कीजिए 1

(अ) बाट (आ) आख

- घ. निम्न लिखित शब्द में उचित स्थान पर नुक्ता का प्रयोग कीजिए 1
 (अ) मजदूर (आ) जरूर
- ड. निम्न उपसर्गों का प्रयोग करके एक एक शब्द लिखिए 2
 (अ) अन (आ) बे
- च. निम्न लिखित शब्द में से प्रत्यय छाँटकर लिखिए 1
 (अ) धार्मिक (आ) आनन्दित
4. क. दिए गए शब्दों का संधि विच्छेद कीजिए 2
 (अ) अधिकाधिक (आ) छात्रावास
- ख. संधि कीजिए 2
 (अ) पर + उपकार (आ) मानव + उचित
5. निम्न लिखित वाक्यों में उपयुक्त विराम चिहनों का प्रयोग कीजिए 1x3 =3
 क. बच्चों शोर क्यों मचा रहा हो कविता कहानी या नाटक याद करो
 ख. हम आकाश का वर्णन करते हैं पृथ्वी का वर्णन करते हैं जलाशयों का वर्णन करते हैं पर कीचड़ का वर्णन कभी किसी ने किया है
 ग. कर्नल खुल्लर ने बचेन्द्रीपाल की सफलता पर बधाई देते हुए कहा मैं तुम्हारी इस अनूठी उपलब्धियों के लिए तुम्हारे माता पिता को बधाई देना चाहूँगा

खंड - ग

6. क. काश में आप के मुल्क में आकर यह सब अपनी आँखों से देख सकता । हामिदखाँ का यह कथन उसकी किस भावना को उजागर करता है ? संक्षेप में लिखिए 3

अथवा

कुँए से चिट्ठी निकालने के साहसिक कार्य का वर्णन स्मृति कहानी के आधार पर कीजिए

- ख. " मैं चलता हूँ । अब आप की बारी है " यहाँ पटेल के कथन का आशय दिया जल उठे के आधार पर स्पष्ट कीजिए 2

7. निम्न लिखित में से किसी एक का उत्तर लगभग 100 शब्दों में लिखिए
दुख का अधिकार- कहानी के आधार पर खरबूजे बेचने वाली बुढिया का चरित्र चित्रण
कीजिए 5

अथवा

अपने घर आए हुए अतिथि को वापस घर जाने का संकेत लेखक ने किन-किन उपायों से किया - तुम कब जाओगे अतिथि पाठ के आधार पर बताइए

8. निम्न लिखित प्रश्नों के उत्तर 20-30 शब्दों में लिखिए
- क. एवरेस्ट अभियान में अग्रिम दल का नेतृत्व कौन कर रहा था ? 1
- ख. धार्मिक लोगों से कौन से लोग अधिक अच्छे हैं ? 2
- ग. महादेव देसाई अपना परिचय किस रूप में देते थे ? 2
9. निम्न लिखित दोहे की व्याख्या कीजिए और बताइए कि प्रस्तुत दोहे में निहित सन्देश क्या है ? 5

धनि रहीम जल पंक को लघु जिय पिअत अघाय ।
उदधि बडाई कौन है, जगत पिआसो जाय ॥

अथवा

अग्निपथ कविता मूल भाव स्पष्ट कीजिए

10. निम्न लिखित प्रश्नों के उत्तर 20-30 शब्दों में दीजिए 1+2+2=5
- क. फूल की चाह कविता के रचयिता कौन हैं ?
- ख. नए इलाके में कवि रास्ता क्यों भूल जाता है ?
- ग. आदमीनामा - कविता से क्या सीख मिलती है ?

खंड - घ

11. समय के सदुपयोग की आवश्यकता समझाते हुए अपने छोटे भाई को पत्र लिखिए 5

अथवा

अपने विद्यालय में आयोजित खेल-दिवस का वर्णन करते हुए पिताजी को पत्र तैयार कीजिए ।

12. निम्न लिखित किसी एक विषय पर संकेत बिंदुओं के आधार पर अनुच्छेद लिखिए

क. पहला सुख निरोही काया

5

आधुनिक जीवन शैली----- सुख और दुख शरीर में ही-----

व्यायाम और तन्दुरुस्ति----- स्वस्थ शरीर में स्वस्थ मन

ख. मेरे जीवन का लक्ष्य

हरेक का लक्ष्य ---- लक्ष्य के बिना जीवन का मतलब नहीं ----

लक्ष्य और जीवन सक्रियता----- लक्ष्य पूर्ति के प्रयास

13. देश में नारियों पर बढ़ते जुल्मों पर दो मित्रों के बीच हुई बातचीत पर 50 शब्दों में संवाद लिखिए

5

अथवा

स्वच्छता-अभियान पर संवाद तैयार कीजिए

14. नवोदय विद्यालयों में कक्षा नवम में लाट्रल-एन्ट्री के लिए एक विज्ञापन तैयार कीजिए

अथवा

5

आप के पास पुराने सिक्कों का संग्रह है जिसे आप बेचना चाहते हैं। इसके लिए एक विज्ञापन तैयार कीजिए

15. दिए गए चित्र को देखकर 40 से 50 शब्दों में उसका वर्णन कीजिए

5



NAVODAYA VIDYALAYA SAMITI

नवोदय विद्यालय समिति
ANNUAL EXAMINATION 2019- 20
CLASS - 9
कक्षा - 9
MATHEMATICS

DURATION: 3 hrs.

MAX. MARKS: 80

समय : 3 घंटा

अधिकतम अंक :80

General instructions:

1. All the questions are compulsory.
2. The question paper consists of 40 questions divided into 4 sections A, B, C, D.
3. Section A comprises of 20 questions of 1 mark each.
4. Section B comprises of 6 questions of 2 marks each.
5. Section C comprises of 8 questions of 3 marks each.
6. Section D comprises of 6 questions of 4 marks each.
7. There is no overall choice. However, an internal choice has been provided in two questions of 1 mark each, 2 questions of 2 marks each, 3 questions of three marks each, and 3 questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
8. Use of calculators is not permitted.

सामान्य निर्देश:

1. सभी प्रश्न अनिवार्य हैं।
2. प्रश्न पत्र में 40 प्रश्न हैं जिन्हें 4 खंडों A, B, C, D में विभाजित किया गया है।
3. खंड अ में 1 अंक के 20 प्रश्न हैं।
4. खंड ब में 2 अंक के 6 प्रश्न हैं।
5. खंड स में 3 अंक के 8 प्रश्न हैं।
6. खंड द में 4 अंक के 6 प्रश्न हैं।
7. कोई समग्र विकल्प नहीं है 1, हालाँकि |अंक के 2, प्रश्नों में 2अंको के 3, प्रश्नों 2अंको के प्रश्नों और 3 अंको के 4प्रश्नों में से प्रत्येक में एक आंतरिक विकल्प दिया गया है आपको ऐसे सभी प्रश्नों में से केवल | एक विकल्प को ही करना है
8. कैलकुलेटर के उपयोग की अनुमति नहीं है |

SECTION - A) खंड(अ-

Qn (1-10) are multiple choice questions. Select the most appropriate answer from the given options

Qn (1-10) बहुविकल्पीय प्रश्न हैं। दिए गए विकल्पों में से सबसे उपयुक्त उत्तर चुनिए

1. How many pairs of adjacent angles are formed when two lines intersect in a point. (a) 0 (b) 4 (c) 2 (d) 3
 ; fn nks js[kk] vki l e , d nll js dks Intersect dj rh g\$ rks fdrus adjacent angles
 CUSX (a) 0 (b) 4 (c) 2 (d) 3

2. If $4^x = 32$ then the value of x is
 8 (b) 5 (c) $\frac{5}{2}$ (d) $\frac{2}{5}$

यदि $4^x = 32$ है तो x का मान है

- (a) 8 (b) 5 (c) $\frac{5}{2}$ (d) $\frac{2}{5}$

3. Which of the following cannot be the sides of a triangle
 (a) {2,4,6} (b) {3,4,5} (c) {5,12,13} (d) {8,15,17}

निम्नलिखित में से कौन सा एक त्रिभुज की भुजाएँ नहीं हो सकती हैं

- (a) {2,4,6} (b) {3,4,5} (c) {5,12,13} (d) {8,15,17}

4. If a triangle and a parallelogram having same base and in between same parallels, then the ratio between the areas of parallelogram and triangle
 (a) 2:1 (b) 1:1 (c) 1:2 (d) None of these

यदि एक त्रिभुज और एक समांतर चतुर्भुज जिसके समान आधार और समान
 समानताएं हैं, तो समांतर चतुर्भुज और त्रिभुज के क्षेत्रों के बीच का अनुपात

- (a) 2:1 (b) 1:1 (c) 1:2 (d) None of these

5. If the altitude of an equilateral triangle is $4\sqrt{3}$ cm, then what is the area of equilateral triangle?

- (a) $16\sqrt{3}\text{cm}^2$ (b) $8\sqrt{3}\text{cm}^2$ (c) $2\sqrt{3}\text{cm}^2$ (d) $64\sqrt{3}\text{cm}^2$

यदि एक समबाहु त्रिभुज की ऊँचाई $4\sqrt{3}$ cm सेमी है, तो समबाहु त्रिभुज का क्षेत्रफल
 कितना है?

- (a) $16\sqrt{3}\text{cm}^2$ (b) $8\sqrt{3}\text{cm}^2$ (c) $2\sqrt{3}\text{cm}^2$ (d) $64\sqrt{3}\text{cm}^2$

6. The bisectors of the angle of a parallelogram enclose a

- (a) Parallelogram (b) rhombus (c) rectangle (d) square

f d l h l kekarj prkkqt ds l Hkh dks kka ds f}Hkk t d l s cuus okys vr% fp= dks dgrs g&

- (a) Lkekarj prkkqt %b) दिशमकोण prkkqt (c) vk; r %d% oxl

7. In a cyclic quadrilateral ABCD, $\angle A = 70^\circ$, then what is the measure of $\angle C$

- (a) 70° (b) 180° (c) 110° (d) None of these

एक चक्रीय चतुर्भुज ABCD में, $\angle A = 70^\circ$ है, तो $\angle C$ का माप क्या है

- (a) 70° (b) 180° (c) 110° (d) bue l s dkbz ugh

8. Degree of zero polynomial

- (a) 0 (b) Not defined (c) 1 (d) None of these

शून्य बहुपद की डिग्री

- (a) 0 (b) Not defined (c) 1 (d) 1
9. Which of the following cannot be the empirical probability of an event
 (a) $\frac{3}{2}$ (b) $\frac{2}{3}$ (c) 0 (d) 1

निम्नलिखित में से कौन सा किसी इवेंट की आनुभविक संभावना नहीं हो सकती है

- (a) $\frac{3}{2}$ (b) $\frac{2}{3}$ (c) 0 (d) 1

10. Volumes of two cubes are in the ratio 27:125. Then the ratio of their surface areas
 (a) 5:3 (b) 25:9 (c) 3:5 (d) 9:25
 दो क्यूब्स के वॉल्यूम 27: 125 के अनुपात में हैं तो उनके सतह क्षेत्रों का अनुपात
 (a) 5:3 (b) 25:9 (c) 3:5 (d) 9:25

(Qn 11-15) Fill in the blanks

(Qn 11-15) रिक्त स्थान भरें

11. Write the rationalization factor of $\frac{1}{3-\sqrt{8}}$

$\frac{1}{3-\sqrt{8}}$ का युक्तिकरण कारक लिखिए

OR

If $p(x) = x$ then $p(x) + p(-x) = \text{-----}$

यदि $p(x) = x$ तो $p(x) + p(-x) = \text{-----}$

12. Measure of the acute angle of an isosceles right angled triangle is----
 समकोण त्रिभुज के समद्विबाहु के तीव्र कोण का मान है ----- है

13. The class mark of the interval 20 – 30 is

वर्जक 20 & 30 का औसत -----

14. In ΔPQR , $\angle P = 50^\circ$, $\angle R = 60^\circ$, then the longest side is-----
 ΔPQR में, $\angle P = 50^\circ$, $\angle R = 60^\circ$, तो सबसे लंबा भाग ----- है

15. Abscissa of a point on y axis is-----

Y अक्ष पर एक बिंदु का अबसीसा ----- है

(Qn 16-20) Answer the following

(Qn 16-20) निम्नलिखित का उत्तर दीजिए

16. Solve $x+6=10$. Which axiom is used?

$X + 6 = 10$ को हल करें। कौन सा स्वयंसिद्ध प्रयोग किया जाता है?

17. Find the remainder obtained when the polynomial $(y^3 - 3y^2 + y + 6)$ is divided by $(y-1)$

बहुपद $(y^3 - 3y^2 + y + 6)$ को $(y-1)$ से विभाजित करने पर प्राप्त शेषफल ज्ञात कीजिए।

OR

Check whether $(x+1)$ is a factor of the polynomial $x^3 + x^2 + x + 1$

जाँचें कि क्या $(x + 1)$ बहुपद $x^3 + x^2 + x + 1$ का कारक है

18. If $\sqrt{2} = 1.414$, then find the value of $\frac{1}{\sqrt{2}}$

यदि $\sqrt{2} = 1.414$ है, तो $\frac{1}{\sqrt{2}}$ का मान ज्ञात करें

19. If 25 & 35 are the two consecutive class marks of two successive class

intervals, find the size of the class?

यदि 25 और 35 दो क्रमिक वर्ग के अंतराल के दो विशिष्ट वर्ग चिह्न हैं, तो कक्षा का आकार ज्ञात करें?

20. In a circle of radius 17cm, there is a chord at a distance of 15cm from the centre. Find the length of the chord?

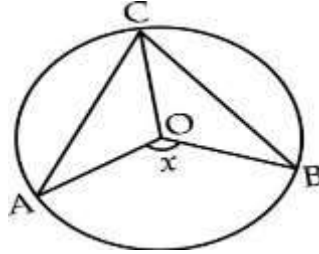
त्रिज्या 17 cm के एक सर्कल में, केंद्र से 15 cm की दूरी पर एक कॉर्ड होता है। कॉर्ड की लंबाई ज्ञात करें?

SECTION B (खंड ब)

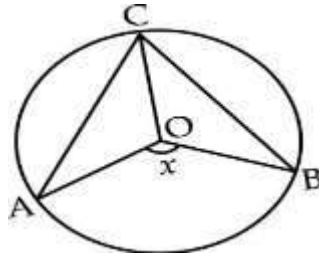
21. If the volume and total surface area of a sphere are numerically equal, find the diameter of the sphere?

यदि किसी गोले का आयतन और कुल सतह का क्षेत्रफल संख्यात्मक रूप से बराबर है, तो गोले का व्यास ज्ञात कीजिए?

22. In figure, O is the center of the circle $\angle CAO = 40^\circ$ and $\angle CBO = 30^\circ$ then find x?



आकृति में, O वृत्त का केंद्र है, $\angle CAO = 40^\circ$ और $\angle CBO = 30^\circ$ तब x ज्ञात कीजिए?



23. Factorise :- $8x^3 + y^3 + 27z^3 - 18xyz$

गुणनखंड:- $8x^3 + y^3 + 27z^3 - 18xyz$

OR

Expand:- $(2x+3y-4z)^2$

विस्तार :- $(2x+3y-4z)^2$

24. Write an equation of line passing through (2,3). How many such lines are there?

(2,3) से होकर गुजरने वाली रेखा का समीकरण लिखिए। ऐसी कितनी लाइनें हैं?

25. Express in $\frac{p}{q}$ form 2.31717-----?
P / q रूप में एक्सप्रेस 2.31717 -----?

OR

Find two rational number and two irrational number between $\frac{1}{2}$ & $\frac{1}{3}$?

$\frac{1}{2}$ & $\frac{1}{3}$ के बीच दो परिमेय संख्या और दो अपरिमेय संख्या ज्ञात कीजिए?

26. Show that median of a triangle divides the triangle into two parts of equal area.
दिखाएँ कि एक त्रिभुज का माध्य त्रिभुज को समान क्षेत्र के दो भागों में विभाजित करता है।

(SECTION –C) खंड-स

27. Represent $\sqrt{5}$ on a number line(With steps of construction)
संख्या रेखा पर $\sqrt{5}$ का प्रतिनिधित्व करें (निर्माण के चरणों के साथ)

OR

Represent $\sqrt{5.6}$ geometrically(With steps of construction)

$\sqrt{5.6}$ ज्यामितीय रूप का प्रतिनिधित्व करें (निर्माण के चरणों के साथ)

28. AD is an altitude of an isosceles triangle ABC in which AB=AC.Show that i)AD bisect BC, ii) AD bisect $\angle A$

AD एक समद्विबाहु त्रिभुज ABC की ऊँचाई है जिसमें AB = AC. दिखाएं है कि

- i) AD द्विविभाजित BC, ii) AD द्विविभाजित $\angle A$

29. A triangle and a parallelogram have the same base and the same area.If the sides of the triangle are 26cm,28cm,and 30 cm and the parallelogram stands on the base 28 cm,find the height of the parallelogram?

एक त्रिभुज और एक समांतर चतुर्भुज का एक ही आधार और एक ही क्षेत्र होता है। यदि त्रिभुज की भुजाएँ 26 cm, 28 cm और 30 cm हैं और समांतर चतुर्भुज 28 cm के आधार पर खड़ा है, तो समांतर चतुर्भुज की ऊँचाई ज्ञात कीजिए?

OR

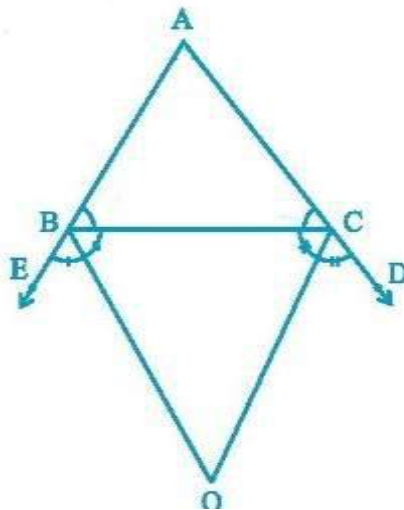
Jumbo circus team wants to start their show in Bangalore in 2018 December after their show in Kerala.But due to 2018 flood in Kerala their canvas were spoiled.They want to purchase the canvas from Chikpet,Bangalore.They want to make a conical tent of 10m high and radius of its base is 24m.Find the cost of the canvas required to make the tent,if the cost of $1m^2$ canvas Rs 70



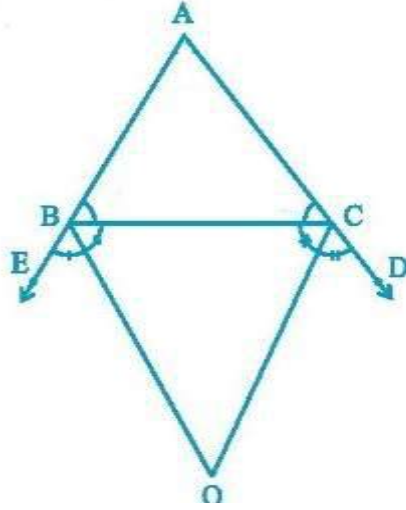
जंबो सर्कस टीम केरल में अपने शो के बाद 2018 दिसंबर में बेंगलोर में अपना शो शुरू करना चाहती है। लेकिन केरल में 2018 की बाढ़ के कारण उनके कैनवास खराब हो गए। वे चिकपेट, बेंगलोर से कैनवास खरीदना चाहते हैं। वे एक शंकु तम्बू बनाना चाहते हैं इसके आधार का 10 m ऊँचा और त्रिज्या 24 m है। के अनुसार, यदि 1 m² कैनवास की लागत रु 70/- है तो तम्बू बनाने के लिए आवश्यक कैनवास की लागत ज्ञात करें



30. If BO and CO are the external angle bisectors of $\angle B$ and $\angle C$ of $\triangle ABC$ and they meet at the point O, then show that $\angle BOC = 90 - \frac{1}{2}\angle A$



यदि BO और CO ΔABC के of $\angle B$ और $\angle C$ के बाहरी कोण द्विभाजक हैं और वे बिंदु O पर मिलते हैं, $\angle BOC = 90 - \frac{1}{2}\angle A$ तो दिखाएं



31. The dimensions of a cinema hall are 100m, 50m and 18m. How many persons can sit in the hall, if each person requires $150m^3$ of air ?

, d fl uæk gky dh yEckb] pkMkbz vkj mpkbz 100 ehVj] 50 ehVj vkj 18 ehVj gA ml fl uæk gky ea fdrus 0; fDr cB l dks ; fn i fr 0; fDr dks 10 ehVj³ भक्) ok; q pkfg, ?

OR

The diameter of a sphere is decreased by 25% By what percent its curved surface area Decrease ?

fdl h xkys ds 0; kl dks 25% de djus ij ml dk Surface Area fdruk i fr"kr de gkxk ?

32. Construct a triangle PQR such that $\angle Q=45^\circ$, $\angle R=60^\circ$ and $PQ+QR+RP=20$ cm (with steps of construction)

एक त्रिकोण PQR का निर्माण करें जैसे कि $\angle Q=45^\circ$, $\angle R=60^\circ$ and $PQ + QR + RP = 20$ cm

(निर्माण के चरणों के साथ)

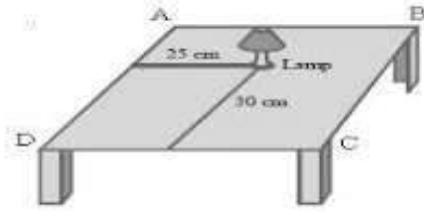
OR

Mr Roshan has a plot in the shape of a quadrilateral near Sitapur,Uthar pradesh .District panchayath of Sitapur decided to take over some portion of his plot from one of the corners to construct a health center.Mr Roshan agrees to the above proposal with the condition that he should be given equal amount of land in lieu of his land adjoining his plot so as to form a triangular plot.Explain how this proposal will be implemented?

श्री रोशन के पास सीतापुर, उत्तराप्रदेश के पास एक चतुर्भुज के आकार का एक भूखंड है। सीतापुर जिला पंचायत ने एक स्वास्थ्य केंद्र के निर्माण के लिए एक कोने से अपने भूखंड के कुछ हिस्से को लेने का फैसला किया। श्री रोशन इस प्रस्ताव के साथ उपरोक्त प्रस्ताव पर सहमत हैं उसके भूखंड के बदले में उसकी भूमि के बराबर भूमि दी जानी चाहिए ताकि एक त्रिकोणीय भूखंड बनाया जा सके। यह प्रस्ताव कैसे लागू किया जाएगा?

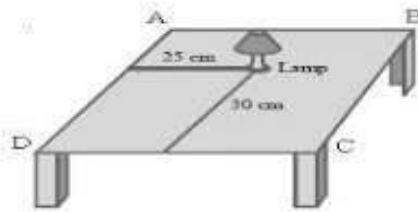
33. The following figure shows a study table with a lamp. Look at the figure carefully and

answer the following questions



- i) Considering D as an origin, which of the following describes the correct position of the lamp?
 (a) (60,50) b) (25,30) c) (0,25) d)(0,30)
- ii) Find the distance of the lamp from Corner D?
- iii) Assuming that position of the lamp is exactly at the centre of the table; find dimensions of the table.

निम्नलिखित आकृति एक दीपक के साथ एक अध्ययन तालिका दिखाती है। आकृति को ध्यान से देखें और निम्नलिखित प्रश्नों के उत्तर दें

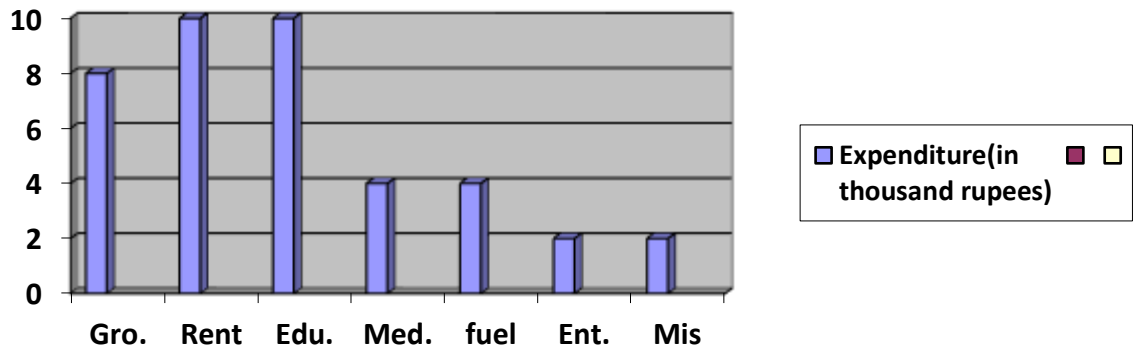


- i) D को मूल मानते हुए, निम्नलिखित में से कौन सा दीपक की सही स्थिति का वर्णन करता है?
 a) (60,50) b) (25,30) c) (0,25) d)(0,30)
- ii) कॉर्नर D से दीपक की दूरी ज्ञात कीजिये?
- iii) मान लें कि दीपक की स्थिति तालिका के केंद्र में है; तालिका के आयाम खोजें।

34. Ram has 5 members in his family. He has monthly income of Rs.40000 .He wants to use it in such a way so as to fulfill the given requirement.Following are the different heads of expenditure.

SL.NO.	HEADS	EXPENDITURE (in Thousand)
1	Fuel	4
2	Entertainment	2

3	Grocery	8
4	Rent	10
5	Medicine	4
6	Education	10
7	Others	2



i) Under which head the maximum amount is spent?

(a) Rent (b) Education (c) Grocery (d) Both a and b

ii) What percentage of monthly income is used under the head grocery ?

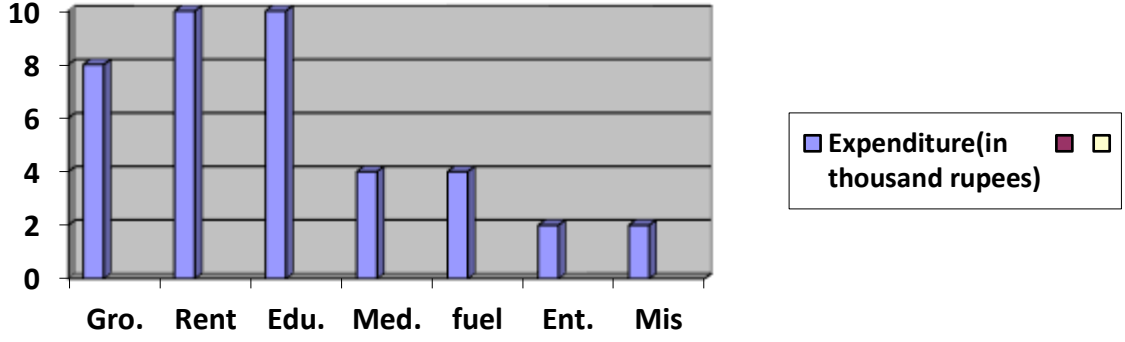
(a) 20% (b) 25 % (c) 75% (d) 80%

iii) What is the ratio of expenditure under medicine and grocery ?

(a) 2 : 1 (b) 1:2 (c) 4:8 (d) 1:4

राम के परिवार में 5 सदस्य हैं। उसकी मासिक आय रु। 4,0000 है। वह इसे इस तरह से उपयोग करना चाहता है ताकि दी गई आवश्यकता को पूरा कर सके। खर्च के विभिन्न हेड हैं

SL.NO.	HEADS	EXPENDITURE (in Thousand)
1	Fuel	4
2	Entertainment	2
3	Grocery	8
4	Rent	10
5	Medicine	4
6	Education	10
7	Others	2



किस हेड के तहत अधिकतम राशि खर्च की जाती है?

(ए) किराया (बी) शिक्षा (सी) किराना (डी) ए और बी दोनों

हेड किराने के तहत मासिक आय का कितना प्रतिशत उपयोग किया जाता है?

(b) 20% (b) 25 % (c) 75% (d) 80%

दवा और किराने के तहत खर्च का अनुपात क्या है?

(a) 2 :1 (b) 1:2 (c) 4:8 (d) 1:4

SECTION D) खंड-द

35. Factorise $x^3 + 13x^2 + 32x + 20$

गुणनखंड $x^3 + 13x^2 + 32x + 20$

OR

Divide the polynomial $3x^4 - 4x^3 - 3x - 1$ by $x - 1$ and verify the following

Dividend = Divisor x Quotient + Remainder

$x - 1$ द्वारा बहुपद $3x^4 - 4x^3 - 3x - 1$ को विभाजित करें और निम्नलिखित को सत्यापित करें

लाभांश = भाजक x भागफल + शेष

36. At a Ramzan Mela, a stall keeper in one of the food stalls has a large cylindrical vessel of base radius 15 cm filled up to a height of 32 cm with orange juice. The juice is filled in small cylindrical glasses of radius 3 cm up to a height of 8 cm, and sold for Rs.3 each.



- i) How many small glasses can be filled by using complete juice in the large cylindrical vessel?
 (a) 25 (B) 50 (C) 100 (D) 200
- ii) How much money does the stall keeper receive by selling the juice completely?
 (A) Rs.100 (B) Rs.300 (C) Rs.200 (D) Rs.250
- iii) If the complete juice of a large cylindrical vessel is filled in 50 small cylindrical equal volume glasses then what will be the price of each glass?

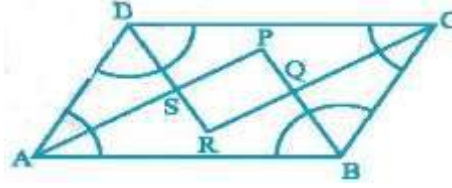
मजान के मेले में, खाने के स्टालों में से एक में एक स्टाल कीपर में नारंगी के रस के साथ 32 सेमी की ऊंचाई तक आधार त्रिज्या का एक बड़ा बेलनाकार बर्तन होता है। रस त्रिज्या के छोटे बेलनाकार गिलास में 3 सेमी 8 सेमी की ऊंचाई तक भरा जाता है, और प्रत्येक के लिए 3 रुपये में बेचा जाता है।



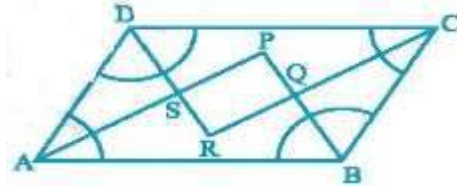
- i) बड़े बेलनाकार बर्तन में पूर्ण रस का उपयोग करके कितने छोटे गिलास भरे जा सकते हैं?
 (A) 25 (B) 50 (C) 100 (D) 200
- ii) रस को पूरी तरह से बेचकर स्टाल कीपर को कितने पैसे मिलते हैं?
 (A) Rs.100 (B) Rs.300 (C) Rs.200 (D) Rs.250

iii) यदि एक बड़े बेलनाकार बर्तन का पूरा रस 50 छोटे बेलनाकार समान मात्रा के गिलास में भरा जाता है, तो प्रत्येक गिलास की कीमत क्या होगी?

37. Show that bisectors of angles of a parallelogram form a rectangle



दिखाएँ कि समांतर चतुर्भुज के कोणों के द्विभाजक एक आयत बनाते हैं



OR

Mrs Gayatri was having a field in the form of a parallelogram ABCD. She took any point P on CD and joined it to points A & B. In how many parts field is divided? What are the shapes of these parts? She wants to sow Paddy and wheat in equal portions of the field separately. How should she do it?

श्रीमती गायत्री एक समांतर चतुर्भुज ABCD के रूप में एक क्षेत्र थीं। उन्होंने CD पर कोई बिंदु P लिया और इसे A और B के बिंदुओं में मिला दिया। कितने भागों में विभाजित है? इन भागों के आकार क्या हैं? वह खेत के समान भागों में धान और गेहूं की बुवाई करना चाहती है। उसे इसको कैसे करना चाहिए?

38.



Amit visited Delhi. He was at the Railway Station and he wanted to see India Gate which is 20km from Railway Station. He also wanted to see Lotus Temple which is also 20km from

Railway Station in other route. The auto driver who is willing to go to India Gate by giving a condition , "For the first km he charges 10 rupees and the subsequent kilometres he charges 5 rupees per km. Another auto driver who is agreed to go to lotus temple by a giving a condition , "For the first kilometer 15 rupees each and the subsequent kilometres he charges 4 rupees per kilometre. Amit is having less money in his pocket but he wants to see any one of them. Which one he prefers to go by calculating the total fare in each case? Form linear equation into two cases taking x as total distance covered and y as total cost? Also represent both the lines graphically?



अमित ने दिल्ली का दौरा किया। वह रेलवे स्टेशन पर था और वह इंडिया गेट देखना चाहता था जो रेलवे स्टेशन से 20 किमी दूर है। वह लोटस टेम्पल भी देखना चाहते थे जो रेलवे स्टेशन से 20 किमी दूर है। ऑटो चालक जो एक शर्त देकर इंडिया गेट जाने के लिए तैयार है, "पहले किमी के लिए वह 10 रुपये और उसके बाद के किलोमीटर के लिए 5 रुपये प्रति किमी शुल्क लेता है। एक अन्य ऑटो चालक जो एक शर्त देते हुए कमल मंदिर जाने के लिए तैयार हो जाता है, "पहले किलोमीटर के लिए 15 रुपये प्रत्येक और उसके बाद के किलोमीटर के लिए वह प्रति किलोमीटर 4 रुपये लेता है। अमित की जेब में कम पैसे हैं, लेकिन वह उनमें से एक को जरूर देखना चाहते हैं। प्रत्येक मामले में कुल किराया की गणना करके वह कौन सा जाना पसंद करता है? प्रत्येक मामले में कुल किराया की गणना करके वह कौन सा जाना पसंद करता है? रेखिक समीकरण बनाए जिनमें दो मामलों में जिनमें x कुल दूरी को दर्शाता है और y कुल लागत को दर्शाता है। रेखांकन भी दोनों रेखाओं का प्रतिनिधित्व करते हैं?

39. ABCD is a quadrilateral in which P, Q, R, S are mid points of the sides AB, BC, CD, DA, and AC is a diagonal . Show that

i) $SR \parallel AC$ and $SR = \frac{1}{2} AC$

ii) $SR = PQ$

iii) PQRS is a parallelogram

ABCD एक चतुर्भुज है जिसमें P, Q, R, S पक्षों के मध्य बिंदु हैं AB, BC, CD, DA और AC एक विकर्ण है। वो दिखाओ

i) $SR \parallel AC$ and $SR = \frac{1}{2} AC$

ii) $SR = PQ$

iii) PQRS एक समांतर चतुर्भुज है

40. If 26 alphabets are taken in such a way that $A=1, B=2, C=3, \dots, Z=26$, find the mean and median of the numbers corresponding to vowels. Also write which alphabet corresponding to median

यदि 26 अक्षर इस तरह से लिए गए हैं कि $A = 1, B = 2, C = 3, \dots, Z = 26$, स्वरों के अनुरूप संख्याओं का माध्य और माध्यिका करें। इसके अलावा मध्यिका के अनुरूप कौन सी वर्णमाला लिखें।

OR

Draw the histogram and frequency polygon for the following data

MARKS	NUMBER OF STUDENTS
0-10	3
10-20	9
20-30	17
30-40	12
40-50	9

निम्नलिखित डेटा के लिए हिस्टोग्राम और फ्रीक्वेंसी बहुभुज बनाएं

MARKS	NUMBER OF STUDENTS
0-10	3
10-20	9
20-30	17
30-40	12
40-50	9

Navodaya Vidyalaya Samiti
Annual Examination: 2019-20

Class-IX

Sub: Social Science

Time: 3.00

Hrs M.M.80

General Instructions-

There are 36 questions in all. All are compulsory.

Question numbers from 1 to 17 are of objective type carrying 1 mark each.

Question numbers from 18 to 25 are short answer type questions carrying 3 marks each. Answer to these questions should not exceed 60 words.

Question number 26 to 31 is very long answer type questions carrying 5 marks each. Answer to these questions should not exceed 120 words.

Question number 32 & 33 is a Map question carrying 6 marks, 3 marks each from History and Geography section.

Attach the filled up map inside your Answer book.

1. The Tropic of Cancer does not pass through which state?

(a) Rajasthan (b) Chhattisgarh (c) Orissa (d) Tripura 1

2. The wind blowing in the northern plains in summers is known as:

(a) Kaal Baisakhi (b) Loo (c) Trade winds (d) none of the above 1

3. The Sundari tree is associated with which type of forest?

(a) Mangroves (b) Tropical rain Forest (c) Tropical deciduous Forest

(d) None of the above 1

4. Which is the highest peak of eastern Ghat?

(a) Annaimuddi (b) Mahendragiri (c) Kanchenjunga (d) Khasi 1

5. How many seats are there in Rajasthan Assembly?

(a) 175 (b) 200 (c) 210 (d) 250 1

6. Aayende was the founder of which party of chili?

(a) Socialist Party (b) Communist Party (c) Congress Party (d) None of these 1

7. Which of the following is part of political executive?

(a) Collector Secretary (b) Ministry of Home Affairs (c) Home Minister

(d) Director General of police 1

8. Which of the following political institutions can amend the existing law of the country?

(a) Supreme Court (b) President (c) Prime Minister (d) Parliament 1

9. Which one is not a Fundamental Right?

(a) Right to Equality (b) Right to Freedom (c) Right to Freedom of Religion

(d) Right to use influence in Personal work 1

10. Who appoints the Chief Election Commissioner (CEC) in India?

(a) The Chief Justice (b) The President (c) the Prime Minister (d) Lok Sabha Speaker 1

11. MSP stands for _____ 1

12. The co-operative that provides milk and vegetables at controlled rate decided by the government of Delhi _____ 1

13. In this state of India, 94% ration shops are run by the co-operatives _____ 1

14. Activity performed for getting pay or profit is called 1

15. Two examples of working capital are _____ 1

16. The most common way of increasing production on a given piece of land _____ 1

17. Match the column 4x1=4

Events	Time period
(A) French revolution	(A) 1864
(B) Great economic depression	(B) 1933
(C) Indian forest service	(C) 1789
(D) Enabling act	(D) 1929-1932

18. Define the following- 3x1=3

i) Minimum support price

ii) Buffer stock

iii) Issue price

19. Identify the social and economic groups which are most vulnerable to poverty in India. 3

20. Briefly explain three differences between market and non market activities. 3

21. What are jet streams and how do they affect the climate of India? 3

22. What is the basis of assuming the election is democratic? 3

23. Write about equality of chili and polish governments. 3

24. Is political rivalry a good thing? Please discuss. 3

25. Explain the role of women in the French Revolution. 3

OR

Differentiate between the ideas of liberals and radicals?

26. Describe the rebellion of Dhurwas of kanger against the British. 5

27. Who was Adolf Hitler? Describe his rise to power in Germany. 5

OR

What were the main changes brought about by the Bolsheviks immediately after the October revolution?

28. Classify Indian vegetation and describe any one 5

29. Discuss the significant difference between the Himalayan and the peninsular rivers. 5

30. Explain how the international organization sets the limits of the functioning of governments. 5

31. Describe current government strategy of poverty alleviation? 5

32(A). In the given map of India shows the following:-

(a) Sariska

(b) State with highest population density

(c) The Arawali Mountain 3X1=3

(B). On the outline map of world, locate and label the following- 3x1=3

(a) Central power of first world war- Germany

(b) Allied powers of first world war- France, Russia

NAVODAYA VIDYALAYA SAMITI
ANNUAL EXAMINATION 2020

SUBJECT –SCIENCE

Maximum Marks: 80

Time Allowed: 3 hours

General instructions:

- i. The question paper comprises of three sections – A(from Q 1 to Q 12),B (from 13 to 23) and section C (from 24 to 30). Attempt all the sections.
- ii. All questions are compulsory. Internal choice is given in each section.
- iii. 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.
- iv. All questions in section B are three-mark, short-answer type questions. These are to be answered in about 50-60 words each.
- v. All questions in section C are five –mark, long –answer type questions. These are to be answered in about 80-90 words each.
- vi. This question paper consists of a total of 30 questions.

SECTION A

Q1. Growth of lichens on barren rocks is followed by the growth of:

- (a) moss
- (b) fern
- (c) gymnosperm
- (d) algae

Q2. Italian species of honeybee is-

- (a) Apis dorsata
- (b) Apis florea
- (c) Apis cerana indica
- (d) Apis melifera

Q3. The inertia of an object tends to cause the object

- (a) to increase its speed
- (b) to decrease its speed
- (c) to resist any change in its state of motion or rest
- (d) to deaccelerate due to friction.

OR

In the birthday party of Aryan, his parent gave slinky to each friend as a return gift. The next day during the school, their teacher explained them about the production of magnetic field using current carrying coil and also said that they can make permanent magnet using such coils by passing high current through them.



SLINKY

Teacher also explained the use of solenoid which is a long coil wrapped in many turns similar to slinky. When current passes through it, it creates a nearly uniform magnetic field inside.

Question: The magnetic field strength of a solenoid can be increased by inserting which of the following materials as the core?

- (a) Copper
- (b) Silver

- (c) Iron
- (d) Aluminum

Q 4. The number of waves in a unit length is known as :

- A. frequency
- B. Wave number
- C. wavelength
- D. wave velocity.

Q5. Rahul's teacher given him three different type of mirror and told her that something about each mirror given as follows. Help Rahul to identify mirror.

Mirror A- It always forms virtual image.

Mirror B- It for image of same size and has infinite focal length.

Mirror C- It can form both virtual and real image

Question: Mirror A has _____ focal length.

- A- Only Positive
- B- Only Negative
- C- May have Positive or Negative
- D- Can't comment on focal length.

OR

A camel walks easily on sand but a man cannot. Give reason.

Q6. An element has electronic configuration 2, 7 . It will have valency

- (a) 1
- (b) 2
- (c) 3
- (d) 4

Q 7. Gas can be liquefied at specific conditions of temperature and pressure . Choose the correct set of conditions.

- (a) High temperature and high pressure
- (b) Low temperature and low Pressure
- (c) Low temperature and high pressure
- (d) High temperature and high pressure

Q8. An isotope of Cobalt is used

- (a) as fuel in nuclear reactor.
- (b) in the treatment of cancer
- (c)) in the treatment of goitre
- (d) in radio carbon dating to determine age of old sample of living organisms

Choose the correct answer out of the following choices

- (a) Both assertion and reason are true and reason is the correct explanation of assertion
- (b) Both assertion and reason are true and reason is not the correct explanation of assertion
- (c) Assertion is true but reasons is false.
- (d) Assertion is false but reason is true.

Q9. Assertion : We feel cool when touch a piece of ice

Reason : Our body temperature is higher than the temperature of ice .

Q10. Assertion : Displacement of a body may be zero when distance travelled by it is not zero.

Reason :The displacement is the shortest distance between initial and final position .

Q11 Making antiviral drugs is more difficult than making antibacterial medicines because

- a) Viruses make use of host machinery.
- b) Viruses have protein coat.
- c) Viruses have very few biochemical mechanisms of their own.
- d) None of the above.

Q12. How many atoms are present in 52 u of He ? (Atomic mass of He=4 u)

- (a) 13 atoms
- (b) $13 \times 6.022 \times 10^{23}$ atoms
- (c) $52 \times 6.022 \times 10^{23}$ atoms

(d) $4 \times 6.022 \times 10^{23}$ atoms

Q13. At 20°C , the minimum distance of a person from a sound reflecting surface to hear an echo is :

- (a) 12.2 m
- (b) 17.2 m
- (c) 15.2 m
- (d) 34.4 m

OR

What does SONAR stand for?

SECTION B

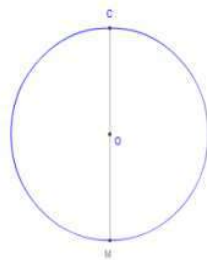
Q14 . Write any 3 disadvantages of principle of treatment of infectious diseases.

Q15. Write the various methods of weed control.

Q16. An object of mass 40 kg is raised to a height of 5m above the ground. What is its potential energy? If the object is allowed to fall, find its kinetic energy when it is half –way down.

Q17. .Mohit's teacher told him about the concept of distance and displacement. She told him that distance is quantity that refers to "how much ground an object has covered" during its motion whereas displacement is a quantity that refers to "how far out of place an object is" which means it is objects' overall change in position.

(1): Given a circle of radius 'r'. Let Mohit start walking along the circle from point 'C' and reaches to point diametrically opposite to it which is 'M'. Choose correct statement.



- A. Distance travelled by Mohit is $2r$
- B. Total displacement of Mohit from his initial position is 0.
- C. Distance travelled by Mohit is $(\pi \times r)$.
- D. Total displacement of Mohit from his initial position is $(\pi \times r)$.

(2).What is the distance travelled if Mohit completes one circle.

(3)The displacement made by Mohit when he reaches to a point diametrically opposite to its starting point is : choose the correct one.

- A. π
- B. r
- C. $2r$
- D. $(2\pi r)$

Q18. In the gold foil experiment, what observations led Rutherford to conclude that

- (a) Most of the space inside the atom is hollow.
- (b) The central portion of the atom is positively charged
- (c) Volume occupied by the nucleus is very small as compare to the total volume of the atom

OR

(i) What are the postulates of Bohr's model of an atom?

(ii) If chlorine atom is available in two isotopes of Chlorine $^{35}_{17}\text{Cl}$ (75%) and $^{37}_{17}\text{Cl}$ (25%) , Calculate the average mass of chlorine atom.

Q19.(i) Define Latent heat of fusion .

(ii) Write the difference between compounds and Mixture giving 4 points.

Q20. Which phylum is having the largest number of members? Write their characteristic features. Give one example.

Q21. Differentiate between the voluntary and involuntary muscles. Give one example of each.

OR

Differentiate between simple and complex permanent tissues in plants.

Q22. Weightlessness is the complete or near-complete absence of the sensation of weight. This is also termed zero-g, although the more correct term is "zero g-force". It occurs in the absence of any contact forces upon objects including the human body.

Weight is a measurement of the force on an object at rest in a relatively strong gravitational field (such as on the surface of the Earth). These weight-sensations originate from contact with supporting floors, seats, beds, scales, and the like. A sensation of weight is also produced, even when the gravitational field is zero, when contact forces act upon and overcome a body's inertia by mechanical, non-gravitational forces- such as in a centrifuge, a rotating space station, or within an accelerating vehicle.



1. Which of the following sentence is true?

Mass of any body is more on moon as compared to earth

Weight of any body on moon is always equal to weight of same body on earth

Weight of any body is more on earth as compared to on moon

Weight doesn't depends on gravity it is always same at any planet.

2. A man weighs 75kg on the surface of the earth. His weight in a geostationary satellite is:

infinity

150kg

zero

75/2 kg

3. The weight of a body of mass 60kg at the centre of the earth is

A. 60N

B. 600 N

C. 0 N

D. Infinity.

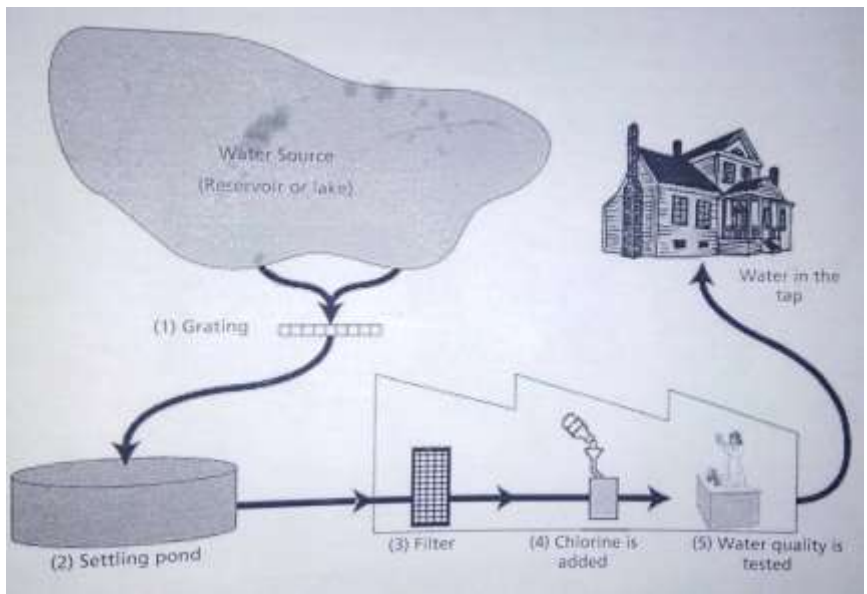
Q23. What is kinetic energy? The velocity of a body moving in a straight line is increased by applying a constant force F , for some distance in the direction of the motion. Prove that the increase in the kinetic energy of the body is equal to the work done by the force on the body.

OR

Establish the relationship between the speed of sound, its wavelength and frequency. If the velocity of sound in air is 340m/sec, calculate: (a) wavelength when frequency is 256 Hz.

(a) frequency when wavelength is 0.85m .

Q 24 .



The figure shows how water supplied to houses in cities is made fit for drinking

(i) The cleaning of water often happens in several steps, involving different techniques. The cleaning process shown in figure involves four steps (1-4). In the second step, the water is collected in a settling pond. In what way does this step make the water cleaner?

- a) The bacteria in the water die
- b) Oxygen is added to water
- c) Gravel and sand sink to the bottom
- d) Toxic substance are broken down

(ii). in the fourth step of the cleaning process, chlorine is added to water.

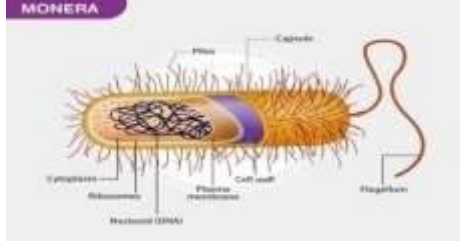
Why chlorine is added to water?

(iii). Can drinking polluted water cause the following health problems? write “Yes” or “No” in each case.

Can drinking polluted water cause the following health problems?	Yes or No
Diabetes	Yes/No
Diarrhoea	Yes/No
HIV/AIDS	Yes/No

SECTION C

Q25.



- Q. Answer the following questions
- i) Why does the DNA of moneran is not enclosed within the nucleus?
 - ii) Why are they regarded as primitive organisms?
 - iii) Where are they found commonly?
 - iv) Write the unique characteristics of moneran

Q26. When will you say a body is in non-uniform acceleration A ball is gently dropped from a height of 20m. If its velocity increases uniformly at the rate of 10m/sec, with what velocity will it strike the ground? After what time it strike the ground?

Q27. An elephant weighing 40,000N stands on one foot of area 1000cm² whereas a girl weighing 400N is standing on one 'stiletto' heel of area 1cm²

(a) Which of the two, elephant or girl, exerts a larger force on the ground and by how much?

(b) What pressure is exerted on the ground by the elephant standing on one foot?

(c) What pressure is exerted on the ground by the girl standing on one heel?

(d) Which of the two, elephant or girl, exerts a larger pressure on the ground?

(e) What is the ratio of pressure exerted by the girl to the pressure exerted by the elephant when both are standing on one foot?

Q.28. (i) Calculate the following:

(a) What is mass of 2 moles of aluminum atoms (Atomic mass of Aluminium=27)?

(b) Convert 20 g of water into mole

(c) What is mass of 0.2 mole of oxygen atoms?

(ii) Write the chemical formula of the following .

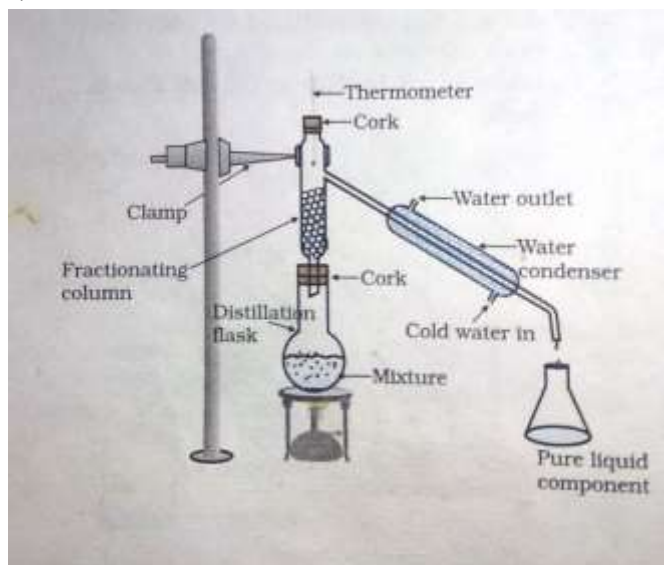
Magnesium Sulphate

Calcium hydroxide

Aluminum chloride

Calcium nitrate

Q29.



The figure shows how the liquid components can be separated using a fractional distillation.

(i) What type of liquids can be separated by fractional distillation?

(ii). Which part of fractional distillation apparatus make it efficient and possess an advantage over simple distillation process and write its function also.

iii) Fractional distillation is used to separate liquids for which the difference in boiling point is

More than 25 K

More than 40 K

Less than 25 K

Less than 40 K

Q30. What are biogeochemical cycles ? Explain the process involved in the cycling of nitrogen in the environment .

Or

a. What is green house effect?

b. Draw a labeled diagram of carbon cycle.