CLASS X

HINDI

१. अनुच्छेद लिखो — ८० से१०० शब्दों में

मेरा भारत महान ,त्योहारों का महत्त्व , बढ़ती जनसंख्या

कैशलेस भारत , कंप्यूटर , डिजिटल भारत

२.औपचारिक पत्र लिखो —

. वन विभाग द्वारा लगाए गए पौधों की दुर्दशा पर चिंता व्यक्त करते हुए संपादक को पत्र

. डेंगू की रोक -थाम हेतु जिलाधिकारी को पत्र।

. अपने क्षेत्र में पुस्तकालय खोलने की प्रार्थना करते हुए शिक्षा विभाग के सचिव को पत्र

३. संवाद लिखो (५०) शब्दों में —-

अवकाशकालीन योजना को लेकर दो छात्रों के बीच ।

बढ़ रहे प्रदूषण को लेकर दो मित्रों के बीच ।

धूम्रपान स्वास्थ्य के लिए हानिकारक विषय पर दो दोस्तों के बीच ।

४.विज्ञापन प्रस्तुतीकरण (२०-२५) शब्दों में —

दीवाली पर विशेष छूट के साथ ए.सी ।

एक विशेष कंपनी की चाय की बिक्री के लिए ।

खिलौनों की बिक्री के लिए एक आकर्षक विज्ञापन तैयार करो ।

५.सूचना लिखो —-

विद्यालय के स्वच्छता अभियान में शामिल होने हेतु।

हॉकी मैच में सबको आमंत्रित करते हुए ।

हिंदी दिवस उद्घाटन समारोह में सबको आमंत्रित करते हुए ।

६. हरिहर काका पाठ के प्रश्न–उत्तर लिखो ।

७. सपनों के से दिन कहानी को पढ़ो ।

ENGLISH

1. Write an E-Mail to your friend living in U.S. describing your school activities

2. Write an article for the school magazine highlighting the environmental hazards (rise in temperature etc.) and the reasons and measures to curtail them.

3. Write Notices on the following topics-

    i. Blood donation camp to be held in the first week of July in school infirmary.

    ii. Lost and found.

    iii. Central zone competition 2018 to be held in Nalanda from 15th July.

4. Write a letter to your friend describing the celebration of Saraswati Puja in your school and asking about his school activities.

5. Write a letter to the Editor of a daily newspaper to publish your views regarding the increase in the no. of road accidents giving reasons and ways to reduce them.

6. Write and learn the Qtn. Answers & Exercises of the chapters taught to you from Lit. Book.
7. Read and solve the exercises of passages given in the M.C.Book units 1 -3.
8. Solve the Exercises of units 1-3 from your Work Book and practice more examples regarding those chapters.
9. Read and write the exercises of the Novel 'The story of my life' by Helen Keller S.A. 1 portion.
10. Write a story of your own on any incident of your life that happened in the past.(150 words)

ODIA

1- WRITE ALL GIVEN QUESTION'S ANSWER OF LESSON-SURA SUNDARI (NATAKA).
2- WRITE ALL GIVEN QUESTION'S ANSWER OF LESSON-KALIYUGARA SAMAPTI O'MISHRABABU(STORY).
3- WRITE ALL GIVEN QUESTION'S ANSWER OF LESSON-JANMA BHUMI(PROSE).
4- WRITE ESSAY-
   -JATIYA SANGHATI.
   -ARANYA SAMPADA O'TARA SURAKHAYA.
   -BHARATA'RA SIMANTA SAMASYA.
   -BHARATA 'RA PRAGATI REE NAARI RA BHUMIKA.
5- WRITE TYPES OF BAKYAS WITH EXAMPLES?
6- WRITE RUDHI AND LOKAVANI WITH EXAMPLES?

MATHEMATICS

SECTION - A

1. If -4 is a zero of the polynomial $x^2 - x - (2k + 2)$ then find the value of k.
2. Express 5005 as a product of its prime factors.
3. Given the linear equation 2x + 3y – 8 = 0, write another linear equation in two variables such
that the geometrical representation of the pair so formed is coincident lines.
4. The HCF of two numbers is 23 and their LCM is 1449. If one of the numbers is 161, find the
other.

SECTION - B

5. Find the zeroes of ($3x^2 +5x-2$) and verify the relationship between its zeroes and Coefficients.
7. Use Euclid's algorithm to find the HCF of 272 and 1032.
8. Check whether 6^n can end with the digit 0 for any natural number n.

SECTION - C

9. If one zero of the polynomial $f(x) = (k^2 + 4) x^2 + 13x + 4k$ is reciprocal of the other, then find
the value of k.
10. On dividing $x^3 – 3x^2 + x + 2$ by a polynomial g(x), the quotient and remainder were x – 2 and
–2x + 4, respectively. Find g(x).

11. Find the values of a and b for which the following pair of linear equations have an infinite
number of solutions:
$2x + 3y = 7$
$(a - b)x + (a + b)y = 3a + b – 2$.

SECTION - D

13. A woman has 60 notes in all of RS 10 and RS 20 denominations. If the total worth of the notes is RS 850, find out how many notes of each kind does she have.

14. If the polynomial $x^4 – 6x^3 + 16x^2 – 25x + 10$ is divided by another polynomial $x^2 – 2x + k$, the
remainder comes out to be $x + a$, find k and a .

15. A train covered a certain distance at a uniform speed. If the train would have been 10 km/hr
faster, it would have taken 2 hours less than the scheduled time. And, if the train were slower
by 10 km/hr; it would have taken 3 hours more than the scheduled time. Find the distance covered by the train.

16. a) Without actual division, show that 625/17 has a terminating decimal expansion. Also express.

CH. 1, REAL NUMBERS, CH.2. Polynomials & CH.3 Linear Equation

1. Using Euclid`s division algorithm, find the HCF of (i) 81 and 231 (ii) 155 and 1385.
2. Show that $n^2 – 1$ is divisible by 8, if n is an odd +ve integer.
3. For positive integers x and y , $x^2 + y^2$ is even but not divisible by 4.
4. Show that the square of any +ve integer of the form 5q+1 is of the same form.
5. If d is the HCF of 56 and 72 , find x and y satisfying d=56x+72y.
6. Find HCF and LCM of 145 and 435 .Also verify that HCF(145,435) X LCM(145, 435) = 145x 435 .
7. The HCF of two nos. is 16 and their product is 3072. Find their LCM.
8. Find the smallest no. which leaves the remainders 8 and 12 when divided by 28 and 32 respectively.
9. Find the largest +ve integer that will divide 398 , 436 and 542 leaving remainders 7,11 and 15 respectively.
10. Find the HCF and LCM of (i) 40, 36,126 (ii) 24,15,36.
11. Prove that √5 and √7 are not rational numbers.
12. Prove that (i) 5 +**2 √3** (ii) √7 (iii)√**2** + √**3** are irrational numbers.
13. Without actually performing division , check whether the decimal expansion of the following numbers are terminating or non – terminating : (i) **25/ 686** (ii) **17/ 15625** .
14. Find the zeroes of the polynomial 4√**3** x^2 +5x - 2√**3** and verify the relationship between the zeroes and coefficients.
15. Find a quadratic polynomial, the sum and the product of whose zeroes are √**2** and – √2 .
16. If α *and* β are the zeroes of p(x)= ax^2 + bx + c , then evaluate(i) $\alpha^2 + \beta^2$ (ii) $1\, \alpha + 1\, \beta$ (iii) $\beta\, \alpha + \alpha\, \beta$.
17. If α *and* β are the zeroes of p(x) = $6x^2$ +x -2 , then evaluate (i) $\alpha + \beta$ (ii) $\alpha^2 + \beta^2$ (iii) $1\, \alpha + 1\, \beta$ (iv) $\beta\, \alpha + \alpha\, \beta$ (iv) $1\, \alpha + 1\, \beta - 2\, \alpha\, \beta$.
18. If 2 & -3 are the zeroes of a quadratic polynomial, then find the polynomial.

19. For the polynomial $p(x)= 3x^3 - 5x^2 + 2x - 24$ and α, β and γ are the zeroes, then find the value of (i) $\alpha + \beta + \gamma$ (ii) $\alpha \beta \gamma$ (iii) $\alpha\beta + \beta\gamma + \gamma\alpha$.

20. Find a cubic polynomial whose zeroes are 2, -3 and 5.

21. Find all zeroes of $x^4 + x^3 - 34x^2 - 4x + 120$, if its two zeroes are 2 and -2.

22. Ten students of class IX took part in Maths. quiz. The number of girls is 4 more than the number of boys. Represent this situation algebraically and graphically.

23. Solve algebraically and graphically : $x + y = 3$ and $3x - 2y = 4$. Also find the area bounded by these two lines and X – axis. 24. Solve $2x + 3y = 9$ and $3x + 4y = 5$ by using elimination and substitution methods.

25. Solve the system of linear equations $2x - y = 6$ and $x - y = 2$ by cross-multiplication method.

26. Find the value of k, for which the system of equations $2x + 5y = 5$ and $6x + ky = 15$ has a unique solution.

27. Solve : $3x - 1y = -9$, $2x + 3y = 5$ by reducing method.

28. Solve $x + y = 2xy$, $x - y = 6xy$.

29. Solve : $152x - 378y = -74$, $-378x + 152y = -604$.

30. Solve $a^2 x - b^2 y = a^2 b + ab^2$, $ax - by = 2ab$.

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1. Verify that the numbers given alongside of the cubic polynomials below are their zeroes. Also verify the relationship between the zeroes and the coefficients in each case:

(i) $2x^3 + x^2 - 5x + 2$; $1, 1, -2, 2$

(ii) $x^3 - 4x^2 + 5x - 2$; $2, 1, 1$

2. Find a cubic polynomial with the sum, sum of the product of its zeroes taken two at a time, and the product of its zeroes as 2, −7, −14 respectively.

3. If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are $a - b$, a, $a + b$, find a and b.

4. If two zeroes of the polynomial $x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$, find other zeroes.

5. If the polynomial $x^4 - 6x^3 + 16x^2 - 25x + 10$ is divided by another polynomial $x^2 - 2x + k$, the remainder comes out to be $x + a$, find k and a.

6. The ages of two friends Ani and Biju differ by 3 years. Ani's father Dharam is twice as old as Ani and Biju is twice as old as his sister Cathy. The ages of Cathy and Dharam differ by 30 years. Find the ages of Ani and Biju.

7. One says, "Give me a hundred, friend! I shall then become twice as rich as you". The other replies, "If you give me ten, I shall be six times as rich as you". Tell me what is the amount of their (respective) capital? [From the Bijaganita of Bhaskara II]

[Hint : $x + 100 = 2(y - 100)$, $y + 10 = 6(x - 10)$].

8. A train covered a certain distance at a uniform speed. If the train would have been 10 km/h faster, it would have taken 2 hours less than the scheduled time. And, if the train were slower by 10 km/h; it would have taken 3 hours more than the scheduled time. Find the distance covered by the train.

9. The students of a class are made to stand in rows. If 3 students are extra in a row, there would be 1 row less. If 3 students are less in a row, there would be 2 rows more. Find the number of students in the class.

10. In a $\triangle$ ABC, $\angle$ C = 3 $\angle$ B = 2 ($\angle$ A + $\angle$ B). Find the three angles.

11. Draw the graphs of the equations $5x - y = 5$ and $3x - y = 3$. Determine the co-ordinates of the vertices of the triangle formed by these lines and the y axis.

PHYSICS

1. A charge of 150 coulomb flows through a wire in one minute. Find the electric current flowing through it.

2. The resistance of a wire of 0.01 cm radius is 10 ohm. If the resistivity of the material of the wire is 5.3×10^{-8} ohm meter, find the length of the wire.

3. (a) Define Ohm's law
   (b) Draw graph between V and I
   (c) A piece of wire having resistance R is cut into four equal parts
       (i) Compare the resistance of each part with the resistance of the original wire.
       (ii) If the four parts are connected in parallel, compare the equivalent resistance with the resistance of the original wire.

4. (a) Define the unit of resistance.
   (b) What happens to the resistance as the conductor is made thicker?
   (c) Keeping the potential difference constant, the resistance of a circuit is doubled, how will the current change?

5. (a) We connect electrical devices in parallel with the battery instead of connecting them in series. Why?
   (b) An electric oven connected to a 220 V line has two resistance coils A and B, each of 20 Ω resistance, which may be used separately, in series, or in parallel. What are the currents in the three cases?

6. Obtain an expression for the heat produced in a conductor when a voltage V is applied across it. Heating effect of electric current is desirable as well as undesirable. Explain this statement.

7. Study the following electric circuit and determine the potential difference across 3ohm resistor.
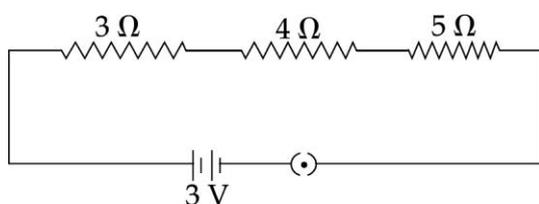
8. V – I graphs for two conductors A and B are shown in the figure. Both of them are connected in parallel to a battery. Which of the two will produce more heat per unit time? Give justification for your answer.

5
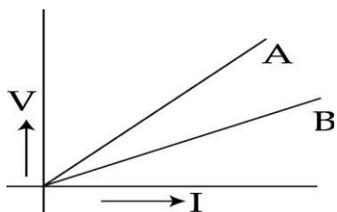
9. Two wires A and B are of equal length and have equal resistances. If the resistivity of A is more than that of B, which wire is thicker and why? For the electric circuit given below calculate:


30 Ω
10 Ω
5 Ω
6 V
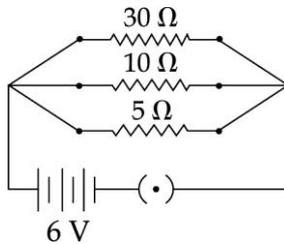
(i) current in each resistor,
(ii) total current drawn from the battery, and
(iii) equivalent resistance of the circuit.

10. How much current will an electric iron draw from a 220 V source if the resistance of its element when hot is 55 ohms? Calculate the wattage of the electric iron when it operates on 220 volts.

11. Can you run an electric geyser with power rating 2 kW; 220V on a 5A line? Give reason to justify your answer.

12. Distinguish between resistance and resistivity of a conductor. The resistors are generally made of thin wires of nichrome or Manganin. while the wires used in connections are comparatively thicker and are of copper or aluminium. Why? Give reason. What would happen to the resistance of a wire if it is stretched to double its length? Justify your answer.

13. A 5ohm resistor is connected across a battery of 6 volts. Calculate:
    (i) The current flowing through the resistor.
    (ii) The energy that dissipates as heat in 10 s.

14. For the parallel combination of resistors establish the relation:

$$1/R = 1/R_1 + 1/R_2 + 1/R_3$$

Where the symbols have their usual meanings.

15. Find the resistance between A and B in the following network.

a
A
3 Ω
3 Ω
B
b   3 Ω   c
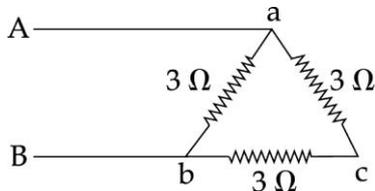
16. When two resistors are connected in parallel, the net resistance is 3ohm. When connected in series, its value is 16ohm. Calculate their resistances.

17. The resistance of a wire of length 80cm and of uniform area of cross section 0.023 cm^2, is found to be 1.5 ohm. Calculate the resistivity of the wire.

18. Calculate the amount of work done to carry 4C of charge from a point at 100V to a point at 120V.

19. A circuit consists of 1ohm wire in series with a parallel arrangement of 6ohm and 3 ohm wires. Calculate the total resistance of the circuit
20. Answer the exercise questions of the chapter ELECTRICITY

CHEMISTRY

1. Translate the following chemical reaction in to chemical equation and balance them.
   a) Magnesium burns with oxygen to form magnesium oxide.
   b) Steam passed over red hot iron to form magnetic oxide and hydrogen gas.
   c) Glucose reacts with oxygen to form carbon dioxide and water.
   d) Ferrous sulphate on heating form ferric oxide ,sulphur dioxide and sulphur trioxide.
   e) Lead nitrate on heating produces lead oxide, nitrogen dioxide and oxygen.
   f) Silver chloride when exposed to sunlight decomposed to form silver and chlorine
   g) Sodium sulphate solution reacts with barium chloride solution to form barium sulphate ppt and sodium sulphate solution.
   h) Manganese dioxide reacts with hydrochloric acid to form manganese chloride, water and chlorine.
   i) Sodium metal reacts with water to form sodium hydroxide and hydrogen.
   j) Ferric oxide reacts with Aluminium to form iron and aluminium oxide.

2. Balance the following equation
   a) $Na + O_2 \rightarrow Na_2O$
   b) $NH_3 + CuO \rightarrow Cu + N_2 + H_2O$
   c) $KClO_3 \rightarrow KCl + O_2$
   d) $Fe + Cl_2 \rightarrow FeCl_3$
   e) $(NH_4)_2Cr_2O_7(s) \rightarrow Cr_2O_3(s) + N_2(g) + H_2O(l)$

3. Classify the following reaction into (i) Combination/decomposition (ii) Displacement/Double displacement reaction.
   a) $CaO(s) + H_2O(l) \rightarrow Ca(OH)_2(s)$
   b) $ZnO(s) + C(s) \rightarrow Zn(s) + CO(g)$
   c) $CuSO_4(aq) + 2NaOH(aq) \rightarrow Na_2SO_4(aq) + Cu(OH)_2(s)$
   d)) $(NH_4)_2Cr_2O_7(s) \rightarrow Cr_2O_3(s) + N_2(g) + H_2O(l)$

4. Name the substance oxidized/reduced and oxidizing agent/reducing agent.
   a) $2NH_3(g) + 3 CuO(s) \rightarrow 3Cu(s) + N_2(g) + 3H_2O(l)$
   b) $Fe_2O_3(s) + 2Al(s) \rightarrow 2Fe(s) + Al_2O_3(s)$

5. Give two examples from each type of following reaction.
   a) Photo chemical reaction
   b) Exothermic reaction.
   c) Endothermic reaction.
   d) Thermal decomposition reaction.
   e) Electro decomposition reaction

6. Define Rancidity.

**Read the chapter 'Chemical Reactions and Equations" thoroughly and answer the text book questions.**

BIOLOGY

1. **Read the Ch-6 & 7 thoroughly and make a Vocabulary table in your H/W Copy.**
2. **Make a chart (Any one) on an Organ System in Humans**
3. **Write down the Answer of the following Questions:**
   a. Define holozoic nutrition.
   b. Which organelle is the site of photosynthesis in a plant cell?
   c. Which part of alimentary canal receives the secretions of liver and pancreas?
   d. What is the role of large intestine in the digestive system of human beings?
   e. Which type of chemical reactions is most common in human body to release energy?
   f. Which part in plant cell generally stores the waste products?
   g. What are the materials taken up by plant from soil apart from water?
   h. Which activity of autotrophs makes radiant energy available for use by heterotrophs to perform essential life process?
   i. Name the type of carbohydrate which are stored in plant as energy source?
   j. Why herbivores need larger small intestine?
   k. What is the site of complete digestion of carbohydrates, protein?
   l. Which part of anus regulate the exist of waste material?
   m. Why it is necessary to move the food in a regulated manner along the digestive tube?
   n. Which type of nutrition is characteristics of fungi?
   o. Name the muscle which regulates the exit of food from the stomach.
   p. What is the site for breakdown of glucose into pyruvate in a cell?
   q. Why rate of breathing in aquatic organism is much faster than that seen in terrestrial organisms?
   r. Name one unicellular eukaryotic organism in which alcoholic fermentation takes place.
   s. Name the process which produces lactic acid. Where does it takes place in our body?
   t. Where, in the cell, is the set of enzymes that catalyse the chemical reactions we call krebs cycle?
   u. The process if glycolysis occurs in which part of cell.
   v. Name a carbon containing, non alcoholic, final product of alcoholic fermentation, other than ATP.
   w. a) What is the mode of nutrition in *Amoeba?*
      (b) Fungi and *Cuscuta* both are heterotrophs still they differ in their modes of nutrition. Name and define the types of nutrition in both of them.
   x. Differentiate between autotrophic and heterotrophic modes of nutrition.
   y. What happens to food once it reaches the buccal cavity in human beings?
   z. Where in the alimentary canal does the digestion of following food component **begin** and which enzyme is responsible for it?

(i) Starch

(ii) Proteins

(iii) Fats

aa. How will you prove that carbon dioxide is essential for photosynthesis?

bb. Name the glands associated with digestive system and list their functions.

cc. List three characteristic features of the organ for exchange of gases in animals?

dd. Write the three main events occuring in the process of photosynthesis.

ee. a) Differentiate between aerobic and anaerobic respiration.

(b) What prevents the air passage from collapsing?

ff. a) Why energy is required by the body?

(b) What is the requirement of nitrogen in the plant body? Mention the form in which it is absorbed by plants?

(c) How does yeast derive its nutrition?

gg. Draw a labelled diagram showing the process of nutrition in *Amoeba*. Explain the steps involved in the process.

hh. (a) List two roles of stomata.

(b) What is the reason behind cramps after vigrous exercise.

ii. Write the role of following in the process of digestion:

(i) Gall bladder

(ii) Salivary glands

(iii) Hydrochloric acid

(iv) Bile

(v) Succus entericus.

jj. How will you prove experimentally that light is necessary for photosynthesis?

kk. How will you prove experimentally that CO_2 is necessary for photosynthesis?

ll. Explain the first step that is common in all cases of respiration. Where does it take place?

mm. What is fermentation? Why is it also referred as anaerobic respiration?

nn. Explain the process of anaerobic respiration taking place in muscle cells.

oo. How does exchange of gases occurs in plants?

pp. How do aquatic animals exchange gases?

qq. Why is the rate of breathing in terrestrial animals slower than aquatic animals?

rr. In an experimental demonstration, two tubes A and B, were taken with 5 mL of starch solution in each. In tube A, 1mL freshly prepared saliva is added whereas in tube B, 1mL water is added. After some time, the solution from both the tubes is taken out and treated with iodine solution.
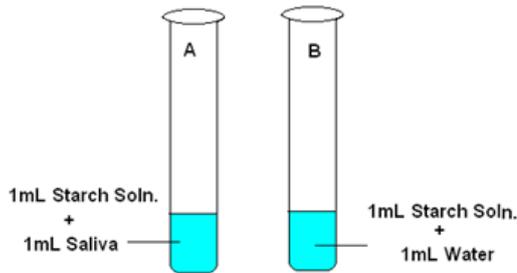
Which of two tubes will show blue-black colour after iodine test and why?

ss. What is the role of hydrochloric acid secreted in the stomach? How are the cells of our stomach protected from action of such a strong acid?

tt. A graph was plotted to show the energy output of two types of respiration. Identify the types of respiration denoted by curves A and B.
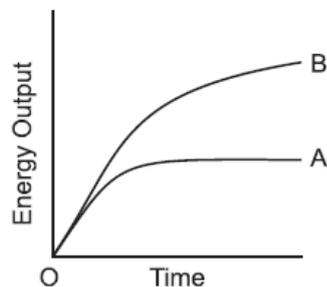
uu. In the test tubes A and B shown below, yeast was kept in sugar solution. Which products of respiration would you expect in tubes A and B?
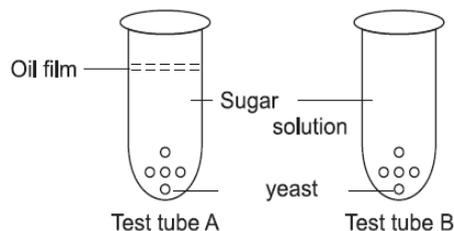
HISTORY/CIVICS

1. What do you mean by Civil war ?
2. Why power sharing is desirable ?
3. What do you mean by prudential and second moral ?
4. In modern democracies ,power sharing arrangements can take many forms. Explain.
5. Explain the term Federalism?
6. Write the features of Federalism ?
7. Explain the term Jurisdiction ?
8. Explain the factors that make federal government in india so attractive .
9. Highlight three major distinctions between the federations of coming together type and holding together type.
10. What are the three lists given in the constitution?

11. Why did the makers of our constitutions declare india to be a union of states ? Why were some sub political units of India given a special status ?
12. Holding together federations do not give equal power to its constituent units.Explain.
13. What is power sharing?
14. Describe horizontal and vertical power sharing?
15. What are the advantages of horizontal distribution of power?
16. The outcome of politics of social division depends on how the political leaders raise the demands of any community. Explain the statement.
17. Describe decentralization?
18. What is the significance of Decentralization?
19. What are the provisions of the constitution amendment of 1992?
20. Prime minister said "My country is still developing rather than a developed one" then Donald trump replied "you give job to reserved one and I give job to deserved one". Explain it.
21. What do you mean by SALT?

GEOGRAPHY

1. Write a note on land resources in India.
2. Write a short note on Types of soil.
3. What consequences would we face if non-renewable resources get exhausted in the world?
4. Why has Kerala a higher Human Development Index than Punjab inspite of low per capita income?
5. What are the main criteria used by the World Bank in classifying different countries? What are the limitations of this criterion?
6. Why different people have different development goals?
7. What is per-capita income? What is its demerit to be taken as index comparison?
8. What are non-monetary goals? Give some examples?
9. What is BMI?
10. "The earth has enough resources to meet the needs of all but not enough to meet the greed of one". How is the statement relevant to the discussion of the development?

INFORMATION TECHNOLOGY

Q1 What do you mean protocols?

Q2. Explain HTTP,FTP,POP,IMAP and SMTP.

Q3. What do you mean by Internet Services? Explain all in short.

Q4.What is the function of TCP/IP?

Q5. What is email? Write the advantages & disadvantages of it.

Q6. What do you mean by Netiquettes?

Q7. What is Web server?

Q8. Define Web site.

Q10. What is the role of Modem in internet?

Q11. Define Hyperlink.