

MATHEMATICS**CLASS- X****Chapter- 2 (Polynomials), Chapter-8 (Trigonometry), Chapter-9 (Application of Trigonometry),
Chapter- 15 (Probability)**

- Q1. The angle of elevation of the top Q of a vertical tower PQ from a point X on the ground is 60° . At a point Y, 40 m vertically X, the angle of elevation is 45° . Find the height of the tower PQ and the distance XQ.
- Q2. From a window (h meters high above the ground) of a house in a street, the angles of elevation and depression of the top and the foot of another house on the opposite side of the street are A and B respectively. Show that the height of the opposite house is $h(1 + \tan A \cot B)$.
- Q3. The angle of elevation of the top of a tower as observed from a point on the ground is A and on moving 'a' meters towards the tower, the angle of elevation is B. Prove that the height of the tower is $\frac{a \tan A \tan B}{\tan B - \tan A}$.
- Q4. The length of the shadow of a tower standing on level ground is found to be 2x metres longer when the sun's altitude is 30° than when it was 45° . Prove that the height of tower is $x(\sqrt{3} + 1)$ metres
- Q5. The pilot of an aircraft flying horizontally at a speed of 1200 km/hr observes that the angle of depression of a point on the ground changes from 30° to 45° in 15 seconds. Find the height at which the aircraft is flying.
- Q 6. If $\cos \alpha = \sin \alpha$ and $9\alpha < 90^\circ$, then find the value of $\tan 5\alpha$.
- Q 7. Given that $\alpha + \beta = 90^\circ$, show that $\sqrt{\cos \alpha \operatorname{cosec} \beta - \cos \alpha \sin \beta} = \sin \alpha$.
- Q 8. If $\sin \theta + \cos \theta = 1$, find the value of $\cos \theta - \sin \theta$.
- Q 9. If ΔABC is right angled at C, then find the value of $\cos (A+B)$.
- Q 10. Find the value of the expression $[\operatorname{cosec} (75^\circ + \theta) - \sec (15^\circ - \theta) - \tan (55^\circ + \theta) + \cot (35^\circ - \theta)]$.
- Q 11. Given that the zeroes of the cubic polynomial $x^3 - 6x^2 + 3x + 10$ are of the form $a, a + b, a + 2b$ for some real numbers a and b , find the values of a and b as well as the zeroes of the given polynomial.
- Q 12. 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.
- Q 13. For which values of a and b , are the zeroes of $q(x) = x^3 + 2x^2 + a$ also the zeroes of the polynomial $p(x) = x^5 - x^4 - 4x^3 + 3x^2 + 3x + b$? Which zeroes of $p(x)$ are not the zeroes of $q(x)$?

GEOGRAPHY
CLASS- X
Chapter-1 (Resource)

Q.1 Define “resource”.

Q.2 Classify resources on the basis of development.

Q.3 Distinguish between renewable and non- renewable resources.

Q.4 “Nature has enough to satisfy human needs but not human greed.” Explain this statement in connection with resource development.

Q.5 Define “sustainable Development”. Why is it necessary?

Q.6 What is resource planning? What are its advantages?

Q.7 Distinguish between black soil and alluvial soil under the following points:

- Area of occurrence
- Nature and composition
- Crops grown

Q.8 What is soil erosion? State any four measures to reduce soil erosion in hilly areas?

Q.9 Explain with example any three human activities causing land degradation in different parts of India.

Q.10 Which soil is found in the western part of Rajasthan? write down any four characteristics of this soil?

ECONOMICS
CLASS- X
Chapter-1 (Development)

Q.1 Explain the following terms:

- | | |
|-----------------------------|--------------------------------------|
| a) Development of a country | b) Economic development of a country |
| c) Net Attendance Ratio | d) Human Development Index |
| e) Human Development Report | f) National Income |

Q.2 “What may be development for one may not be development for others.” Explain with examples.

Q.3 Explain any two indicators that are used to measure the development of a country.

Q.4 What should India do to become a developed country?

Q.5 What is the method to find out if adults are under nourished?

Q.6 Give your suggestive measures to solve the problems of exhaustion of natural resources.

Q.7 Is it correct to say that environmental degradation do not respect national and state boundaries? Illustrate with example.

Q.8 Explain the role of per capita income and economic welfare as an indicators of development.

Q.9 What is Human Development Index? Write about basic components of human development measurement.

Q.10 Explain the main achievement of the Government of India in the improvement of health status of the people after independence.

Q.11 Distinguish between Developed and Developing economies.

HISTORY & DEMOCRATIC POLITICS
CLASS- X
CHAPTER-1 (Rise of Nationalism in Europe)

- Q.1 "The first clear expression of nationalism came with the French Revolution in 1789." Examine the statement.
- Q.2 What were the various measures taken by French revolutionaries to create a sense of collective identity amongst French people?
- Q.3 'Napoleon destroyed democracy in France, but in the administrative field he had incorporated revolutionary principles.' Analyse the statement with arguments.
- Q.4 'The reactions of the local people to French rule were mixed in the areas conquered by him.' Enumerate the reasons for the same.
- Q.5 Explain the three features of landed aristocracy in Europe.
- Q.6 Name the social group that emerged in Central and western part of Europe in the end of 18th and 19th century. What were the reasons for the emergence? Among which class of people the ideas of national unity gained popularity?
- Q.7 What were the political, social and economic ideas supported by the liberals in the 19th century Europe?
- Q.8 How did economic liberalism lead to the rise of nationalism?
- Q.9 In which year was Treaty of Vienna signed and by whom? What were the clauses of this treaty?
- Q.10 Explain three beliefs of conservatism that emerged after 1815?
- Q.11 How had revolutionaries spread their ideas in many European states after 1815?
- Q.12 Explain what is meant by the 1848 revolution of the liberals. What were the political, social and economic ideas supported by the liberals?
- Q.13 Through a focus on two countries, explain how nations developed over the 19th century?
- Q.14 What is Romanticism? How did Romanticism seek to develop a particular form of nationalist sentiment during the 18th century?
- Q.15 Explain the contribution of culture in the growth of nationalism in Europe with the help of three examples.
- Q.16 Explain three ways in which nationalist feelings were kept alive in Poland in 18th and 19th centuries.
- Q.17 "The 1830s were years of great economic hardship in Europe". Justify the statement.
- Q.18 Describe the first phase in the unification of German or write a short note on Frankfurt Parliament.
- Q.19 Examine the role of women in nationalist struggles.
- Q.20 Briefly trace the process of German unification.
- Q.21 What were the obstacles in the unification of Italy?
- Q.22 Briefly trace the unification of Italy.

Q.23 How was the formation of the nation-state the result of a long drawn out process in Britain?

Q.24 Who were Marianne and Germania ?What was the importance of the way in which they were portrayed?

Q.25 Why did nationalist tensions emerge in the Balkans?

Q.26 Write a note on:

a)Bismarck

b)Garibaldi

c)Mazzini

Q.27 Compare the positions on the question of women's rights voiced by the three writers (Carl Welcker ,Louise Otto – Peters ,an anonymous reader).

Q.28 What is a Nation according to Ernst Renan?

Q.29 When did we see the first clear expression of nationalism?

Q.30 Name the treaty through which Greece was recognized as an independent state.

Q.31Name the only state ruled by an Italian princely state.

Q.32Name the allegory of Britain.

DEMOCRATIC POLITICS
CLASS- X
Chapter-1 (Power Sharing)

- Q.1 Which policy was followed by the Belgian government to accommodate regional diversities?
- Q.2 What is Majoritarianism?
- Q.3 Describe the ethnic composition in Belgium and Srilanka.
- Q.4 Mention any three provisions of the Act which was passed in Srilanka in 1950 to establish Sinhala supremacy.
- Q.5 What do you mean by Belgian model? Explain the main elements of Belgian model of power sharing.
- Q.6 Give one Prudential and one moral reason in favour of power sharing , with an example from Indian context.
- Q.7 “The horizontal form of power sharing is called as system of checks and balances.” Explain the statement.
- Q.8 Explain various forms of power sharing.
- Q.9 Describe any three demands of Srilankan Tamils.How did they struggle for their demands?
- Q.10.Why is power sharing desirable?

DEMOCRATIC POLITICS
CLASS- X
Chapter- 2 (Federalism)

- Q.1 What is federalism? What are the features of federalism?
- Q.2 Distinguish between unitary and federal system.
- Q.3 Differentiate between coming together and holding together federation.
- Q.4 Why is India called a Union of States?
- Q.5 What makes India a federal country?
- Q.6 Most federations that are formed by 'holding together' do not give equal power to its constituent states. Justify the same by giving examples from India.
- Q.7 How are the powers divided between Union and States?
- Q.8 The real success of federalism in India can be attributed to the nature of democratic politics. Examine three policies in the light of above statement .
- Q. 9 Explain the rationale for decentralisation of power in India.
- Q. 10 What is decentralisation? Explain the provisions of the Constitutional Amendment Act of 1992.
