

CLASS X HOLIDAY HOMEWORK 2023

ग्रीष्मावकाश गृहकार्य

विषय - हिंदी

- 1.5 विभिन्न प्रकार के विज्ञापन लेखन। (व्याकरण कॉपी पर)
2. परियोजना कार्य - आंध्र प्रदेश की वेशभूषा, लोकगीत और लोकनाच के बारे में लिखिए।
3. स्कूल पत्रिका के लिए एक लेख लिखिए।

(Computerized A4 पेपर पर)

4. कक्षा में कराए गए सभी कार्यों को पूरा कीजिए तथा उसको याद भी कीजिए।

English Holiday Homework

1. Submit write ups (Article/ Poems/ short story/ anecdotes/ travelogues) for school magazine.
2. A PPT (with voice over) by the students on the state of Andhra Pradesh with emphasis on customs, art and culture and literature of the state. Minimum 6 slides and maximum 12 slides. To be submitted on a CD stating the name, class and section of the student.

IT Holiday Homework

Design and develop any one RDBMS (**PROJECT**):

Hints-

- a. Banking Management System
- b. Railway Management System
- c. School Management System
- d. Collage Management System
- e. Smart Bazar management System
- f. Book Shop Management System
- g. Indian Army Management System
- h. CBSE Exam Management System
- i. According to you any office Management System

SCIENCE Holiday Homework

1. To complete the lab work of the Physics, Chemistry and Biology in the practical notebook.

All activities to be done in a single practical notebook.

2. To solve minimum two sample papers (chapter wise) for each completed chapter.

SOCIAL SCIENCE Holiday Homework

1. Make a First Aid Box.

2. Map Practice :

A. Geography (chapterwise)

B. History (Chapterwise)

3. Prepare project file on the following topic: (any one)

A. Contemporary social issues.

B. Consumer Rights

C. Sustainable development.

Note:

1. The topic have been given as per the roll numbers of all sections.

2. Students will be submitting the F.A.Box and project file by 4th July 2023 positively.

Chapter-2: FEDERALISM

WORKSHEET

1. (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 true, but R is false. (d) A is false, but R is true.

Assertion (A) : In federalism, there is division of powers between the Centre and the States.

Reason (R) : The legislation is not invalid merely because it incidentally encroaches upon matters which have been assigned to another organ.

2. When independent states come together on their own to form a bigger unit, so that by pooling sovereignty and retaining identity they can increase their security. This type of 'coming together' federations are practiced by which countries?

A. Switzerland & Canada B. USA and Britain

C. USA, Australia and Switzerland D. Britain, Canada, USA

3. Where a large country decides to divide its power between the constituent states and the national government. It is called 'holding together' federations. Which countries practice this system?

- A. India, Pakistan, Italy B. India, Spain, Belgium
C. Canada, Italy, Germany D. Australia, Canada, USA

4. Which one comes under the Union List in India?

- A. Police B. Agriculture C. Banking D. Trade

5. Which one comes under the State List in India?

- A. Defence B. Currency C. Communications D. Police

6. On which given subject can both the Union as well as the State Governments make laws?

- A. Currency B. Defence C. Trade Unions D. Agriculture

7. What is meant by residuary subjects?

- A. Subjects under union list B. Subjects under state list
C. Subject under both state and union list D. Subjects which are not under any list

8. Give an example of a subject under the residuary list?

- A. Currency B. Irrigation C. Computer software D. Commerce

9. Give one feature of Union territories?

- A. They have powers of a state B. They enjoy independent power
C. The Central Government has special powers in running these areas.
D. These are areas which are too small to become an independent State but which can be merged with any of the existing States

Q10. Sharing of power between the Union Government and the State governments is basic to the structure of the Constitution. The Parliament cannot on its own change this arrangement. Any change to it has to be first passed by both the Houses of Parliament with at least majority?

- A. 50 % B. Three- fourth C. Two- third D. 25%

Q11. The creation of was the first and a major test for democratic politics in our country

- A. States according to religion B. States according to culture
C. Linguistic states D. States according to topography

12. When was the beginning of the era of Coalition Governments at the Centre which led to a new culture of power sharing and respect for the autonomy of State Governments?

- A. 1980s B. 1990s C. 1870s D. 2000 onward

13. Census of India held in 2011, recorded more thandistinct languages which people mentioned as their mother tongues?

A. 200 B. 500 C. 1200 D. 1300

14. The distinguishing feature of a federal government is:

- A. National government gives some powers to the provincial governments.
- B. Power is distributed among the legislature, executive and judiciary.
- C. Elected officials exercise supreme power in the government.
- D. Governmental power is divided between different levels of government.

15. Consider the following two statements.

- 1. In a federation the powers of the federal and provincial governments are clearly demarcated.
- 2. India is a federation because the powers of the Union and State Governments are specified in the Constitution and they have exclusive jurisdiction on their respective subjects.
- 3. Sri Lanka is a federation because the country is divided into provinces.
- 4. India is no longer a federation because some powers of the States have been devolved to the local government bodies.

A. 1, 2 and 3 B. 1, 3 and 4 C. 1 and 2 only D. 2 and 3 only

16 _____ oversees the implementation of constitutional and procedures.

17. Consider the following statements on the practice of federalism in India. Identify those which hold true for decentralisation after 1992.

- A. Local governments did not have any power or resources of their own.
- B. It became constitutionally mandatory to hold regular elections to local government bodies.
- C. The state governments are required to share some powers and revenue with local government bodies.

D. No seats are reserved in the elected bodies for scheduled castes, scheduled tribes and other backward classes.

(a) B and C (b) A and C (c) A and D (d) B and D

18. In a 'Holding together federation':

- A. A large country divides its power between constituent states and the national government.
- B. The Central government tends to be more powerful vis-a-vis the States.
- C. All the constituent states usually have equal powers.
- D. Constituent states have unequal powers.

Which of the above statements are correct?

(a) A, B, C and D (b) A and D
(c) B and C (d) A, B and D

19. What is true regarding sources of revenue in a federal system?

- (a) States have no financial powers or independent sources of revenue.
- (b) States are dependent on revenue or funds on the central government.
- (c) Sources of revenue for each level of government are clearly specified to ensure its financial autonomy.

(d) States have no financial autonomy.

20..Which of the following is incorrect regarding a unitary government?

- (a) There is either only one level of government or the sub-units are subordinate to the central government.
- (b) The central government can pass on orders to the provincial government.
- (c) A state government is conservable to central government.
- (d) The powers of state governments are guaranteed by the Constitution

21. Consider the following two statements.

Worksheet 1

Subject : History

Class: X

MCQ (Multiple Choice Questions):

1. When was Zollverein formed?
 - a) 1830
 - b) 1834
 - c) 1838
 - d) 1835
2. Who headed the Congress of Vienna?
 - a) Mazzini
 - b) Duke Metternich
 - c) Cavour
 - d) Victor Emmanuel
3. In which year did Napoleon lose the Battle of Leipzig?
 - a) 1813
 - b) 1815
 - c) 1814
 - d) 1816
4. In the following questions, the Assertions(A) and Reasons(R) have been put forward. Read both statements carefully and choose the correct answer from the below:
 - a) If both Assertion(A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion(A).
 - b) If both Assertion(A) and Reason(R) are true but Reason(R) is not the correct explanation of Assertion(A).
 - c) Assertion(A) is true but Reason(R) is false.
 - d) Both Assertion(A) and Reason(R) are false.
 - i. Assertion(A): Conservatives believed that established traditional institutions of state and society should be preserved.
Reason(R): Zollverein was formed with the initiative of preserving Conservatism.
 - ii. Assertion(A): The Scottish Highlanders were forbidden to speak their Gaelic language or wear their national dress, and large numbers were forcibly driven out of their homeland.
Reason(R): The English helped the Protestants of Ireland to establish their dominance over a largely Catholic country.
 - iii. Assertion(A): Culture played an important role in creating the idea of the nation.

- Reason(R): Weavers in Silesia had led a revolt against the contractors who supplied raw materials and gave them orders for finished textiles but drastically reduced their payments.
- iv. Assertion(A): Italy was divided into seven states, of which only one was ruled by an Italian princely house.
Reason(R): The north was under the domination of the Bourbon kings of Spain.
- v. Assertion(A): Giuseppe Mazzini worked with the conservatives for the monarchy.
Reason(R): Italy had to continue to be a patchwork of small states and kingdoms.
- vi. Assertion(A): In the areas conquered by Napoleon the reactions of the local population were mixed.
Reason(R): Increased taxation, censorship etc. outweigh the advantages of administrative changes.
- vii. Assertion(A): Germany, Italy and Switzerland were divided into kingdoms, duchies and cantons whose rulers had their autonomous territories.
Reason(R): They were closely bound to each other in spite of their autonomous rule.
- viii. Assertion(A): Like Germany, Italy too had a long history of fragmentation.
Reason(R): During the middle of the nineteenth century, Italy was divided into seven states.
- ix. Assertion(A): From the very beginning, the French revolutionaries introduced various measures and practices like the idea of La Patrie and Le Citoyen.
Reason(R): This was done to create a sense of collective identity amongst the French people.
- x. Assertion(A): On 18 May 1848, 831 elected representatives revolted in the Frankfurt Parliament.
Reason(R): The elected representatives revolted against the issue of extending political rights to women.
- xi. Assertion(A): Artists in the eighteenth and nineteenth centuries found out a way by personifying a nation.
Reason(R): They represented a country as if it were a person.
- xii. Assertion(A): In India rise of nationalism is associated with the anti-colonial movement.
Reason(R): The sense of being oppressed under colonialism connected many different groups together.
- xiii. Assertion(A): Mass processions were a common feature of the Indian national movement.
Reason(R): People protested for the benefit of their respective social groups.
- xiv. Assertion(A): The notions of 'Swaraj' were different for every social group.
Reason(R): Every class and group felt the effects of colonialism differently.
- xv. Assertion(A): Rates of taxes were raised and income tax was introduced in colonial India.
Reason(R): Defence expenditure and war loans after the First World War were financed by Indian taxes.
- xvi. Assertion(A): In 1920-1921 crops failed in many parts of India and there was an influenza epidemic.
Reason(R): According to the 1921 census, 13 million people perished in India due to famine and disease.
- xvii. Assertion(A): Mahatma Gandhi appeared as the new leader of the popular movement after the First World War.
Reason(R): Hardships as hoped ended after the war.
- xviii. Assertion(A): Mahatma Gandhi returned from South Africa to India in January 1916.
Reason(R): Gandhi successfully fought the racist regime of South Africa with Satyagraha and now he was back in India to apply this policy.
- xix. Assertion(A): A satyagrahi could win any battle without the use of violence and anger.

- Reason(R): Satyagrahi while constantly standing their ground would strike at the conscious of the oppressor.
- xx. Assertion(A): Mahatma Gandhi declared that Satyagraha is a weapon of the strong instead of the weak.
Reason(R): Satyagraha is pure soul force and uses truth as its driving force.
- xxi. Assertion(A): Mahatma Gandhi decided to launch a nationwide Satyagraha against the Rowlatt Act in 1919.
Reason(R): Rowlatt act gave government unrestricted power to arrest Indian political prisoners without trial for 2 years.
- xxii. Assertion(A): Mahatma Gandhi took up the Khilafat issue along with his Non-cooperation movement.
Reason(R): Gandhi believed that the Khilafat issue was an opportunity to bring the Muslims under the umbrella of a unified movement.
- xxiii. Assertion(A): People would surrender their titles, boycott government services and foreign goods during 1920.
Reason(R): Non-cooperation in 1920 was a movement of not cooperating or giving aid to Britishers.
- xxiv. Assertion(A): Although most provinces boycotted council elections, the Justice Party of Madras participated in it.
Reason(R): The Justice Party saw council elections as an opportunity to gain some power which normally had Brahmanical dominance.
- xxv. Assertion(A): Peasants in Awadh had to do forced work and 'begar' at landlords' farms. They also had to pay extremely high taxes and rents.
Reason(R): The movement in Awadh was against Talukdars and landlords.
- xxvi. Assertion(A): Tribals in Gudem Hills adopted violent methods to protest against the colonial government in which they were led by Alluri Sitaram Raju.
Reason(R): Tribal lifestyle and livelihood were disturbed by colonial forest laws and their leader Raju declared that liberation could be achieved only by use of force.
- xxvii. Assertion(A): Most industrial workers stayed aloof from the Civil Disobedience Movement.
Reason(R): Congress included the demands of Industrial workers against the rich and business class in their campaign.
- xxviii. Assertion(A): After 24 days of Salt March, Gandhi reached Dandi and broke the salt law by making salt from sea water.
Reason: This was the conclusion of the Civil Disobedience movement.
- xxix. Assertion(A): Congress had ignored untouchables or 'Dalits' for a long time in fear of offending 'Sanatanis'.
Reason(R): Dalits were one of the social groups who were not moved by the concept of 'Swaraj' and movements by Congress.
- xxx. Assertion(A): Mahatma Gandhi called untouchables 'Harijans' and organized a movement to remove social restrictions put upon them.
Reason(R): Gandhi believed that true Swaraj couldn't be achieved until untouchability wasn't eliminated.
- xxxi. Assertion(A): The Congress and Muslim League entered into compromise in 1927 and formed an alliance.
Reason(R): In 1928 hopes of conference were removed when M.R. Jayakar of the Hindu Mahasabha strongly opposed efforts of compromise.
- xxxii. Assertion(A): History, fiction, folklores, songs, literature, prints and symbols played a great role in inspiring nationalism in India.

- Reason(R): The identity of any nation when symbolized with a figure or a image helps people to have a concrete concept of their nation and they identify with it.
- xxxiii. Assertion(A): During nationalist movements like Swadeshi Andolan and Non-cooperation movements, various flags were designed by leaders.
Reason(R): Nationalist leaders were aware of the value of nationalist icons and symbols in unifying people.
- xxxiv. Assertion(A): To glorify the past of the Indians, images were taken from the Hindu iconography.
Reason(R): These images were welcomed and celebrated by all the Indians.
- xxxv. Assertion(A): Nationalist leaders made people see the pre-British era as a glorious time for India.
Reason(R): Indian nationalists wrote about past achievements of Indians and their height of art, culture and economy which declined due to British rule.

SHORT ANSWER TYPE

5. How did the ideas of French Revolution spread to other parts of Europe?
6. How was the Habsburg empire a patchwork of many different regions and people in Europe? Explain.
7. Why were 1830s called the years of great economic hardships in Europe? Give reasons.
8. Explain any three reasons for the nationalist upsurge in the 19th century Europe?
9. How did nationalism aligned with imperialism become the cause of the First World War? Explain.
10. 'The idealistic liberal-democratic sentiment of nationalism became a narrow creed with limited ends.' Support the statement in the context of Balkan nationalism in the early 19th century.

OR

What conditions of Balkan areas led to First World War.

11. What do you know about Natesa Sastri?
12. Who had designed the 'Swaraj Flag' by 1921? Explain the main features of this 'Swaraj flag'.
13. What type of flag was designed during the 'Swadeshi Movement' in Bengal? Explain its main features.
14. Why was Poona Pact signed?
15. Why did some leaders of the Congress oppose the idea of a Non-Cooperation movement?
16. How was Non-Cooperation movement taken in the plantations?
17. What was the Simon Commission? Why was it opposed?
18. What was the Gandhi-Irwin Pact?
19. Examine the significance of the Lahore session (1929) of the Indian Congress.
20. Explain the steps taken by the Indians for the reinterpretation of the Indian history.
21. Who organised the Dalits into Depressed Classes Association in 1930? Describe his achievements.
22. Why did the Muslims felt alienated from the Congress during the Civil Disobedience Movement?
23. Explain the features of Boycott and Swadeshi movement?

Long Answer Type

24. Briefly explain the incident of the Jallianwala Bagh massacre and its effects on Punjab.
25. Why did Mahatma Gandhi decide to call off the Civil Disobedience Movement? Explain.
26. Assess the role of Mahatma Gandhi in the nationalist movement with special reference to the methods adopted by him?

27. "Till mid-eighteenth century there were no nation-states in Europe". Support the statement with examples.
28. Mention any two economic obstacles that the liberal nationalists wanted to overcome. In what way did the Zollverein custom union of 1834 try to overcome these shortcomings?

Class – X Subject – Economics
Worksheet

Chapter - 1

Q.1 Write a paragraph on your nation and what should India do, to become a developed country. (3)

Q.2."Consequences of environmental degradation do not respect national or state boundaries". Justify the given statement. (3)

Q.3. While average income is useful for comparison, it may hide disparities '. Discuss with a suitable example. (4)

Q.4.Differentiate between Human Development Report and the World Development Report. (4)

Chapter - 2

Directions:- In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both statements carefully and choose the correct answer from the below:

1. **Assertion (A):-** Leela works 5 days a week, receives her income on the last day of each month, and gets medical facilities from her firm.

Reason (R):- Leela is working in an organized sector.

a. both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b. both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

c. Assertion (A) is true but Reason (R) is false.

d. Assertion (A) is false but Reason (R) is correct.

2. Assertion (A): *Disguised unemployment is hidden in contrast to someone who does not have a job and is visible as unemployed. Everyone is working, no one is fully employed.*

Reason (R): *In fact, labor effort gets divided.*

a. If both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

b. If both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

c. Assertion (A) is true but reason (R) is false.

d. Both assertion (A) and reason (R) are false.

3. Assertion (A) *Under MNREGA 2005, those who are able to and are in need to work in rural areas are guaranteed 100 days of employment in a year.*

Reason (R) *The Central Government in India made a law implementing the Right to Work in about 625 districts of India.*

(A) both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(B) both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

c. Assertion (A) is true but Reason (R) is false.

d. Assertion (A) is false but Reason (R) is correct.

4. Assertion (A): *Per Capita Income is calculated in US dollars.*

Reason (R): *US dollar is not considered as the medium of international exchange. It is accepted as a method of payment across the world*

a. If both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

b. If both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

c. Assertion (A) is true but reason (R) is false.

d. Both assertion (A) and reason (R) are false.

5. Assertion (A):- *Rakesh is an educated and skilled worker who earns a high monthly salary as he is employed in a private bank in a city.*

Reason (R)- *all services sectors in India are growing extremely well and each individual engaged in any kind of tertiary activity and earns a high income.*

a. both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b.. both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

c. Assertion (A) is true but Reason (R) is false.

d. Assertion (A) is false but Reason (R) is correct.

6. Assertion (A): *In the public sector, the government owns most of the assets and provides all the services.*

Reason (R): *the purpose of the public sector is not first to earn profits but to promote public welfare.*

a. If both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

b. If both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

c. Assertion (A) is true but reason (R) is false.

d. Both assertion (A) and reason (R) are false.

7. Assertion (A) *An individual who manufactures flour from wheat is engaged in the primary sector.*

Reason (R) *When some process of manufacturing is used the product is a part of the secondary sector.*

- a. both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
- b. both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
- c. Assertion (A) is true but Reason (R) is false.
- d. Assertion (A) is false but Reason (R) is correct.

8. **Assertion (A):** The service sector is gaining more importance in the global economy.

Reason (R): As income levels decrease, certain sections of people start demanding many more services like private schools, hospitals, eating outlets, tourism, etc

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

9. **Assertion (A):-** *In India the primary sector is the largest employer.*

Reason (R):- *The demand for services has increased enormously.*

- a. both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
- b. both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
- c. Assertion (A) is true but Reason (R) is false.
- d. Assertion (A) is false but Reason (R) is correct.

In10.Assertion (A): Since the 1890s, it is common to see a large number of workers losing their jobs in the organized sector.

Reason (R) The service sector also includes some essential services that may not directly help in the production of goods.

- (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 true but R is false.
- (d) A is false but R is true.

11. **Assertion (A):** The unorganized sector offers jobs that are the most sought-after.

Reason (R): The employment opportunities in the organized sector have been expanding very slowly.

- (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 true but R is false.
- (d) A is false but R is true.

12. **Assertion (A):** The value of final goods already includes the value of all the intermediate goods that are used in making the final good.

Reason (R): The value of final goods and services produced in each sector during a particular year provides the total production of the sector for the next two years.

- (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 true but R is false.
- (d) A is false but R is true.

13. **Assertion (A):** The Government of India buys wheat and rice from farmers at a fair price.

Reason (R): Public sector contributes to economic development.

- (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 true but R is false.
- (d) A is false but R is true.

14. **Assertion (A):** In India, the mammoth task of measuring GDP is undertaken by a state government ministry.

Reason(R): With the help of various government departments of all the Indian states and union territories, the central ministry collects information relating to the total volume of goods and services and their prices and then estimates the GDP.

- (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 true but R is false.
- (d) A is false but R is true.

1. The sectors are classified into public and private sectors based on the?

- a) Employment conditions

c) Ownership of enterprises.

b) Nature of economic activity.

d) Number of workers employed in the enterprise

2. A _____ proportion of labourers in India are working in the unorganized sector.

3. GDP is the total e of _____ produced during a particular year.

4. Services based on information technology are a part of the _____ sector.

5. Give another name for disguised unemployment.

11. How are the sectors classified based on economic conditions? (3)

12. How should the workers in the unorganised sector be protected? (5)

13. Distinguish between the Public & Private Sectors. (5)

14. Explain how the Public Sector contributes to the economic development of the country? (5)

15. Distinguish between Organised and Unorganised Sectors. (5)

16. Write any three advantages of the organised sector and any three disadvantages of the unorganised sector.

17. Name the sector that is the largest employer in India .why does this sector produce only a quarter of GDP? (4)

(Note - Complete the exercise of chapter - 2 of the NCERT Book)

MATHEMATICS Holiday Homework

1. Worksheet (of the chapters completed) to be given to the students.





CLASS 10
SUBJECT- MATHEMATICS
SUMMER HOLIDAY HOMEWORK (2022-2023)
SECTION A

- 1 If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is
(A) 10 (B) -10 (C) 5 (D) -5
- 2 If one of the zeroes of the quadratic polynomial $(k-1)x^2 + kx + 1$ is -3, then the value of k is
(A) $4/3$ (B) $-4/3$ (C) $2/3$ (D) -2
- 3 If the zeroes of the quadratic polynomial $x^2 + (a+1)x + b$ are 2 and -3, then
(A) $a = -7, b = -1$ (B) $a = 5, b = -1$ (C) $a = 2, b = -6$ (D) $a = 0, b = -6$
- 4 The zeroes of the quadratic polynomial $x^2 + 99x + 127$ are
(A) both positive (B) both negative (C) one positive & one negative (D) None
- 5 A quadratic polynomial, whose zeroes are -3 and 4, is
(A) $x^2 - x + 12$ (B) $x^2 + x + 12$ (C) $2x^2 + 2x - 24$ (D) None
- 6 The pair of equations $5x - 15y = 8$ and $3x - 9y = 24/5$ has
(A) one solution (B) two solutions (C) infinitely many solutions (D) no solution
- 7 The pair of equations $x + 2y + 5 = 0$ and $-3x - 6y + 1 = 0$ have
(A) a unique solution (B) exactly two solutions (C) infinitely many solutions (D) no solution
8. If a pair of linear equations is consistent, then the lines will be
(A) parallel (B) always coincident (C) intersecting or coincident (D) always intersecting
9. The pair of equations $y = 0$ and $y = -7$ has
(A) one solution (B) two solutions (C) infinitely many solutions (D) no solution
10. The pair of equations $x = a$ and $y = b$ graphically represents lines which are
(A) parallel (B) intersecting at (b, a) (C) coincident (D) intersecting at (a, b)
- 11 Which of the following equations has 2 as a root?
(A) $x^2 - 4x + 5 = 0$ (B) $x^2 + 3x - 12 = 0$ (C) $2x^2 - 7x + 6 = 0$ (D) None
- 12 If $1/2$ is a root of the equation $x^2 + kx - 5/4 = 0$, then the value of k is
(A) 2 (B) -2 (C) $1/4$ (D) $1/2$
- 13 Values of k for which the quadratic equation $2x^2 - kx + k = 0$ has equal roots is
(A) 0 only (B) 4 (C) 8 only (D) 0, 8
- 14 The quadratic equation $2x^2 - 5x + 1 = 0$ has
(A) two distinct real roots (B) two equal real roots (C) no real roots (D) None
- 15 If the quadratic equation $x^2 - x + 1 = 0$ represents the shape of a headlight of a car then nature of roots is
(A) two distinct real (B) two equal real (C) no real roots (D) None

SECTION B

- 1) Find a quadratic polynomial whose sum and product of zeroes are $\sqrt{2}$ and 3 respectively.
- 2) Find the zeroes of the polynomial $mx^2 + (m + n)x + n$.
- 3) If m and n are zeroes of the polynomial $3x^2 + 11x - 4$, find the value of $\frac{m}{n} + \frac{n}{m}$.
- 4) Find the sum and product of zeroes of $p(x) = 2(x^2 - 3) + x$.
- 5) Find a quadratic polynomial, the sum of whose zeroes is 4 and one zero is 5.
- 6) If α and β are the zeroes of $2x^2 + 5(x - 2)$, then find the product of α and β .
- 7) Find a quadratic polynomial, the sum and product of whose zeroes are 5 and 3 respectively.
- 8) Solve the following system of linear equations graphically: $2x - 3y - 17 = 0$; $4x + y - 13 = 0$. Shade the region bounded by the above lines and x-axis.
- 9) Solve the following system of linear equations graphically: $2x + 3y = 4$; $3x - y = -5$. Shade the region bounded by the above lines and y-axis.
- 10) The difference between two numbers is 14 and the difference between their squares is 448, then find the numbers.
- 11) Sum of two numbers is 50 and their difference is 10, then find the numbers.
- 12) The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the numbers get reversed. Find the number.
- 13) The sum of a two-digit number and the number formed by interchanging its digit is 110. If 10 is subtracted from the original number, the new number is 4 more than 5 times the sum of the digits of the original number. Find the original number.
- 14) If twice the son's age in years is added to the mother's age, the sum is 70 years. But if twice the mother's age is added to the son's age, the sum is 95 years. Find the age of the mother and her son.
- 15) Find the value of k for which the quadratic equation $(k - 12)x^2 + 2(k - 12)x + 2 = 0$ has two real equal roots..
- 16) Find the value of k for which the quadratic equation $k^2x^2 - 2(k - 1)x + 4 = 0$ has two real equal roots..
- 17) If the roots of the equation $(a - b)x^2 + (b - c)x + (c - a) = 0$ are equal, prove that $b + c = 2a$.
- 18) The sum of the squares of the two positive integers is 208. If the square of the larger number is 18 times the smaller number, find the numbers.
- 19) Two numbers differ by 3 and their product is 504. Find the numbers.
- 20) Seven years ago Varun's age was five times the square of Swati's age. Three years hence Swati's age will be two fifth of Varun's age. Find their present ages.
- 21) The product of Rohit's age five years ago with his age 9 years later is 15 in years. Find his present age.
- 22) The product of Archana's age five years ago with her age 8 years later is 30 in years. Find her present age.
- 23) The speed of a boat in still water is 8 km/hr. It can go 15 km upstream and 22 km downstream in 5 hours. Find the speed of the stream.
- 24) In a flight for 6000 km, an aircraft was slowed down due to bad weather. Its average speed for the trip was reduced by 400 km/hr and consequently time of flight increased by 30 minutes. Find the original duration of flight.

Case study

<p>1. A passenger train takes 2 hours less for a journey of 300 km if its speed is increased by 5 km/hr from its usual speed. Find its usual speed.</p>	
<p>2. If two pipes function simultaneously, a reservoir will be filled in 12 hours. One pipe fills the reservoir 10 hours faster than the other. How many hours will the second pipe take to fill the reservoir?</p>	
<p>3. A man's age is three times the sum of the ages of his two sons. After 5 years his age will be twice the sum of the ages of his two sons. Find the age of the man.</p>	