ACADEMIC ACHIEVEMENT TESTS

APPENDIX VI

School I: - St. Soldier Divine Public School
School II: - B.S.F. School

Subject: Science

Topics: (1) Human Diseases.
(2) Work, Power & Energy

Pre – Test.

Time: 30 minutes               Marks: 20.

1. The diseases caused by Salmonella typhi and vibrio cholera are ______ and ______ . (2)

2. Rickets is caused due to deficiency of Vitamin (i) A (ii) B (iii) C (iv) D. (1)

3. What is the main symptom of diarrhoea ? (1)

4. __________ as a medicine is recommended for a person suffering from Malaria. (1)

5. Give two differences between communicable and non-communicable diseases. (2)

6. What is the chemical name of Vitamin A? Describe its daily need, source and deficiency disease. (4)

7. The unit of Power is ________________ . (1)

8. One horse power is equal to ________________ . (1)

9. A rocket is fired with a vertical velocity of 1 Km/s at an altitude of 25 km. If the mass of rocket is $3 \times 10^6$ kg. Calculate its potential and kinetic energies. Given $g = 10$ m/s$^2$. (4)

10. Choose the right answer
    (i) 1 calorie = _______________ Joule.
        (a) 4.190 (b) 4.189 (c) 4.186 (d) 4.192

    (ii) 1 kilowatt hour (k wh) = _______________ Joule.
        (a) $3.5 \times 10^3$ (b) $3.3 \times 10^3$ (c) $3.8 \times 10^8$ (d) $3.6 \times 10^8$

    (iii) What kind of energy is there in compressed Air?
        (a) Kinetic energy (b) Potential energy (c) Chemical energy (d) Heat energy . (1)
School I: - St. Soldier Divine Public School
School II: - B.S.F. School

Subject: Science

Topics: (1) Food Nutrition & Health
       (2) Heat

Post – Test.

Time: 30 minutes               Marks: 20.

1. Full form of WHO ____________ . (1)

2. What is balanced diet? (1)

3. Which of the following provides more roughage ?
   (a) Rice (b) Meat (c) Cauliflower (d) Fruit Juice (1)

4. What are proteins? Compare plant proteins and animal proteins. (3)

5. Name the types of proteins present in our body. State functions of any 3 types of
   proteins. (4)

6. Calculate the density of mercury at 100\(^\circ\) c. Given its density at 0\(^\circ\) c is 13.596 gm/cm\(^3\). (3)

7. 1 K cal = ____________ . (1)

8. Unit of heat is ________ , __________ , __________ . (3)

9. What is meant by vaporization and boiling ? (2)

10. Specific heat capacity (J/kg \(^\circ\)c) of a substance Aluminum is ________ . (1)
    (a) 0.930x10\(^3\) (b) 0.920x10\(^3\) (c) 0.910x10\(^3\) (d) 0.950x10\(^3\)
Pre – Test.  

Time: 30 minutes

Marks: 20.

1. What is the maximum value of $1/\sec \theta$ is ________. (1)

2. Maximum value of $\sin \theta$ is ________.  
   (a) 1 (b) 2 (c) 3 (d) 4 (1)

3. If $\tan \theta = 4/3$, the value of $3 \sin \theta + 2 \cos \theta / 3 \sin \theta - 2 \cos \theta$ is ________. (1)
   (a) 4 (b) 3 (c) 2 (d) 1

4. If $\sin A = 1/3$, evaluate $\cos A \cosec A + \tan A \sec A$. (1)

5. In the right angled $\triangle ABC$, $\angle ABC=90^0$, $AB = 3cm$, $BC = 4cm$
   Find (i) $\sin A$
   (ii) $\cos C$
   (iii) Is $\sin A = \cos C$  

6. Find a quadratic polynomial whose zeroes are $1/2$ and $-1/3$. (1)

7. Find the sum and product of zeroes of the polynomial $x^2 + 7x + 10$. (1)

8. What must be added to $f(x) = 4x^4+2x^3-2x^2+x-1$, so that the resulting polynomial is divisible by $g(x)=x^2+2x-3$. (1)

9. If two zeroes of the polynomial $f(x) = x^4-6x^3-26x^2+138x-35$ are $2 + \sqrt{3}$, find other zeroes. (5)

10. Verify that $1/2$ is zero of the polynomial $p(x) = 2x^3 - 3x^2 - 11x+6$ (5)


**School I: - St. Soldier Divine Public School**  
**School II: - B.S.F. School**

**Subject: Maths**

**Topics:**  
(1) Surface areas & volumes.  
(2) Some application of Trigonometry

**Post – Test.**

**Time: 30 minutes**  
**Marks: 20.**

1. A hemisphere bowl is made of steel, 0.25 cm thick. The inner radius of the bowl is 5 cm. Find the outer curved surface area of the bowl.  

2. Curved surface area of a cone is 308 cm$^2$ and its slant height is 14 cm. Find (i) radius of the base (ii) total surface area of the cone.  

3. An electric pole is 10m high. Its shadow is $10\sqrt{3}$m in length. Find the angle of elevation.  

4. The angle of elevation of the sun when the length of the shadow of a tree is equal to its vertical height ______ .  
   (a) 45°  (b) 60°  (c) 30°  (d) 90°

5. A kite is flying at a height of 75m from the level ground attached to a string inclined at 60° to the horizontal. The length of the string to the nearest metres is ________ .

6. A tower stands vertically on the ground. From a point on the ground which is 15m away from the foot of the tower, the angle of elevation of the top of the tower is found to be 60°. Find the height of the tower.  

7. A largest sphere is carved out of a cube of side 7cm. Find the volume of the sphere.  

8. A solid hemispherical toy has a radius of 3.5cm. Find its total surface area.  

9. Formula for total surface area of cuboid is ________________ .  

10. Formula for curved surface area of cube, sphere & hemisphere is ____ . ____ . ____ .
Subject: Social Studies

Topics: (1) Natural vegetation & Wild life
      (2) Indian Democracy

Pre – Test.

Time: 30 minutes
Marks: 20.

1. What is meant by natural vegetation? (1)

2. How could foreign plants be harmful for us? (3)

3. Ecology is the branch of Science, which deals with the study of ________, ________ and ___________ and ___________ . (2)

4. Biotic environment is related to the __________ and ___________. (2)

5. Define Biosphere and Ecosystem. (2)

6. Write a note on dry deciduous forests. (3)

7. Basis of Democracy is _______, _______, _______ and ____________. (2)

8. Define Election manifesto and Adult Franchise. (2)

9. When Indian National Congress was formed?
   (a) 1880 (b) 1845 (c) 1885 (d) 1870 (1)

10. Explain two hurdles in the way of Democracy. (2)
School I: - St. Soldier Divine Public School
School II: - B.S.F. School

Subject: Social Studies

Topics: (1) Disaster Management
       Agriculture

Post – Test.

Time: 30 minutes               Marks: 20.

1. Write any two precautions, which rescuer must take during electrocution. (2)
2. Define Search and Rescue activity. (2)
3. Suggest two preparedness measures in pre Tsunami scenario. (2)
4. Remote sensing is a technique of _____________________. (1)
5. Explain the role of National Cadet Corps (NCC) during disaster. (3)
6. Agriculture is an art or science of production of _____________. (1)
   (a) Crops (b) Livestock (c) Crops and Livestock (d) Not any of these.
7. Define Green Revolution. (2)
8. Give two land reforms in India. (2)
9. Name any two advantages of Green Revolution. (2)
10. What are the institutional problems that put obstacles in agriculture development? (3)
School – III: Police DAV Public School

Subject: Science

Topics: (1) Fundamental Unit of Life
(2) Motion

Pre – Test.

Time: 30 minutes               Marks: 20.

1. Genes are made up of ______________ . (1)

2. Nucleus was discovered by ______________ . (1)

3. Root hair absorbs water from soil through:
   (a) active transport (b) passive transport (c) osmosis (d) Diffusion (1)

4. Write the main function of the following:
   (a) Mitochondria (b) Lysosomes (2)

5. Write the difference between plant cells and animal cells. (3)

6. The rate of change of displacement with time is called:
   (a) speed (b) velocity (c) acceleration (d) retardation (1)

7. Define the terms Rest and Motion. Give one example for each. (2)

8. Derive the equation for position – velocity relation. (3)

9. A 100 m long train crosses a 300 m long bridge at a speed of 90 km/hour. How much time will it take to cross the bridge completely? (3)

10. Anjali swims in 90 m pool. She covers 180 m in one minute by swimming from one end to the other and back along a straight path. Find the average speed and average velocity of Anjali. (3)
School-III: Police DAV Public School

Subject: Science

Topics: (1) Metals and Non-metals
       (2) Why do we fall ill

Post – Test.

Time: 30 minutes               Marks: 20.

1. AIDS is a :
   (a) Viral disease (b) Bacterial disease (c) Fungal infection (d) None of these. (1)

2. Which disease is likely to occur in crowded areas?
   (a) Genetic (b) Infectious (c) Non-infectious (d) Deficiency disease. (1)

3. Rabies is also called ________________ . (1)

4. What are infectious and non infectious diseases. Give one example of each. (2)

5. List any three reasons why you would think that you are sick and ought to see a doctor. If only one of these symptoms were present, would you still go to doctor? Why or why not? (4)

6. Magnesium liberates __________ gas on reacting with boiling water. (1)

7. Brass is an alloy of __________ and __________________ . (2)

8. What are metalloids? Give examples. (2)

9. Differentiate between metals and non-metals. (3)

10. Why is a solid ionic compound bad conductor of electricity, but its aqueous solution is good conductor of electricity? (3)
School-III: Police DAV Public School

Subject: Maths

Topics: (1) Coordinate Geometry
(2) Polynomials

Pre – Test.

Time: 30 minutes               Marks: 20.

1. Equilateral triangle shows that ___________________ . (1)
2. Rhombus show that ________________________ . (1)
3. Check whether (5, - 2 ), (6, 4) and (7, - 2) is collinear. (2)
4. The distance between the points P(3, -5) and Q (8, 7) is ________ .
   (a) 14 units (b) 17 units (c) 13 units (d) 19 units (1)
5. Using distance formula, show that the points (4,2), (7,5) and (9,7) are collinear. (2)
6. Find a quadratic polynomial, whose zeroes are 1/2 and – 1/3. (1)
7. Find the sum and product of zeroes of the polynomial $x^2 + 7x + 10$ (1)
8. What must be added to $f(x) = 4x^4+2x^3-2x^2+x-1$, so that the resulting polynomial is divisible by $g(x) = x^2+2x-3$. (1)
9. If two zeroes of the polynomial $f(x) = x^4 – 6x^3 – 26x^2 + 138x – 35$ are $2 + \sqrt{3}$, find other zeroes. (5)
10. Verify that 1/2 is zero of the polynomial $p(x)=2x^3 – 3x^2 – 11x +6$ (5)
School-III: Police DAV Public School

Subject: Maths

Topics: (1) Linear Equation in two variable
(2) Number System

Post – Test.
Marks: 20.

1. The equation, \(ax + by + c=0\) is called the _____________ form of a linear equation, in two variables. (1)

2. For the following system of equations, determine the value of \(k\) for which the given system has no solution: \(3x-4y+7=0, \ kx+3y-5=0\) (2)

3. The algebraic condition for pair of lines, i.e. \(a_1x + b_1y + c_1 =0\) is ________. (1)
   (a) \(\frac{a_1}{a_2}\neq\frac{b_1}{b_2}\) (b) \(a_1/a_2=b_1/b_2 = c1/c2\) (c) \(a1/a2=b1/b2\neq c1/c2\)

4. Algebraic interpretation for \(a_2x+b_2y+c_2=0\) is (1)
   (a) No solution (b) Infinitely many solutions (c) Exactly one solution.

5. For what value of \(a\), the system of linear equations:
   \(ax+3y=a-3, \ 12x+ay=a\) has no solution? (3)

6. We obtain the system of whole numbers (W) when the number _____ is included with the system of _____________ numbers. (2)

7. When the ________ of all the ________ numbers are included with the system of ____________ numbers, we obtain the system of integers. (3)

8. Find HCF and LCM of 17, 25 by applying prime factorization method. (2)

9. Examine whether the following numbers are rational or irrational.
   (i) \((\sqrt{2}+3)^2\) (ii) \((6+\sqrt{6}) (6 -\sqrt{6})\) (2)

10. Find HCF and LCM of 25152 and 12156 by using fundamental theorem of arithmetic. (3)
School-III: Police DAV Public School

Subject: Social Studies

Topics: (1) Russian Revolution
(2) Constitutional Design

Pre – Test.

Time: 30 minutes               Marks: 20.

1. The people, who are opposed to rapid changes are called __________ . (1)

2. Who was the ruler of Russia in 1914?
   (a) Rasputin (b) Czar Nicholas II (c) Lenin (d) None of these. (1)

3. In which year, the event ‘Bloody Sunday’ occur?
   (a) 1904 (b) 1905 (c) 1907 (d) 1910 (1)

4. What were the causes of Russian Revolution ? (3)

5. Explain the term ‘Soviet’. (3)

6. “I have fought against white domination and I have fought against black domination---
   It is an ideal for which I am prepared to die.” Who said?
   (a) Pt. J. L. Nehru (b) Nelson Mandela (c) Dr. Ambedkar (d) Mahatma Gandhi. (1)

7. Define constitution. (2)

8. What is Preamble? (2)

9. Explain the objectives of our constitution as prescribed in the preamble. (3)

10. Explain the meaning of ‘Secular’ mentioned in the Preamble of India constitution. (3)
School-III: Police DAV Public School

Subject: Social Studies

Topics: (1) French Revolution
       (2) Drainage

Post – Test.

Time: 30 minutes               Marks: 20.

1. ______________ and ______________ were the French Philosophers .  (2)

2. In which year, was Louis XVI hanged?
   (a) 1792 AD   (b) 1793 AD   (c) 1794 AD   (d) 1795 AD  (1)

3. When did Constituent Assembly declared the ‘Rights of men’?
   (a) 11 Aug., 1789 (b) 14 Aug., 1790 (c) 15 Aug, 1789 (d) 12 Aug., 1789  (1)

4. Mention the role of Rousseau in the French Revolution.  (2)

5. What was the immediate cause of the French Revolution?  (3)

6. Two major groups of Indian Drainage System are _______ and _______.  (2)

7. Define water divide alongwith an example.  (2)

8. Why does Brahmaputra in its Tibetan part has less silt, despite a longer course?  (2)

9. Compare the East flowing and West flowing rivers of the Peninsular Plateau.  (2)

10. Why are the rivers considered the life lines of human civilization?  (3)
School-IV: Lawrence International Public School

Subject: Science

Topics: (1) Atoms and Molecules
(2) Why do we fall ill

Pre – Test.

Time: 30 minutes               Marks: 20.

1. A substance, in which all atoms are alike is called an ______________ . (1)

2. Helium is a ______________ atomic gas. (1)

3. The % of carbon in CaCO$_3$ is __________ .
   (a) 40% (b) 48% (c) 12% (d) None of these. (1)

4. What is the present accepted (IUPAC) system of symbols of elements? (2)

5. Define and explain atomic mass of an element. (3)

6. Who is regarded as the father of modern chemistry?
   (a) Dalton (b) Proust (c) Democrats (d) Lavoisier (1)

7. Write the difference between acute and chronic diseases. (2)

8. Name 3 infections agents and diseases caused by them. (3)

9. What do you mean by inflammation and its common effects? (3)

10. Why prevention is better than cure. Give three reasons. (3)
Lawrence International Public School

Subject: Science

Topics: (1) Force (2) Tissues

Post – Test.  
Time: 30 minutes  
Marks: 20.

1. Blood is a _____________ tissue .  

2. Water and minerals are conducted by __________________ .  

3. Plant growth is increased by :  
   (a) apical meristem (b) lateral meristem (c) periblem (d) parenchyma  

4. What is epidermis? Write its function.  

5. Give the difference between RBCs and WBCs.  

6. Name four types of elements found in phloem.  

7. Define the term Force. State the various effects produced by a Force.  

8. What are balanced forces. Give examples  


10. What force would be needed to produce an acceleration of 4 m/s$^2$ in a ball of mass 6 kg?  

Lawrence International Public School

Subject: Maths

Topics: (1) Polynomials
(2) Heron’s Formula

Pre – Test.

Time: 30 minutes               Marks: 20.

1. Find a quadratic polynomial, whose zeroes are 1/2 and – 1/3. (1)

2. Find the sum and product of zeroes of the polynomial $x^2 + 7x + 10$ (1)

3. What must be added to $f(x)=4x^4+2x^3-2x^2+x-1$, so that the resulting polynomial is divisible by $g(x)=x^2+2x-3$. (1)

4. If two zeroes of the polynomial $f(x)=x^4-6x^3-26x^2+138x-35$ are $2+\sqrt{3}$, find other zeroes. (5)

5. Verify that $\frac{1}{2}$ is zero of the polynomial $p(x) = 2x^3 – 3x^2 – 11x + 6$ (5)

6. Dodecagon polygon has __________ number of sides: (a) 8 (b) 10 (c) 5 (d) 12 (1)

7. A solid is an enclosed portion of space bounded by _______ and ________ surfaces. (2)

8. A regular pantagon is a 5 – sided _______ and ____________ polygon. (2)

9. Write the Heron’s formula to find out an area of a triangle. (1)

10. 1 hectometre (hm) = _______ dam
    (a) 10 (b) 100 (c) 1,000 (d) 10,000 (1)
Subject: Maths

Topics: (1) Line and Angles
       (2) Number system

Post – Test

Marks: 20.

Time: 30 minutes

1. A part or portion of a line with _______ end points is called a line segment. (1)
2. An angle is formed, when _________ rays originate from the _______ end point. (2)
3. Two angles are said to be complementary, if the sum of their measures is _____ . (1)
4. Adjacent angles have _________ vertex, a common ___________ . (2)
5. Two angles are said to be supplementary if sum of their measurer is ________. (1)
   (a) 90°  (b) 45°  (c) 180°  (d) 70°

6. In a given figure, POQ is a line. Ray OR is perpendicular to line PQ. OS is another ray
   lying between ray OP and OR. Prove that
   \[ \angle ROS = \frac{1}{2} [\angle QOS - \angle POS] \] (3)

7. We obtain the system of whole numbers (W) when the number ____ is included with
the system of __________ numbers. (2)

8. When the ________ of all the ________ numbers are included with the system of
   ______ of numbers, we obtain the system of integers. (3)

9. Examine whether the following numbers are rational or irrational. (2)
   (i) \((\sqrt{2}+3)^2\) (ii) \((6+\sqrt{6})(6-\sqrt{6})\)

10. Find HCF and LCM of 25152 and 12156 by using fundamental theorem of arithmetic. (3)
Lawrence International Public School

Subject: Social Studies

Topics: (1) People as a resource
(2) Drainage

Pre – Test.

Time: 30 minutes               Marks: 20.

1. What is a lagoon? Give examples. (2)

2. ______ and ______ are the two major rivers flowing over the northern plains. (2)

3. Name the place where Jamuna joins Ganga river ______.
   (a) Ladakh (b) Lucknow (c) Allahabad (d) Moradabad (1)

4. What is the length of Ganga river?
   (a) 2000 Km  (b) 2500 Km  (c) 2300 Km  (d) 1500 Km (1)

5. Name the four deltas on the East Coast. What is their effect on the relief of the area? (3)

6. Which sector is also known as service sector?
   (a) Primary sector (b) Tertiary Sector (c) Secondary Sector (d) None of these. (1)

7. Infant mortality rate is the ______ of a child under one year of age. (1)

8. Differentiate between economic activities and non economic activities. (3)

9. Explain different types of Unemployment. (3)

10. Explain the concept of the Gross Enrolment Ratio (GER) (3)
Lawrence International Public School

Subject: Social Studies

Topics: (1) India – Size and Location
(2) Democracy in the contemporary world

Post – Test.

Time: 30 minutes               Marks: 20.

1. The Tropic of Cancer does not pass through - _________________.
   (a) Rajasthan (b) Chattisgarh (c) Orissa (d) Tripura.

2. The easternmost longitude of India is _________.
   (a) 97° 25’E  (b) 68° 7’E  (c) 77° 6’E  (d) 82° 32’E

3. ___________ and ___________ island countries are our southern neighbours.


5. Reason out why Ahmedabad in the west and Kolkata in the east are able to see the noon sun exactly overhead twice a year, but not Delhi.

6. Poland had its first elections in: _____.
   (a) April 1989 (b) October 1990 (c) April 1990 (d) October, 1992.

7. United Nations was established on ________.
   (a) 24th Oct., 1945 (b) 20th Oct., 1946 (c) 20th Oct., 1947 (d) 1st Jan., 1950

8. Mention two main features of democratic system of Chile of 1988.


10. ‘Democracy means the government of the people by the people and for the people’. Explain.
School-V: APJ Public School

Subject: Science

Topics: (1) Why do we fall ill
(2) Motion

Pre – Test.

Marks: 20.

1. Infectious diseases are caused by _______________. (1)

2. Any organism capable of producing a disease is called _______________. (1)

3. Houseflies are the vectors of: _____________.
   (a) Cholera (b) Jaundice (c) Pneumonia (d) Diabetes (1)

4. Public cleanliness is important for individual health. Comment. (2)

5. What are the differences between communicable and non-communicable diseases? (3)

6. What are the different ways, by which AIDS can be transmitted? (3)

7. The slope of velocity-time graph for retarded motion is ____________. (1)
   (a) negative (b) positive (c) zero (d) positive or negative

8. Show that Rest and Motion are relative terms. (2)

9. Derive the equation for position-time relation. (3)

10. Anjali swims in a 90 m pool. She covers 180 m in one minute by swimming from one
    end to the other and back along a straight path. Find the average speed and average
    velocity of Anjali. (3)
Subject: Science

Topics: (1) Tissue
(2) Atoms and Molecules

Post – Test.

Time: 30 minutes               Marks: 20.

1. A group of cells having a common __________ and _______ in structure and _____ is known as Tissue. (3)

2. Two types of plant tissues are __________ and ________________ . (2)

3. Differentiate between xylem and phloem. (2)

4. What are different types of tissues in animals? (3)

5. Who stated the law of definite proportions?
   (a) Lavosier  (b) Dalton  (c) Pronst  (d) None of these (1)

6. The unit of atomic mass is __________________________. (1)

7. One amu is: (a) 1.0076 g  (b) 6.000329 g  (c) 6.02x10^{-23} g  (d) 1.66x10^{-24} g (1)

8. Which one of the following is ionic compound?
   (a) S_8  (b) P_4  (c) CH_4  (d) Cu(NO_3)_2 (1)

9. State the law of constant proportions. Give examples also. (3)

10. Define and explain atomic mass of an element. (3)
APJ Public School

Subject: Maths

Topics: (1) Polynomials
(2) Heron’s Formula

Pre – Test.

Time: 30 minutes               Marks: 20.

1. Find a quadratic polynomial, whose zeroes are 1/2 and -1/3. (1)

2. Find the sum and product of zeroes of the polynomial $x^2+7x+10$. (1)

3. What must be added to $f(x)=4x^4+2x^3+2x^2+x-1$, so that the resulting polynomial is divisible by $g(x)=x^2+2x-3$. (1)

4. If two zeroes of the polynomial $f(x) = x^4-6x^3-26x^2+138x-35$ are $2 + \sqrt{3}$, find other zeroes. (5)

5. Verify that $1/2$ is zero of the polynomial $p(x) = 2x^3 - 3x^2 - 11x + 16$. (5)

6. Dodecagon polygon has ________ member of sides
   (a) 8 (b) 10 (c) 5 (d) 12. (1)

7. A solid is an enclosed portion of space bounded by ________ and ________ surfaces. (2)

8. A regular pantagon is a 5 – sided ___________ and ________ polygon. (2)

9. Write the Heron’s formula to find out an area of a triangle. (1)

10. One hectometre (hm) = __________ dam.
    (a) 10 (b) 100 (c) 1000 (d) 10,000 (1)
APJ Public School

Subject: Maths

Topics: (1) Quadratic Equations
(2) Angles and Triangles

Post – Test.

Time: 30 minutes               Marks: 20.

1. An equation of the form $ax^2+bx+c=0$, $a\neq0$ (general form) is called a quadratic equation in one variable $x$, where $a$, $b$ and $c$ are ___________ numbers. (1)

2. Simplify the equation $(3x-1)^2-9x^2+6=0$ and show that it is not a quadratic equation. (1)

3. Solve the equation $2x^2-5x+3=0$ by the method of completing square (3)

4. If I had walked $2 \frac{1}{2}$ km/h faster, I would have taken half an hour less to walk 15 km, find out my speed. (3)

5. Find two consecutive numbers, whose squares have the sum 85. (2)

6. Two angles are said to be complementary, if the sum of their measure is _______. (1)

7. Two angles are said to be supplementary, if the sum of their measure is _______. (1)

8. In given figure, POQ is a line, Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that $\angle ROS = \frac{1}{2} [ \angle QOS - \angle POS]$. (3)

9. In $\triangle ABC$, DE is parallel to the base BC with D on AB and E on AC. If $\frac{AD}{DB} = \frac{2}{3}$, find $\frac{BC}{DE}$. (3)

10. The perimeter of two triangles are 30 cm and 20 cm. If one of the side of the first triangle 12 cm, find out the length of the corresponding sides of the other triangle. (2)
APJ Public School

Subject: Social Studies

Topics:
(1) People as a Resource
(2) French Revolution

Pre - Test

Time: 30 minutes               Marks: 20.

1. Death of a child under one year of age is called __________ rate         (1)
2. What do you understand by ‘people as a resource’?                      (2)
3. Describe the role of education in human capital formation alongwith examples (3)
4. Differentiate between Seasonal unemployment and Disguised unemployment.  (3)
5. The sector, which include quarrying and manufacturing is called:
   (a) Primary Sector (b) Secondary sector (c) Tertiary sector or None of these. (1)
6. Describe an immediate cause of French Revolution.         (3)
7. Necker was a popular minister of ___________________.                   (1)
8. Define the term ‘Middle Class’.                                       (2)
9. Give the factors that enabled ‘Reign of Terror’.                      (2)
10. What did French women gain from the revolution?                     (2)
APJ Public School

Subject: Social Studies

Post - Test

Time: 30 minutes                Marks: 20.

1. The wind blowing in the northern plains in summers is known as
   (a) Kal Baisakhi (b) Trade winds  (c) Loo (d) None of the above

2. Jet streams are __________ velocity winds blowing through a narrow zone in the
   ________.

3. ___________ is the seasonal winds, which ________ their dissection with change in
   seasons.

4. Distinguish between western cyclone disturbances and tropical cyclones.

5. Why does rainfall on the western ghats decrease from South to North?

6. Who said, “Democracy is a government of the people, by the people and for the
   people:
   (a) Pt. J.L. Nehru (b) Nelson Mandela (c) Abraham Lincoln (d) M. Gandhi

7. Democracy is based on the principle of ____________.

8. What do you understand by indirect democracy?


10. Give three arguments against democracy.
School-VI: Shiv Jyoti Public School

Subject: Science

Topics: (1) Human Diseases
(2) Gravitation

Pre - Test

Time: 30 minutes
Marks: 20.

1. Define diseases. (1)

2. __________ are most affected by the disease Tuberculosis (1)

3. What is Rabies? Give two symptoms of Rabies (3)

4. Full form of AIDS is _______________________. (2)

5. Name the disease having symptoms: Persistent fever, low heart beat, green stool, thinning and shrinking of abdomen wall.
   (a) Jaundice (b) Malaria (c) Typhoid (d) Rabies (1)

6. Clarify the difference between hereditary and congenital diseases. (3)

7. The value of ‘G’ universal gravitation constant is (a) $6.68 \times 10^{-11}$ Nm$^2$/Kg$^2$ (b) $6.69 \times 10^{-1}$ Nm$^2$/Kg$^2$ (c) $6.67 \times 10^{-11}$ Nm$^2$/Kg$^2$ (1)

8. Explain, why one can jump higher on the surface of moon than on earth? (2)

9. The radius of moon is $1.7 \times (10)^6$ meter and its mass is $7.35 \times (10)^{22}$ Kg. What is acceleration due to gravity on the surface of moon? (3)

10. Compare the gravitational force applied by the sun and the moon on the earth. Which exerts a greater force and by how many times? (3)
Shiv Jyoti Public School

Subject: Science

Topics:
(1) Work, Power and Energy
(2) Metals and Non-metals

Post - Test

Time: 30 minutes               Marks: 20.

1. 1 KW = __________ Watt. (1)
   (a) 10   (b) 100   (c) 1000   (d) 10,000

2. 1 Watt = ______________ . (1)

3. A man rowing a boat upstream is at rest with respect to the bank. Is he doing work? (2)

4. How much electric energy be consumed by an electric bulb of 10 watt when lighted for two hours. (3)

5. Give the SI Units of Work, Potential Energy, Kinetic energy and Power. (4)

6. Define metals and non-metals. (3)

7. A base, which is soluble in mater, is called ___________. (1)

8. Give an example of a metal, which is a liquid at room temperature _________. (1)
   (a) Sodium (Na). (b) Mercury (Hg). (c) Silver (Ag). (d) Copper (Cu).

9. Complete the following equations: (2)
   (a) Ca(s)+2H_2O(l) = ________________ .
   (b) 2K(s) + 2H_2O = ________________ .

10. Why do ionic compounds have high melting points? (2)
Shiv Jyoti Public School

Subject: Maths

Topics: (1) Trigonometry
(2) Heron’s Formula.

Pre - Test

Time: 30 minutes               Marks: 20.

1. The Maximum value of $1/\sec \theta$ is ______________.

2. Maximum value of $\sin \theta$ is _______________.
   (a) 1   (b) 2   (c) 3   (d) 4

3. If $\tan \theta = 4/3$, the value of $3 \sin \theta + 2 \cos \theta / 3 \sin \theta - 2 \cos \theta$ is ____________.
   (a) 4   (b) 3   (c) 2   (d) 1

4. If $\sin A = 1/3$, $\cos A \cosec A + \tan A \sec A$ will be __________.

5. In the right angled $\triangle ABC$,
   $\sqrt{ABC} = 90^\circ$, $AB = 3$ cm, $BC = 4$ cm

   Find (i) $\sin A$   (ii) $\cos C$   (iii) Is $\sin A = \cos C$?

6. Prove that $\sin^2 \theta + \cos^2 \theta = 1$.

7. $\sin^2 \theta + \cos^2 \theta = 1$ or $\sin^2 \theta = ____________ = 1 - \sin^2 \theta$.

8. Dodecagon polygon has __________ member of sides
   (a) 8   (b) 10   (c) 5   (d) 12

9. An isosceles triangle has perimeter 30 cm and each of the equal sides is 12 cm. How much area does it occupy?

10. The base of an isosceles triangle is 10 cm and one of its equal sides is 13 cm. Find area using Heron’s formula.
Shiv Jyoti Public School

Subject: Maths

Topics: (1) Statistics
(2) Probability

Post - Test

Time: 30 minutes               Marks: 20.

1. Formula of Arithmetic mean is ______________. (1)

2. What do you mean by cumulative frequency of a class interval? (1)

3. Find the Median of Class from the following data:

<table>
<thead>
<tr>
<th>Marks</th>
<th>0-10</th>
<th>10-20</th>
<th>20-30</th>
<th>30-40</th>
<th>40-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>32</td>
<td>20</td>
</tr>
</tbody>
</table>

(2)

4. Fill in the blank : ______ Median = Mode + 2 Mean
   (a) 2    (b) 5    (c) 6    (d) 3 (1)

5. Explain class limits, class intervals and types of data (4)

6. What is the probability of getting a tail, if a coin is tossed once?
   (a) 3/4    (b) 1/4    (c) 1/2    (d) 3/2 (1)

7. Find the probability of getting an even number, if a die is tossed once.
   (a) 3/2    (b) 1/2    (c) 3/4    (d) 1/4. (1)

8. A card is drawn from a well shuffled pack of 52 cards what is probability that
   (i) is it a black King? (ii) a red card? (2)

9. In a non-leap year, find the probability of getting 53 Tuesdays. (3)

10. A box contains 90 discs, which are membered from 1 to 90. If one disc is drawn at
    random from the box, find the probability that
    (i) a 2-digit number (ii) a perfect square number. (4)
Shiv Jyoti Public School

Subject: Social Studies

Topics:
(1) Poverty as a Challenge
(2) Fundamental Rights

Pre - Test

Time: 30 minutes               Marks: 20.

1. A person is considered poor, if his income or consumption level falls between a given ________________ necessary to fulfill basic needs. (1)

2. What is vulnerability? (2)

3. Write about new indicators of poverty. (2)

4. Full form of NSSO is __________________________ . (1)

5. When was Pradhan Mantri Gramodayog Yojna Launched?
   (a) 1999   (b) 2000   (c) 2002    (d) 1997 (1)

6. Give an account of Inter–state disparities in poverty in India. (3)

7. What do you mean by ‘Rights’? (2)

8. Write down any three features of Rights. (3)

9. What do you mean by fundamental Right? Why are they called fundamental? (3)

10. Describe any two political Rights of the citizens. (2)
Shiv Jyoti Public School

Subject: Social Studies

Topics: (1) Natural vegetation and Wild life
(2) Indian Democracy

Post - Test

Time: 30 minutes               Marks: 20.

1. Define Democracy.  
2. What is direct democracy?  
3. Democracy is a government _________ The people, ______ the people and _____ the people.  
4. Democracy is based on the principle of:  
   (a) justice  (b) liberty  (c) fraternity  (d) equality  (e) all the above  
   (f) None of the above.  
5. Ecosystem deals with ____________ .  
   (a) Plant kingdom  (b) Animal kingdom  (c) Human beings  (d) Plants, Animals, humans  
6. Distinguish between tropical evergreen and deciduous forests.  
7. Rubber belongs to __________ type of vegetation.  
8. Name two major vegetation regions of India.  
9. Why do the tropical deciduous forests shed their leaves during the summer?  
10. Distinguish between extinct and endangered species of animals.
School-VII: Seth Hukum Chand Public School

Subject: Science.

Topics: (1) Respiration.
       (2) Metals and Non-metals.

Pre - Test

Time: 30 minutes               Marks: 20.

1. Define respiration and breathing.  (2)

2. The intake of ___________ and release of ________________ by organisms is called
gaseous exchange.  (2)

3. Differentiate between aerobic and anaerobic respiration.  (3)

4. Aquatic animals use _____ for respiration
   (a) Lungs   (b) Gills   (c) Skin   (d) Air tubes.  (1)

5. Describe one method of respiration in plants.  (2)

6. Define metals, non-metals and alloy.  (3)

7. Why has the use of petrol containing tetraethyl lead been banned?  (1)

8. Complete the following:
   \[4\text{Na} + \text{O}_2 = \quad \]  (2)
   \[2\text{Ca} + \text{O}_2 = \quad \]  (2)

9. Write 2 differences between minerals and ores.  (2)

10. Name 4 main ores of iron.  (2)
Post - Test

Time: 30 minutes  
Marks: 20.

1. Who discovered cell, and how?  
   (2)

2. Why is the plasma membrane called a ‘selectively permeable membrane’?  
   (2)

3. Size of Prokaryotic cell is generally __________ and size of Eukaryotic cell is generally __________ .  
   (2)

4. Which cell organelle is called ‘Kitchen’ of the cell?  
   (a) Ribosome’s  
   (b) Mitochondria  
   (c) Plastids  
   (d) Endoplasmic reticulum  
   (1)

5. What is endoplasmic reticulum? Write its main functions.  
   (3)

6. Who gave the laws of motion?  
   (a) Robert Hooke  
   (b) Newton  
   (c) Einstein  
   (d) Virchow  
   (1)

7. The SI unit of density is __________ .  
   (1)

8. A bullet fired from a rifle is more dangerous than an air molecule hitting a person, though both of than have almost same speed. Explain  
   (2)

9. A force acts for 10s on a body of mass 10 kg after which the force stops and the body covers 50 m in the next 5 s. Calculate the force.  
   (3)

10. A shell of mass 0.02 kg is fired by a gun of mass 100 kg. If the muzzle speed of the shell is 80m/s, what is the recoil speed of the gun?  
    (3)
Seth Hukum Chand Public School

Subject: Maths.

Topics:
(1) Angles and Triangles
(2) Quadrilaterals

Pre - Test

Time: 30 minutes               Marks: 20.

1. Two angles are said to be complementary, if the sum of their measure is _________.
   (a) 45°  (b) 90°  (c) 180°  (d) 70°

2. Two angles are said to be supplementary, if the sum of their measure is _________.

3. In given figure, POQ is a line. Ray OR is perpendicular to line PQ. OS is another ray
   lying between rays OP and OR. Prove that \( \overline{ROS} = \frac{1}{2} (\overline{QOS} - \overline{POS}) \).

4. In \( \Delta ABC \), DE is parallel to the base BC with D on AB and E on AC. If \( \frac{AD}{DB}=2/3 \),
   Find BC/DE.

5. The perimeters of two triangles are 30 cm and 20 cm. If one of the side of the first
   triangle is 12 cm, then find out the length of the corresponding sides of the other
   triangle.

6. Rectangle is a special type of ____________ when one of its angle is 90°.

7. Kite is a special type of ____________ in which two pairs of adjacent sides are equal.

8. Draw 3 types of quadrilaterals.

9. Prove that a diagonal of a parallelogram divides it into two congruent triangles.

10. If the diagonals of a parallelogram are equal, prove that the parallelogram is a
    rectangle.
Subject: Maths.

Post - Test

Time: 30 minutes               Marks: 20.

1. The equation \( ax + by + c = 0 \) is called the __________ form of a linear equation in two variables. (1)

2. For the following system of equations, determine the value of K for which the given system has no solution. \( 3x - 4y + 7 = 0 \), \( Kx + 3y - 5 = 0 \) (2)

3. The algebraic condition for pair of lines, i.e. \( a, x + b, y + c = 0 \) is __________. (a) \( a_1/a_2 \neq b_1/b_2 \) (b) \( a_1/a_2 = b_1/b_2 = c_1/c_2 \) (c) \( a_1/a_2 = b_1/b_2 \neq c_1/c_2 \). (1)

4. Algebraic interpretation for \( a_2x + b_2y + c_2 = 0 \) is ________________. (a) No solution (b) Infinitely many solutions (c) Exactly one solution. (1)

5. For what value of \( a \), the system of linear equations:
\( ax + 3y = a - 3 \), \( 12x + ay = a \) has no solution? (3)

6. A card is drawn from a well shuffled pack of 52 cards. What is the probability that (i) it is a black king? (ii) a red card? (2)

7. It is given that in a group of 3 students, the probability of 2 students not having the same birthday is 0.992. What is the probability that 2 students have the same birthday? (2)

8. A coin is tossed three times. Find the probability of getting ‘head and tail’ alternately. (2)

9. Gopi buys a fish from a shop for his aquarium. The shopkeeper takes out one fish at random from a tank containing 5 male fish and 8 female fish. What is the probability that the fish taken out is a male fish? (3)

10. Suppose you drop a die at random on the rectangular region shown in fig. What is the probability that it will land inside the circle with diameter 1 m? 

![Diagram](attachment:rectangular_region.png)
Seth Hukum Chand Public School

Subject: Social Studies.

Topics: (1) French Revolution.  
(2) Physical Features of India.

Pre-Test

Time: 30 minutes               Marks: 20.

1. Who said, “I am France, my will is law”?  
   (a) Napoleon  (b) Louis XVI  (c) Voltaire  (d) Rousseau.  (1)

2. When did the National Assembly completed the draft of the constitution?  
   (a) 1790 AD   (b) 1791 AD   (c) 1792 AD   (d) 1793 AD  (1)

3. The Battle of Mater Loo took place in ______________ .  (1)

4. Mention the contribution of Voltaire in the French Revolution.  (3)

5. What was the immediate cause of French Revolution?  (3)

6. ___________ and ___________ are the two natural resources of northern mountains.  (2)

7. The Western Coastal Strip south of Goa is referred to as:  
   (a) Coromandel  (b) Konkan  (c) Malabar  (d) Northern circar  (1)

8. What is the cause of evolution of present continents and oceans?  (2)

9. Write three features of Central Highlands of Peninsular India.  (3)

10. Explain briefly the formation of northern plains.  (3)
Seth Hukum Chand Public School

Subject: Social Studies.

Topics:
(1) The Story of Cricket
(2) Constitutional Design

Post - Test

Time: 30 minutes               Marks: 20.

1. Full form of:
   (i) ICC ___________   (ii) MCC ____________  (iii) MCG_________________
   
2. Describe one way in which the 19th century technology brought about a change in equipment and give an example where no change in equipment took place.

3. Which country invented the game of cricket?
   (a) USA    (b) Australia    (c) England    (d) West Indies.

4. When did India become a test playing nation?
   (a) 1930      (b) 1932      (c) 1948        (d) 1950

5. How cricket is related to nationalism?

6. Country Championship was started in ________________.

7. Define constitution.

8. Mention the nature of state according to the preamble of India constitution.

9. Describe the term ‘Fraternity’.

10. Examine the significance of the Preamble of the Indian Constitution.
School-VIII: Swami Sant Dass Public School

Subject: Science.

Topics:(1) Is matter around is pure?
(2) Tissues

Pre-Test

Time: 30 minutes               Marks: 20.

1. The cream can be separated from the milk by the process of:
   (a) filtration (b) evaporation   (c) centrifugation   (d) none of them.  (1)

2. Alloys are mixtures of two or more ________________.  (1)

3. Soap solution ____________ light.  (1)

4. What is the difference between solutions and colloids?  (2)

5. Give the difference between mixture and Compound.  (3)

6. Define distillation.  (2)

7. A group of cells, which are similar in structure and function is called.
   (a) Tissue   (b) Organs   (c) Organelle   (d) None of these.  (1)

8. Write the difference between collenchyma and sclerenchyma.  (3)

9. What is lymph? Write its functions.  (3)

10. Explain the structure of parevechyma what are its major types?  (3)
Swami Sant Dass Public School

Subject: Science.

Topics:
(1) Respiration
(2) Force

Post - Test

Time: 30 minutes               Marks: 20.

1. Differentiate between breathing and respiration. (2)

2. Two types of respiration are __________ and ________________ . (2)

3. Write full form of ATP and ADP. (2)

4. Prawn, an aquatic animal takes in oxygen by means of __________ . (1)
   (a) gills    (b) air tubes    (c) lungs    (d) skin.

5. Explain the mechanism of gaseous exchange between tissues and blood. (3)

6. Density = _________________ . (1)

7. The jet aero planes fly, based upon which law of Newton (motion) ? (1)
   (a) first    (b) second    (c) third    (d) none of these.

8. What are the types of inertia? Explain by giving examples. (3)

9. A body of mass 0.25 kg moving with velocity of 12m/s is stopped by applying a force of 0.6 N calculate the time taken to stop the body. (3)

10. If someone jumps to the shore from a boat, the boat moves in opposite direction. Why? (2)
Swami Sant Dass Public School

Subject: Maths.

Topics: (1) Probability
(2) Number System

Pre-Test

Time: 30 minutes              Marks: 20.

1. We obtain the system of whole numbers (W) when the member ______ is included with the system of ___________ numbers. (2)

2. When the __________ of all the ___________ numbers are included with the system of ___________ numbers, we obtain the system of integers. (3)

3. Find HCF and LCM of 17, 25 by applying prime factorization method. (2)

4. Examine whether the following numbers are rational or irrational.
   (i) \( \sqrt{2} + 3 \)\(^2\)  (ii) \( 6 + \sqrt{6} \)  (6 - \( \sqrt{6} \)) (2)

5. Find HCF and LCM of 25152 and 12156 by using fundamental theorem of arithmetic. (3)

6. What is the probability of getting a tail, if a coin is tossed once?
   (a) 3/4   (b) 1/4   (c) 1/2   (d) 3/2 (1)

7. Find the probability of getting an even number, if a die is tossed once:
   (a) 3/2   (b) 1/2   (c) 3/4   (d) 1/4 (1)

8. A card is drawn from a well shuffled pack of 52 cards. What is the probability that (i) is it a black king? (ii) a red card? (2)

9. In a non-leap year, find the probability of getting 53 Tuesday. (3)

10. The sum of probabilities of all the elementary events of an experiment is ___________. (1)
Swami Sant Dass Public School

Subject: Maths.

Topics: (1) Trigonometry
(2) Heron’s Formula

Post - Test

Time: 30 minutes               Marks: 20.

1. What is the maximum value of $1/\sec \theta$? (1)

2. Maximum value of $\sin \theta$ is _______________. (1)
   (a) 1     (b) 2     (c) 3     (d) 4

3. If $\tan \theta = 4/3$, the value of $3 \sin \theta + 2 \cos \theta / 3 \sin \theta - 2 \cos \theta$ is ____________. (1)
   (a) 4     (b) 3     (c) 2     (d) 1

4. If $\sin A = 1/3$, evaluate $\cos A \csc A + \tan A \sec A$. (1)

5. In the right angled $\triangle ABC$, $\angle ABC=90^\circ$, $AB=3\text{cm}$, $BC=4\text{ cm}$. Find (i) $\sin A$ (ii) $\cos C$ (iii) Is $\sin A = \cos C$? (3)

6. Prove that:
   $\sin 2\theta + \cos^2 \theta = 1$ (3)

7. $\sin^2 \theta + \cos^2 \theta = 1$ or $\sin^2 \theta = ________________ 1- \sin^2 \theta$. (1)

8. Dodecagon polygon has _______ number of sides. (1)
   (a) 8     (b) 10     (c) 5     (d) 12

9. An isosceles triangle has perimeter 30cm and each of the equal sides is 12cm. How much area does it occupy? (4)

10. The base of an isosceles triangle is 10cm and one of its equal sides is 13cm. Find area by using Heron’s formula. (4)
Swami Sant Dass Public School

Subject: Social Studies.

Topics:
(1) Electoral Politics.
(2) India – Location & Size.

Pre - Test

Time: 30 minutes               Marks: 20.

1. A constituency is ______________ to which each candidate, who stands in an election, represents. (1)

2. Electoral Roll is the Roll is the ________ , which contains the __________ of eligible votes. (2)

3. What makes an election democratic? (2)

4. Describe the significance of election manifesto. (3)

5. Distinguish between a by-election and a mid-term election. (3)

6. Length of Indian coastline:
   (a) 5500 Kms   (b) 5700 Kms   (c) 5900 Kms   (d) 6000 Kms. (1)

7. The easternmost longitude of India is: (1)
   (a) 97° 25’   (b) 37° 6’   (c) 68° 7’   (d) 82° 32’

8. The tropic of cancer runs almost half-way through the country. What does this imply? (2)

9. What do you know about the situation of the Indian Sub-continent? (2)

10. Why India is often referred to as a sub-continent? Give reasons. (3)
Post - Test

Time: 30 minutes

Marks: 20.

1. The army of revolutionary Russia was called ________________ . (1)

2. Who were the ‘radicals’ (2)

3. What were the contributions of Lenin? (2)

4. The pro Tsarists were called ___________ and socialist revolutionaries were called __________________ . (2)

5. The Russian revolution took place in the year: (1)
   (a) 1915   (b) 1916   (c) 1917   (d) 1918

6. Define Poverty. (2)

7. Which state has the highest percentage of population below poverty line among Indian States? (1)

8. Distinguish between Absolute poverty and Relative poverty. (3)

9. Explain the views circle of poverty. (3)

10. What is meant by National Food for work Programme [NFWP]?