

**English**

- i) You are Radha / Raghu, C-15, Mayur Vihar, Delhi. Write a letter in 100-120 words to the editor of the newspaper on the consequences of climatic changes due to various man-made reasons. Take ideas from the notes given below:  
(Deforestation/ pollution /Unlimited needs and limited means / Encroachments /Unplanned urbanisation and industrialisation) [5]
- ii) A sedentary life gives birth to all kinds of diseases. Write an article on 'Keeping Physically and Mentally Fit and Strong' in 100-120 words for publication in your school magazine [5]
- iii) Read below the beginning of a story. Complete it by using your imagination in about 100-120 words.  
(A woodcutter was chopping down trees on the bank of river. His hands were so much wet with his sweat that he lost his grip.....) [5]
- iv) Write the summary of the poem 'The Frog and The Nightingale' also write about what do you learn from the given poem. [5]
- v) How do the two boys in 'the Two Gentlemen Of Verona' promise hope and humanity for the society? Write Pen Portraits of the two boys in your own words? [5]

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**Hindi**

- i) 'राजभाषा हिन्दी' पर निम्नलिखित संकेत बिन्दुओं के आधार पर 200-250 शब्दों में निबंध लिखें। [15]  
- राजभाषा का महत्व  
- भाषा की आवश्यकता  
- संविधान में हिन्दी की स्थिति  
- हिन्दी के प्रति भारतीय नागरिक के कर्तव्य
- ii) अपने मुहल्ले में वर्षा के कारण उत्पन्न हुई जल भराव की समस्या की ओर ध्यान आकृष्ट कराने के लिए नगरपालिका अधिकारी को पत्र लिखिए। [10]

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**Maths**

- i) If one of the zeroes of the quadratic polynomial  $(k-1)x^2+kx+1$  is  $-3$ , find the value of  $k$ . [1]
- ii) For what value of  $k$ , do the equations  $3x-y+8=0$  and  $6x-ky=-16$  represent coincident lines? [1]
- iii) If one of the zeroes of the cubic polynomial  $x^3+ax^2+bx+c$  is  $-1$ , then find the product of other two zeroes. [2]
- iv) If  $x = a$  and  $y = b$  is the solution of the equations  $x-y = 2$  and  $x + y = 4$ , find the value of  $a$  and  $b$ . [2]

- v) For the pair of equations  $\lambda x + 3y + 7 = 0$  and  $2x + 6y - 14 = 0$ , to have infinitely many solutions, the value  $\lambda$  should be 1. Is the statement true? Give reasons [2]
- vi) Find the zeroes of the given polynomial by factorization method and verify the relations between the zeroes and the coefficients of the polynomials,  $4x^2 - 3x - 1$ . [3]
- vii) Find  $k$ , so that  $x^2 + 2x + k$  is a factor of  $2x^4 + x^3 - 14x^2 + 5x + 6$ . Also find all the zeroes of the two polynomials. [3]
- viii) Find the solution of the pair of equations  $x/10 + y/5 - 1 = 0$  and  $x/8 + y/6 = 15$  and find  $\lambda$  if  $y = \lambda x + 5$ . [3]
- ix) If the zeroes of the cubic polynomials  $x^3 - 6x^2 + 3x + 10$  are of the form  $a$ ,  $a+b$  and  $a+2b$  for some real numbers  $a$  and  $b$ , find the values of  $a$  and  $b$  as well as the zeroes of the given polynomial. [4]
- x) Vijay had some bananas and he divided them into two lots A and B. He sold the first lot @ of Rs.2 for three bananas and the second lot @ of Rs.1 per banana and got a total of Rs.400. If he had sold the first lot @ of Rs.1 per banana and the second lot @ of Rs.4 for 5 bananas, his total collection would have been Rs.460. Find the total number of bananas he had. [4]

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**Science**  
**(Physics)**

- i) Define potential difference of 1 volt. [1]
- ii) What do you understand by Resistance of a conductor? Write its SI unit. [2]
- iii) A conducting wire having length  $l$ , Radius  $r$ , Resistance  $R$ , and Resistivity  $\rho$ . If it is divided into 4 equal parts. Find:  
 a) The Resistance of each part.  
 b) Resistivity of each part  
 c) Area of cross section of each part. [3]
- iv) State Ohms Law. The voltage across the conductor is increased to 4 times keeping the temperature constant. What will be the change in - a) Current b) Resistance [3]

**Chemistry**

- i) How do we come to know that chemical reaction takes place? [1]
- ii) Give reasons:  
 a) Aluminum is a reactive metal but is still used for packing food articles.  
 b) Red litmus paper turns blue when touched with aqueous solution of magnesium oxide. [2]
- iii) A solution of substance (X) is used for white washing [2]  
 a) Name the substance X and write its formula.  
 b) Write the reaction of the substance X (named in above question) with water.
- iv) Why respiration is considered an exothermic reaction? Explain. [1]
- v) What type of chemical reactions are represented by the following equations: [2]  
 a)  $A+B \rightarrow C$                       b)  $A+BC \rightarrow AC+B$   
 c)  $A \rightarrow B+C$                       d)  $AB+CD \rightarrow AD+B$

### Biology

- i) a) What is the difference between autotrophic and heterotrophic nutrition? [1]  
b) What is the role of HCl in our stomach? [1]  
ii) State the difference between artery and vein. [2]  
iii) What are the different ways in which glucose is oxidized in different organisms? Give one example of each. [2]  
iv) Differentiate between xylem and phloem. [2]

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### Social Science

#### (History)

- i) Through which Acts the children of the city of London were kept out of industrial work? [1]  
ii) What were the 'deserving poor' offered by the authorities? [1]  
iii) Why did the city of London attract migrant population like a powerful magnet? [3]

OR

What was the impact of city life on women?

- iv) Mention the major characteristics of an ancient town. [3]

OR

Why is Bombay known as the city of dreams? Give reasons.

#### Civics

- i) What was the reason for tension between Dutch speaking & French speaking people in Belgium? [1]  
ii) What gave birth to the feeling of alienation among the Sri Lankan Tamils? [1]  
iii) How is power shared among governments at different levels? [3]

OR

Why is power sharing desirable?

OR

Explain the elements of Belgian model.

#### Geography

- i) What is land degradation? [1]  
ii) Give three examples to prove that resources are unevenly distributed in India. [3]  
iii) Write three features of black soil. [3]

#### Economics

- i) Mention any one thing that people like to seek besides income. [1]  
ii) Which state has the highest per capita income and why? [1]  
iii) What is meant by economic development? What are the two basis of measuring economic development of a country? [3]

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### Sanskrit

- i) अन्वय कुरुत । [4]  
(चक्षुः, सत्यसमम्, दुःखम्, त्यागसमम्)  
विद्यासमम् \_\_\_\_\_ न अस्ति, \_\_\_\_\_ तपः न अस्ति ।  
रागसमम् \_\_\_\_\_ न अस्ति, \_\_\_\_\_ सुखम् न अस्ति ।

- ii) प्रश्न निर्माणं कुरुत । [5]  
 (क) भारत्याः कोशः अपूर्वः ।  
 (ख) रागस्य विलोमः त्यागः ।  
 (ग) पठनस्य षट् गुणाः ।  
 (घ) सत्येन समं सुखं नास्ति ।  
 (ङ) मधुरभाषिणी वाणी पुरुषं प्रहलादयति ।
- iii) एकपदेन उत्तरत । [4]  
 (क) 'अम्भोजः' इति पदस्य पर्यायः कः?  
 (ख) सरस्वत्याः कोशः कथं वर्धते?  
 (ग) कीदृशी वाणी पुरुषं प्रसन्नं करोति?  
 (घ) ऊह शब्दस्य कः विलोमः?
- iv) सन्धि विच्छेदं कुरुत । [3]  
 कोऽपि, क्षयमायाति, नास्ति
- v) शुद्धं उत्तरं चित्वा रिक्त स्थानानि पूरयत् । [4]  
 (सर्वत्र, इतस्ततः, वृथा, अद्या)  
 (क) वृक्षाणम् \_\_\_\_\_ वानराः कूदन्ति ।  
 (ख) ईश्वरः \_\_\_\_\_ व्यापकः अस्ति ।  
 (ग) विद्यालये \_\_\_\_\_ वनमहोत्सवः मान्यते ।  
 (घ) समुद्रेषु वृष्टिः \_\_\_\_\_ ।
- vi) अपूर्वः कोऽपि कोशीऽयं विद्यते तव भारती । [5]  
 व्ययतो वृद्धिमायाति क्षयमायाति सञ्चयात् ।।  
 (क) एक पदेन उत्तरत :-  
 (अ) सरस्वत्याः कोशः कीदृशोऽस्ति?  
 (ब) सरस्वत्याः कोशः कथं वृद्धिं आयाति?  
 (ख) पूर्ण वाक्येन उत्तरत :-  
 सरस्वत्याः कोशः कथं क्षयम् आयाति?  
 (ग) शुद्धं उत्तरं प्रदत्तविकल्पेभ्यः चित्वा किम्?  
 (अ) 'आयाति' इति क्रियापदस्य वचनं किम्?  
 (1) एकवचनम् (2) बहुवचनम्  
 (ब) 'सञ्चयात्' इति पदस्य विलोम पदं किम्?  
 (1) वृद्धिम् (2) व्ययतः

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### Computer

Make a project on "Services on Internet" on A4 size sheets.

[25]