SANT NISCHAL SINGH PUBLIC SCHOOL LADWA

CLASS - X

SUMMER HOLIDAY HOMEWORK

ACADEMIC SESSION **2023-24**

ART INTEGRATED ACTIVITY

• Prepare a PPT of 10-15 slides on famous sports personality of Manipur & Haryana

ART INTEGRATED PROJECT

General Instructions for ART INTEGRATED PROJECT :

The project needs to be developed and presented in this order.

a) Handwritten/ Type cover page showing project title, student's name, class, section, school's name and academic year.

b) Index page should include names of the subjects, page no. and a column for teacher's sign

c) Acknowledgements (acknowledging the institutions and persons who have helped).

d) The work is to be done in the given sequence only

e) Page limits (for each subject); Minimum 3 Maximum no limits excluding cover page, index page and acknowledgement page

f) Google text to be avoided.

g) You have to mention Project Report also.

• English

Highlight the literary heritage of Manipur by featuring renowned poets ,writers and their works. Mention their contributions to Manipuri literature and quote few lines from their notable poems and writings.

Provide brief Biographical Sketches of the featured poets ,highlighting their award and notable works.

Include interesting anecdotes or quotes that reflect their poetic style and philosophy. Also paste the photographs to support your Project

Social Science

Comparative Study of Mesmerizing traditions, Art , Music ,Food and Festivals of Manipur and Haryana.

• <u>Science</u>

The integration of your state Haryana has to be done with state of Manipur under this project.

You have to prepare Project file of the under listed topics in relation to the

state of Haryana and Manipur

Use all the topics to make the comparative study of Haryana and Manipur

Topic 1- Analysis of Indigenous soil and water conservation measures

Topic 2 - Eco-efficient approaches to land management

Topic 3- Conservation strategy for flora and fauna initiated by state governments.

Prepare an integrated project on the mathematical measurement or structure of any two monument of Manipur and Haryana

• <u>Hindi</u>

* मणिपुर के प्रसिद्ध लेखकों और हरियाणा के प्रसिद्ध लेखकों का परिचय एवं उनकी साहित्यिक उपलब्धियों का वर्णन करते हुए एक परियोजना तैयार कीजिए।

Social –Science

Revise and Learn the syllabus done.

Economics – Development, Sectors of Indian Economy.

Civics – Power Sharing, Federalism.

History – Nationalism in Europe, Nationalism in India.

Geo – Resources and Development, Forest and Wildlife Resources, Water Resources.

Assignment

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<u>History & Economics</u>

1. Explain the Non - Cooperation Movement.

2. Explain the limitations of civil disobedience movement.

3. Explain the following-

a)Satyagraha movement.

b) Khilafat movement.

c) Rowlatt Act.

d) The Salt March.

d) Inland Emigration Act.

e) Guerrilla Movement.

3) Who wrote the book Hind Swaraj?

4) Who was Alluri Sitaram Raju?

5)Explain the following-

a) Unification of Italy

b)Unification of Germany

c) Unification of Britain.

C) Turala the Manalaania Cada of Canduct

7) Define Per Capita Income.

- 8) Differentiate between GDP and GNP.
- 9) Distinguish between Primary, Secondary and Tertiary sectors.
- 10) 'Developmental goals are conflicting in nature'. Explain.

<u>Assignment</u>

Geography & Civics

1) Differentiate between Roof Top Rain Water Harvesting and Bamboo Drip Irrigation System.

2) Explain the following terms

- Shelter Belt
- Crop Insurance
- Gully Erosion
- Vulnerable Species
- Endangered Species
- Sheet Erosion

3) Define federalism

4) Differentiate between Coming together federation and Holding Together Federation .

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5) Explain the different forms of power sharing .

<u>Hindi</u>

- कबीर के 10 शिक्षाप्रद दोहों का संकलन कर लिखिए।
- 'आई एम कलाम' फिल्म देख कर उससे मिलने वाली शिक्षाएं लिखिए।
- Revise all chapters and poems
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<u>English</u>

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- Watch a video of any motivational speaker and give a detailed account of it.
- Solve practice assignments 1,2,3, 4,5,6 from module 1 (Reading)in BBC.
- Solve practice assignments 16,17,18 from module 2 (Writing) in BBC.
- Revise all the chapters and poems done in the class

Chapter - Light

- Draw the ray diagram of convex lens, when the object placed at focus, between focu and centre of curvature.
- Draw the ray diagram of concave mirror, when the object placed at focus and i between focus and pole.
- A convex lens formed image of double of actual size having focus length 10 cm. fin u and v.
- A concave mirror formed image of double of actual size having focus length 20 c r find u and v.
- An object is placed 40 cm in front of convex mirror. The image appears 15 cm behin the mirror. What is focus of mirror?
- What are defects of eye? How can we correct them? Draw neat and clean diagram c these.
- Define power and what is its unit. Define 1 diopter.
- An incident wave falls off on plane mirror. The incident angle is 60°. what is angle between reflected angle and plane mirror?
- What is the focal length plane mirror?
- What is the effect on nature of image if object is moving towards convex mirror?
- Two plane mirrors are set at right angle and flower is placed between the mirrors Find the number of images formed.
- Which of following lenses would prefer to use while reading small letters i dictionary?
- The refractive index of medium A is 3/2 and medium B is 4/3. Find the relativ refractive index of B with respect to A.
- The refractive index of diamond with respect to glass is 1.65. what is the refractiv index of diamond.
- An object is placed at the centre of curvature of concave mirror. Find the distanc between its image and pole.
- A light bulb is placed inside a cube. A small hole is made on one of surface. The hol behaves which type of lens?
- What is the sign of power of convex lens and concave lens.
- In which mirror the image formed by mirror is equal in size and virtual and erect?

- In which medium the incident ray and emergent ray is parallel?
- A ray incident at an angle of 60 degree and the refractive index of medium is 1.732 Find the refracted angle.

Chapter-chemical reaction and equations

Q1:-Identify the type of chemical reaction

i. A - -> B+C

ii. AD+CB- -> AB+CD

Q2:-Why does not silver evolve hydrogen on reacting with dil H_2SO_4 ?

Q3:-. Why do diamond and graphite, the two allotropic forms of carbon, evolve different amounts of heat on combustion?

Q4:-What happens chemically when quick lime is added to water?

Q5:-Why a combustion reaction an oxidation reaction?

Q6:-"We need to balance a skeltal chemical equation." Give reason to justify the statement.

Q7:-Name the reducing agent in the following reaction:

$$3MnO_2 + 4Al - - - > 3Mn + 2Al_2O_3$$

Q8:-(i) Write a balanced chemical equation for process of photosynthesis.

(ii)When do desert plants take up carbon dioxide and perform photosynthesis?

Q9:- Name the type of chemical reaction represented by the following equation:

 $(i)CaO+H_2O\rightarrow Ca(OH)_2$

(ii)3BaCl₂+Al₂(SO4)₃+2AlC₃+3BaSO₄

(iii)2FeSO₄ Heat. Fe₂O₃+SO₂+SO₃

Q10:-Write the chemical equation of the reaction in which the following changes have taken place with an example of each: LADWA

(i) Change in colour

(ii) Change in temperature

(iii) Formation of precipitate

Q11:-List four observations that help us to determine whether a chemical reaction has taken place.

Q12:-What is the role of oxidizing agent in a reaction?

Q13:-Identify the substance oxidized and reduced in the reaction.

CuO(s)+Zn(s)---->ZnO(s)+Cu(s)

Q14:-. A substance X used for coating iron articles is added to a blue solution of a reddishbrown metal Y, the colour of the solution gets discharged. Identify X and Y & also the type of reaction.

Q15:-Why should a magnesium ribbon be cleaned before burning in air?

Q16:-What do you mean by a precipitation reaction? Explain by giving examples.

Q17:-Identify the substances that are oxidized and the substances that are reduced in the $4Na(s)+O_2(g) - - - >$ following reactions. $2Na_2O(s)$

Q18:-What is the product formed on adding quick lime to water?

Q19:-Write the chemical formula for marble.

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Q21:- Write balanced chemical equations for the following chemical reactions:

(a) Hydrogen + Chlorine \rightarrow Hydrogen chloride

(b) Lead + Copper chloride \rightarrow Lead chloride + Copper

(c) Zinc oxide + Carbon \rightarrow Zinc + Carbon monoxide

Q22:-Why should we not touch iron container in which CaO reacts with H2O? Give reason Q23:-Why is aluminium called a self-protecting metal?

Q24:-A rod of metal X is placed in an aqueous solution of lead nitrate. After sometime, it was observed that a thin layer of lead is deposited on the the rod of metal X. According tc you, which is more reactive, lead or metal X and why?

Q25:-On what chemical law, balancing of chemical equation is based?

Q26:-Hydrogen being a highly inflammable gas and oxygen being a supporter of combustion, yet water which is a compound made up of hydrogen and oxygen is used to extinguish fire. Why?

Q27:-What is a redox reaction ? When a magnesium ribbon burns in air with a dazzling flame and forms a white ash; is magnesium oxidised or reduced ? Why ?

Q28:-What does the symbol (aq) represent in a chemical equation?

Q29:-Why is photosynthesis considered an endothermic reaction?

Q30:-Why do we store silver chloride in dark colored bottles? Explain in brief.

Q31:- When hydrogen sulphide gas is passed through a blue solution of copper sulphate, a black precipitate of copper sulphide is obtained and the sulphuric acid so formed remains in the solution. The reaction is an example of a

(a) combination reaction

(b) displacement reaction

(c) decomposition reaction

(d) double displacement reaction.

Q32:- Study the following equation of a chemical reaction:

 $H_2 + CI_2 \rightarrow 2HCI$

(i) Identify the type of reaction.

(ii) Write a balanced chemical equation of another example of this type of reaction.

Q33:- A student prepares aqueous solutions of the following salts:

Copper sulphate: ferrous sulphate, Sodium sulphate, barium chloride. Write the colour of each solution thus formed.

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Q34:- Write one equation each for decomposition reactions where energy is supplied in the form of heat, light and electricity.

Q35:- A sample of water weed was placed in water and exposed to sunlight. Bubbles of a gas are seen on the surface of the leaves.

(i) Name the gas evolved.

(ii) Name the process taking place.

(iii) Write a balanced equation of reaction taking place.

Q36:- Explain the following terms with suitable examples.

(a) Oxidation

(b) Reduction

Q37:- Write the balanced chemical equations for thefollowing reactions and identify the type of reaction in each case.

(b) Sodium hydroxide solution is treated withacetic acid to form sodium acetate and water.

(c) Ethanol is warmed with ethanoic acid toform ethyl acetate in the presence of concentrated H2SO4

(d) Ethene is burnt in the presence of oxygen to form carbon dioxide, water and releases heat and light.

Q38:- What is lime water test for the detection of carbon dioxide?

Q 39:- Identify the oxidising agent (oxidant) in the following reactions:

(a) Pb₃0₄ +8HCl 3PbCl₂ + Cl₂ + 4H₂0

(b) $2Mg + 0_2 \rightarrow 2MgO$

(c) $CuSO_4 + Zn \rightarrow Cu + ZnSO_4$

(d) $V_2O_5 + 5Ca \rightarrow 2V + 5CaO$

(e) $3Fe + 4H_2O \rightarrow Fe3O_4 + 4H_2$

(f) CuO+ $H_2 \rightarrow Cu + H_2O$

Q40:- Write the balanced chemical equations for the following reactions and identify the type of

reaction in each case.

(a) Thermite reaction, iron (III) oxide reacts with aluminium and gives molten iron and aluminium oxide.

(b) Magnesium ribbon is burnt in an atmosphere of nitrogen gas to form solid magnesium nitride.

(c) Chlorine gas is passed in an aqueous potassium iodide solution to form potassium chloride solution and solid iodine.

(d) Ethanol is burnt in air to form carbon dioxide, water and releases heat

Chapter Life processes

1.Name the term for transport of food from leaves to other parts of plants.

- What process in plants is known as transpiration.
- Name the tissue which transport soluble products of photosynthesis in a plant.
- Name the tissue which transport water and Minerals in a plant.
- How do autotrophs obtain CO2 and N2 to make their food?
- Which pancreatic enzyme is effective in digesting protein.
- Name the two ways in which glucose is oxidised to provide energy in various organisms.
- How do plants get each of the raw material required for photosynthesis.
- Name the intermediate and the and products of glucose breakdown in aerobic respiration.
- State the purpose of urine formation?.
- Give reason for the following
 - why is diffusion not sufficient to meet oxygen requirement of all the cells in the multicellular organism?
 - How does desert plant perform photosynthesis if their stomata remain closed

- Differentiate between arteries and veins.
- Leakage of blood from the vessels reduce the efficiency of pumping system. How is leakage prevented?
- Major amount of water is selectively reabsorbed by the Tubular part of nephron in humans. What are the factors on which the amount of water reabsorbed depends?
- Leaves of a healthy potted plant were coated with Vaseline. Will this plant remain healthy for long? Give reason for your answer.
- Give reason -
 - The two ventricles have thicker muscular wall than the two Atria in human heart.
 - The capillaries have wall which are one cell thick.
 - Glottis is covered by epiglottis
 - The wall of track your supported by cartilage ring
 - Long Al covered with blood capillaries 17. In which form nitrogen is taken by plants
- Compare Albela in the lungs and the nephron in the Kidney with respect to their structure and functioning.
- State three common features of respiratory organs of animals.
- Why is double circulation necessary in human being?

Maths

ASSIGNMENT

- Do the revision of chapters- 1,2,3,7,8,9,14,15
- Class 10 Maths MCQs Chapter 1 Real Numbers

1. The largest number which divides 60 and 75, leaving remainders 8 and 10 respectively, is

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- (a) 260
- (b) 75
- (c) 65
- (d) 13
- 2. HCF of 8, 9, 25 is
- (a) 8
- (b) 9
- (c) 25
- (d) 1

3. Which of the following is not irrational?

(a) $(2 - \sqrt{3})^2$ (b) $(\sqrt{2} + \sqrt{3})^2$ (c) $(\sqrt{2} - \sqrt{3})(\sqrt{2} + \sqrt{3})$

- 4. The product of a rational and irrational number is
- (a) rational
- (b) irrational
- (c) both of above
- (d) none of above
- 5. The sum of a rational and irrational number is
- (a) rational
- (b) irrational
- (c) both of above
- (d) none of above
- 6. The product of two different irrational numbers is always
- (a) rational
- (b) irrational
- (c) both of above
- (d) none of above
- 7. The sum of two irrational numbers is always
- (a) irrational
- (b) rational
- (c) rational or irrational
- (d) one

8. . If the HCF of 408 and 1032 is expressible in the form 1032 x 2 + 408 \times p then the value of p is

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- (a) 5
- (b) -5
- (c) 4
- (d) -4

9. The product of three consecutive positive integers is divisible by

- (a) 4
- (b) 6
- (c) no common factor
- (d) only
- 10. The set A = $\{0, 1, 2, 3, 4, ...\}$ represents the set of
- (a) whole numbers
- (b) integers

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- (c) natural numbers
- (d) even numbers

11. Which number is divisible by 11? (a) 1516

(d) 1121

12. LCM of the given number 'x' and 'y' where y is a multiple of 'x' is given by

(a) x

(b) y

(c) xy

(d) xy

13. The largest number that will divide 398,436 and 542 leaving remainders 7,11 and 15 respectively is

(a) 17

(b) 11

(c) 34

(d) 45

14. There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students

- (a) 52
- (b) 56
- (c) 48
- (d) 63

15. There is a circular path around a sports field. Priya takes 18 minutes to drive one round of the field. Harish takes 12 minutes. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet ?

- (a) 36 minutes
- (b) 18 minutes
- (c) 6 minutes
- (d) They will not meet

16. Express 98 as a product of its primes

- (a) $2^2 \times 7$
- (b) 2² × 7²
- (c) 2×7^2
- (d) $2^3 \times 7$

17. Three farmers have 490 kg, 588 kg and 882 kg of wheat respectively. Find the maximum capacity of a bag so that the wheat can be packed in exact number of bags.

0.

- (a) 98 kg
- (b) 290 kg
- (c) 200 kg
- (d) 350 ka

18. The decimal expansion of the rational number 14587250 will terminate after:

(a) one decimal place

- (b) two decimal places
- (c) three decimal places
- (d) four decimal places

19. For some integer p, every odd integer is of the form

- (a) 2p + 1
- (b) 2p
- (c) p + 1
- (d) p

20. . If two positive integers A and B can be ex-pressed as A = xy3 and B = xiy2z; x, y being prime numbers, the LCM (A, B) is

- (a) xy² (b) x⁴y²z
- (c) x^4y^3
- (d) x^4y^3z
- (u) x y z

SHORT ANSWER TYPE QUESTIONS

Q21. Two positive integers 'a' and 'b' can be expressed as a = x 3 y 2 and b = xy

x and y

are prime numbers .What is the L.C.M and H.C.F of a and b?

Q22. Prove that if x and y are both odd positive integers, then x2 + y2 is even

but

not divisible by 4.

Q23. Prove that n2 - n is divisible by 2 for every positive integer 'n'.

Q24. Prove that one of every three consecutive positive integers is divisible by

Q25. Find the H.C.F of 65 and 117 and express it in the form 65m+117n.

Q26. If the H.C.F of 210 and 55 is expressible in the form of 210×5 + 55y, find

íγ'.

3.

Q27. Find the greatest number of six digits exactly divisible by 24, 15 and 36.

Q28. Three sets of English, Hindi and Mathematics books have to be stacked in

such a

same. The number of English books is 96, the number of Hindi books is 24

and

the number of Mathematics books is 336. Assuming that the books are of

same thickness, determine the number of stacks of English, Hindi and

Mathematics books.

Q29. Two brands of chocolates are available in packs of 24 and 15 respectively.

lf I need

to buy an equal number of chocolates of both kinds, what is the least

number of

boxes of each kind I would need to buy?

Q30. Given $\sqrt{2}$ is irrational, prove that 5 + $3\sqrt{2}$ is an irrational number.

Class -10 Maths MCQs

Chapter- 2 Polynomials

If one zero of the quadratic polynomial x² + 3x + k is 2, then the value of k is

 (a) 10
 (b) -10
 (c) 5
 (d) -5

 2. Given that two of the zeroes of the cubic poly-nomial ax³ + bx² + cx + d are

 the third zero is

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $-\frac{d}{a}$

3. If one of the zeroes of the quadratic polynomial $(k - 1) x^2 + kx + 1$ is – 3, then the value of k is

(a)	$\frac{4}{3}$	(b) $\frac{-4}{3}$	(c) $\frac{2}{3}$	(d) $\frac{-2}{3}$

4. A quadratic polynomial, whose zeroes are -3 and 4, is (a) x^2-x+12 (b) x^2+x+1 (c) x22-x2-6 (d) $2x^2+2x-6$

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5. 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) $a = 0$, $b = -6$

6. The number of polynomials having zeroes as -2 and 5 is

(a) 1 (b) 2 (c) 3 (d) more than 3

7. Given that one of the zeroes of the cubic polynomial $ax^3 + bx^2 + cx + d$ is

the other two zeroes is

(a) $-\frac{c}{a}$ (b) $\frac{c}{a}$ (c) 0 (d) $-\frac{b}{a}$

8. If one of the zeroes of the cubic polynomial $x^3 + ax^2 + bx + c$ is –1, then the product of the

other two zeroes is

(c) c and a have the same sign

(a) b - a + 1 (b) b - a - 1 (c) a - b + 1 (d) a - b - 1

9. The zeroes of the quadratic polynomial x2 + 99x + 127 are

(a) both positive (b) both negative (c) one positive and one negative (d) both equal

10. The zeroes of the quadratic polynomial $x^2 + kx + k$, k? 0,

(a) cannot both be positive (b) cannot both be negative (c) are always unequal (d) are always equal

11. If the zeroes of the quadratic polynomial ax² + bx + c, c # 0 are equal, then
(a) c and a have opposite signs
(b) c and b have opposite

(d) c and b have the same

signs

sign

12. If one of the zeroes of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then it

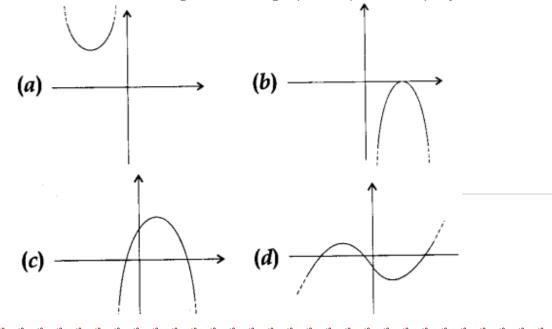
(a) has no linear term and the constant term is negative.

(b) has no linear term and the constant term is positive.

(c) can have a linear term but the constant term is negative.

(d) can have a linear term but the constant term is positive.

13. Which of the following is not the graph of quadratic polynomial?



	(a) 2	(b) 3	(c) 4	(d) mor	re than 4	
15.	A quadratic p	olynomial, wl	hose zeores are	-4 and -5, is		
	(a) x ² -9x + 20	(b) x ² + 9x	x + 20 (c) x ² -9	9x-20 (d)	x ² + 9x-	20
16.	The zeroes of (a) both nega (c) both posit	tive	c polynomial x² (b) one (d) both	positive and		tive
17. positive	(a) both nega		: polynomial x² - ɔ) one positive a			(c) bo
18. positive	(a) both nega		c polynomial 3x ² o) one positive a		tive	(c) bo
19.	The zeroes of (a) both nega		c polynomial x² (b) c	– 18x + 81 are one positive a		iegati∨
	(c) both positi	ve and unequ	ual (d) k	ooth equal ar	nd positiv	е
20	. The zeroes of (a) both equa		c polynomial x² (b) b	+ px + p, p ≠ oth cannot b		2
	(c) both unequ	al	(d) bo	th cannot be	negative	
		SHORT AN	NSWER TYPE QUE	STIONS		
21. If are -2.	e the zeros of t		polynomial f(x)=		Find the v	value o
	e zero of the q nd the value of		rnomial f(x)= 4 >	<² - 8KX -9 i	is negativ	e of th
	sum of zeros c Find the value		ic polynomial F	(t)= k t ² +2t +	3k is equa	al to th
	a quadratic po nial PX ² +q X +		ose zeros are ne	gative of the	zeros of	the

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26. Find a quadratic polynomial, the sum and product of whose zeros are respectively. Also find its zeros 27. If 1 is the zero of the polynomial $p(x)=a x^2 - 3(a-$ 1) x - 1, then find value of a.

28. If the graph of the quadratic polynomial + the negative direction of y- axis, ther what

is the sign of c.

29. If the graph of the quadratic polynomial + the positive direction of y- axis, then what is the sign of c.

30. If F(x)= +- a -

MCQs for Chapter 3

1. The pairs of equations x+2y-5 = 0 and -4x-8y+20=0 have:

- (a) Unique solution
- (b) Exactly two solutions
- (c) Infinitely many solutions
- (d) No solution

2. If a pair of linear equations is consistent, then the lines are:

(a) Parallel

- (b) Always coincident
- (c) Always intersecting
- (d) Intersecting or coincident
- 3. The pairs of equations 9x + 3y + 12 = 0 and 18x + 6y + 26 = 0 have

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- (a) Unique solution
- Estd. 1994 (b) Exactly two solutions
- (c) Infinitely many solutions
- (d) No solution

4. If the lines 3x+2ky - 2 = 0 and 2x+5y+1 = 0 are parallel, then what is the value of k?

(a) 4/15

- (C) $\frac{4}{5}$
- (d) 5/4

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5. If one equation of a pair of dependent linear equations is -3x+5y-2=0. The second equation will be:

- (a) -6x+10y-4=0
- (b) 6x-10y-4=0
- (c) 6x+10y-4=0
- (d) -6x+10y+4=0

6.The solution of the equations x-y=2 and x+y=4 is:

- (a) 3 and 1
- (b) 4 and 3
- (c) 5 and 1
- (d) -1 and -3

7. A fraction becomes 1/3 when 1 is subtracted from the numerator and it becomes 1/4 when 8 is added to

its denominator. The fraction obtained is:

- (a) 3/12
- (b) 4/12
- (c) 5/12
- (d) 7/12

8. The solution of 4/x+3y=14 and 3/x-4y=23 is:

- (a) ¹/₅ and -2
- (b) $\frac{1}{3}$ and $\frac{1}{2}$
- (c) 3 and $\frac{1}{2}$
- (d) 2 and

9. The angles of cyclic quadrilaterals ABCD are: A = (6x+10), B=(5x)°, C

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The value of x and y is:

- (a) x=20° and y = 10°
- (b) x=20° and y = 30°
- (c) x=44° and y=15°
- (d) x=15° and y=15°.

10. The pair of equations x = a and y = b graphically represents lines which are

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(a) parallel

- (b) intersecting at (b, a)
- (c) coincident
- (d) intersecting at (a, b)

11. 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

12. 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 Std. 1994
- (d) no solution

13. The value of c for which the pair of equations cx - y = 2 and 6x - 2y = 3 will have infinitely many

solutions is

- (a) 3
- (b) -3
- (c) -12

(d) no value

14. If the lines representing the pair of linear equations $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ are

coincident, then

(a) $a_1/a_2 = b_1/b_2$

(b) $a_1/a_2 = b_1/b_2 = c_1/c_2$

(c) $a_1/a_2 \neq b_1/b_2$

(d) $a_1/a_2 = b_1/b_2 \neq c_1/c_2$

15. A pair of linear equations which has a unique solution x = 2, y = -3 is

(c)
$$2x - y = 1$$
; $3x + 2y = 0$

(d)
$$x - 4y - 14 = 0$$
; $5x - y - 13 =$

16. The father's age is six times his son's age. Four years hence, the age of the father will be four times

his son's age. The present ages, in years, of the son and the father are, respectively

- (c) 6 and 36
- (d) 3 and 24

17. If the pair of linear equations has a unique solution, then the lines representing these equations will

Estd. 1994

- (a) coincide
- (b) intersect at one point
- (c) parallel to each other

(d) narallal to v_avie

⁽a) 4 and 24

⁽b) 5 and 30

18. Which of the following method(s) is/are used to find the solution of a pair of linear

equations algebraically?

- (a) Substitution Method
- (b) Elimination Method
- (c) Cross- multiplication Method
- (d) All the above

19. The graphical representation of a pair of equations 4x + 3y - 1 = 5and 12x + 9y = 15 will be

- (a) parallel lines
- (b) coincident lines
- (c) intersecting lines
- (d) perpendicular lines

20. A two digit number is 4 times the sum of its digits. If 18 is added to the number , the digits are reserved. find the number.

ADW

- (a) 24
- (b) 42
- (c) 36
- (d) 63

SHORT ANSWER TYPE QUESTIONS

21. Two numbers are in the ratio 5:6. If 8 is subtracted from each of the numbers, the ratio becomes 4:5.

Find the numbers.

22. A two digit number is obtained by either multiplying the sum of the digits b 8 and then subtracting 5

23. The sum of bthe numerator and the denominator of a fraction is 12 . if the denominator is increased

by 3, the fraction becomes ½. Find the fraction.

24. The sum of the numerator and denominator of a fraction is 3 less than denominator. If the

numerator and denominator are decreased by 1, the numerator becomes half the

denominator. Determine the fraction.

25. Two year ago a father was five times as old as his son. Two years later his age will be 8 more than

Three times the age of his son . Find the present ages of father and son.

26. Two years ago Ram was thrice as old as his daughter and six years later , he will be four years older than

Twice her age. How old are they now ?

27. Points A and B are 90 km apartfrom each other on a highway. A car starts from point A

and another from point B at the same time. If they go in the same direction they meet in nine

hours if they go in the opposite directions they meet in 9/7 hours. Find their speeds.

28. There are two examination rooms A and B . If 10 candidates are sent from A To B, the number of

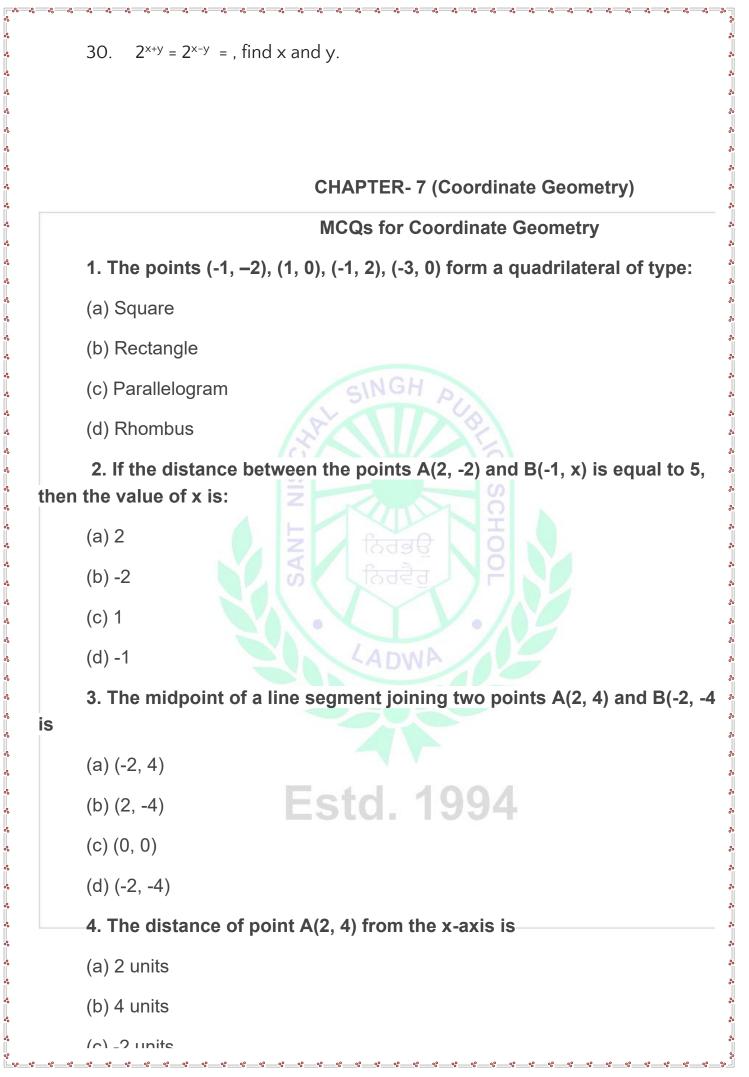
Students in each room is same. If 20 students are sent from B to A, The number of students in A is

Double the number of students in B. Find the number of students in each room.

29. In a competitive examination , one mark is awarded for each correct answer while $\frac{1}{2}$ mark is

deducted for each wrong answer. Anil awarded 120 questions and got 90 marks . How many

questions did he answer correctly ?



5. The distance b	etween the points P(0, 2) and Q(6, 0) is
(a) 4√10	
(b) 2√10	
(c) √10	
(d) 20	
6. If O(p/3, 4) is th 5) and Q(-2, 3), th	ne midpoint of the line segment joining the points P(-6 ne the value of p is:
(a) 7/2	
(b) -12	
(c) 4	SINGH PU
(d) -4	
7. The point whic n the ratio of 2:3 is:	h divides the line segment of points P(-1, 7) and (4, -3)
(a) (-1, 3)	ਨਿਰਭਉ ਨਿਰਵੈਰ
(b) (-1, -3)	ਅੰ ਨਿਰਵੇਰ –
(c) (1, -3)	
(d) (1, 3)	LADWA
8. The ratio in wh Q(6, –8) is divided by C	ich the line segment joining the points P(-3, 10) and D(-1, 6) is:
(a) 1:3	
(b) 3:4	Estd. 1994
(c) 2:7	
(d) 2:5	
	es of a point P, where PQ is the diameter of a circle 2, – 3) and Q is (1, 4) is:
(a) (3, -10)	
(h) (2 _10)	

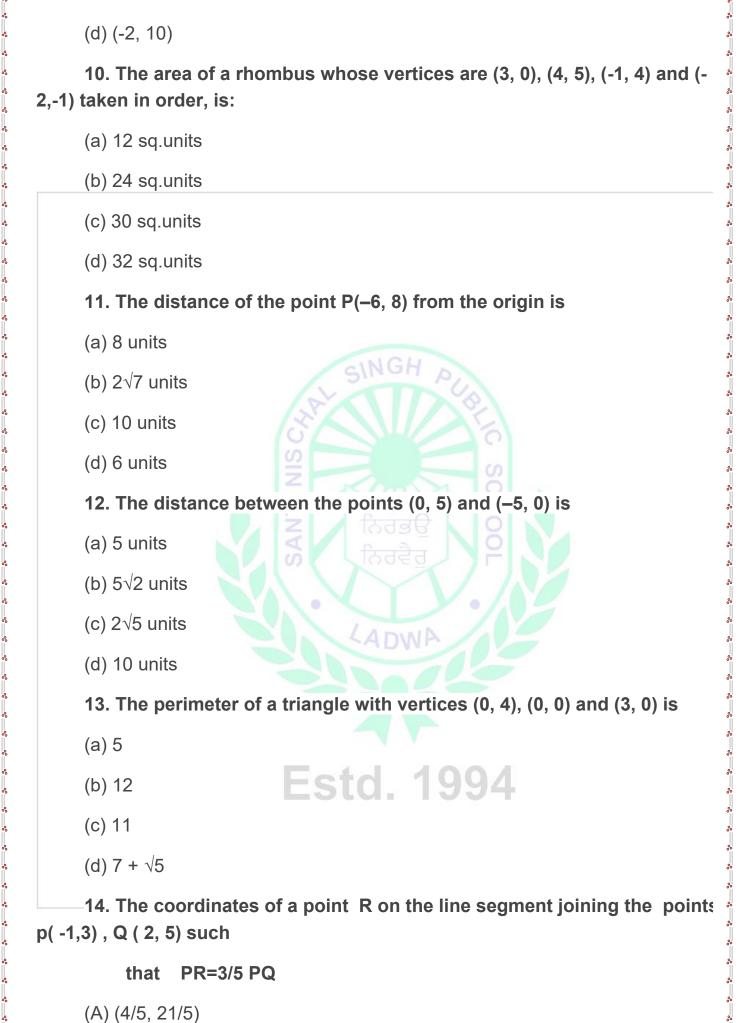
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(A) (4/5, 21/5)

(B) (0 , 1/5)

- (C) (2/5, 3/5)
- (D) NONE

15. The point which lies on the perpendicular bisector of the line segment joining the points A(-2, -5) and B(2, 5) is

(a) (0, 0)

- (b) (0, 2)
- (c) (2, 0)

(d) (-2, 0)

16. If the points A(1, 2), O(0, 0) and C(a, b) are collinear, then

- (a) a = b
- (b) a = 2b
- (c) 2a = b
- (d) a = -b

17. If the points A(6, 1), B(8, 2), C(9, 4) and D(p, 3) are the vertices of a parallelogram, taken in order, then the value of p is

ADWP

- (a) 4
- (b) -6
- (c) 7
- (d) -2

18. A line intersects the y-axis and x-axis at the points P and Q, respectively. If (2, -5) is the midpoint of PQ, then the coordinates of P and Q are, respectively

(a) (0, -5) and (2, 0)

(b) (0, 10) and (-4, 0)

(c) (0, 4) and (-10, 0)

(d) (0, -10) and (4, 0)

19 The perpendicular bisector of the line segment icining the points A(1, 5) and B(4, 6) cuts the y-axis at

- (a) (0, 13)
- (b) (0, -13)
- (c) (0, 12)
- (d) (13, 0)

20. The fourth vertex D of a parallelogram ABCD whose three vertices are A(-2, 3), B(6, 7) and C(8, 3) is

- (a) (0, 1)
- (b) (0, -1)
- (c)(-1, 0)
- (d) (1, 0)

SHORT ANSWER TYPE QUESTIONS

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21. Find a point on which is at equidistant from the points A(2, -5) and B (-2,9)

22. Find a point on which is at equidistant from the points A(6, 5) and B (-4 ,3).

23. If the point A(2, -4) is equidistant from P(3, 8) and Q (-10, y). find the value of y. Also find the distance PQ.

24. Show that the points A(1,-2), B (3,6), C (5,10), D (3,2) are the vertices of a parallelogram.

25. Name the quadrilateral formed by the points A(2,-2), B(7,3), C(1,-1), D(6,-6).and give reason for Estd. 1994

your answer.

26. Prove that the points (3,0), (4,5), (-1,4), (-2, -1), taken in order are the vertices of a Rhombus also find

its area.

27. Name the type of a triangle formed by the points, P (6).

28. The centre of a circle is (2a, a-7), Find the values of 'a' if the circle passes through the point (11, -9)

and has diameter 10 units.

29. Two opposite vertices of a square are (-1,2) and (3,2). Find the coordinates of other two vertices.

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30. Prove that the points (2,-2), (-3,8), and (-1,4) are collinear.



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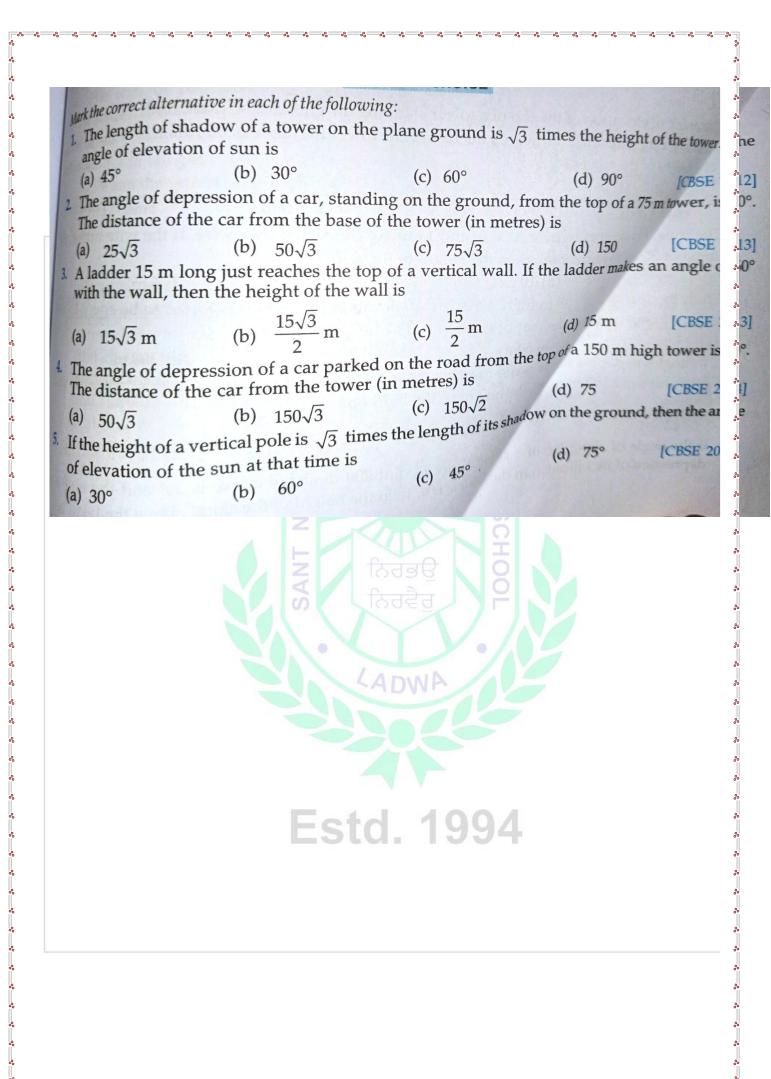
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16	(a) $2\cos\theta$ (b) 0	(c)	2 sin θ	(d) 1	
10.	If $\triangle ABC$ is right angled at (a) 0	t <i>C</i> , then the value	of $\cos(A + B)$ is	(4) 1	
	(a) 0 (b) 1 If $\sec \theta + \tan \theta = x$, then see	(c)	$\frac{1}{2}$	(d) $\frac{\sqrt{3}}{2}$	
	(a) $\frac{x^2 + 1}{x}$ (b) $\frac{x^2}{2}$ If $\sec \theta + \tan \theta = x$, then tar	$\frac{+1}{2x}$ (c) $\theta =$	$\frac{x^2-1}{2x}$	(d) $\frac{x^2 - 1}{x}$	
19.	(a) $\frac{x^2 + 1}{x}$ (b) $\frac{x^2}{x^2}$ sec ⁴ A - sec ² A is equal to	$\frac{-1}{x}$ (c)	$\frac{x^2+1}{2x}$	(d) $\frac{x^2 - 1}{2x}$	
20.	(a) $\tan^2 A - \tan^4 A$ (b) $\tan^2 \cos^4 A - \sin^4 A$ is equal to	$A^4A - \tan^2 A$ (c)	$\tan^4 A + \tan^2 A$ ((d) $\tan^2 A + \tan^4 A$	
	(a) $2\cos^2 A + 1$ (b) $2\cos^2 A + 1$	$\cos^2 A - 1$ (c)	$2\sin^2 A - 1$	(d) $2\sin^2 A + 1$	
21.	The value of $(1 + \cot \theta - \cos \theta)$ (a) 1 (b) 2			(d) 0	
22.	$(\csc \theta - \sin \theta)(\sec \theta - \cos \theta)$ (a) 0 (b) 1	$(\tan \theta + \cot \theta)$ is equal to (c)		(d) none of thes	51

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	78	ation of the top of a tower a	the groun	d 50 m away from
		in the second seco	at a point on the grad	, oin the for
	6 The angle of eleva	ation of the top of a tower a P. Then the height of the to (wer (in metres)	50
	of the tower is 45°	Then the height of the to	50 (d	$\frac{50}{\sqrt{3}}$ [CPc
	of the tower 13 45		(c) $\frac{50}{\sqrt{2}}$ (c)	
	(2) 50 /2	(Ъ) 50	t when placed again	nst a wall. If the foot of
	(4) 5075	, coo with the gro	und with he ladder (in	metres) is
7	7. A ladder makes ar	(b) 50 (angle of 60° with the gro	ength of the	
	ladder is 2 m away	y from the war	E (C	CRSE.
	4	(b) $4\sqrt{3}$ (b) $4\sqrt{3}$ (b) $4\sqrt{3}$ (c) $4\sqrt{3}$ (b) 45°	(c) $2\sqrt{2}$	of elevation of the
	(a) $\overline{\sqrt{3}}$	(D) $4\sqrt{3}$	w is $1:\sqrt{3}$. The angular	(d) 90° une sum is
8	The ratio of the ler	igth of a rod and its shade	(c) 60°	am its foot is co.
	(a) 30°	(b) 45° ation of a tower from a di	stance of 100 metres r	rolli its foot is 60°, then H
-	If the angle of elev	ration of a tower from a di	Istance	
9.	If the angle of elev	n ic		(d) $\frac{200}{\sqrt{3}}$ m
	height of the tower	100	(c) 50√3 m	(a) $\sqrt{3}$ m
	(-) 100 5	(b) $\frac{100}{\sqrt{3}}$ m	(() 001	(1
	(a) $100\sqrt{3}$ m	(0) 13	aight of the vertical to	wer that will cast a shade
10	If the altitude of th	(b) $\frac{-1}{\sqrt{3}}$ m the sum is at 60°, then the he	eight of a	
10.	of length 30 m is	Self self self self self self	(c) $\frac{30}{\sqrt{3}}$ m	(1) 15 5
	-		(c) $\frac{1}{\sqrt{2}}$ m	(a) $15\sqrt{2}$ m
	(a) $30\sqrt{3}$ m	(b) 15 m	V3	b(a > b) from its foot.
			points distant u allu	o tower is
11.	If the angles of elev	vation of a tower from two ine from it are 30° and 60°	, then the height of th	
	the same straight li	ine from it are 50° and 60°		(d) $\sqrt{\frac{a}{h}}$
		a) 17	$(c) \sqrt{u-v}$	VO
	(a) $\sqrt{a+b}$		c two points dista	nt a and b from the base;
12.	If the angles of elev	vation of the top of a tower at line with it are complem	Hom the heigh	ht of the tower is
14.	in the same straigh	t line with it are complem	ice i i i i i i i i i i i i i i i i i i	
	in the same straight		(c) $\frac{a}{b}$	(d) $\sqrt{\frac{a}{b}}$
	(a) <i>ab</i>	(b) <i>\(\sum ab\)</i>	(C) b	10
		i (learnagion ()	f two ships on opposit	e sides of the light house
13.	From a light house	the angles of depression of and 45°. If the height of the	e light house is h metr	es, the distance between
	observed to be 30° a	and 45°. If the neight of the		
	ships is			
		(b) $(\sqrt{3} - 1) h m$	(c) $\sqrt{3}h$ m	(d) $1 + \left(1 + \frac{1}{\sqrt{3}}\right)$
		(b) $(\sqrt{3} - 1) n \ln 1$		(\3)
	(a) $(\sqrt{3} + 1) h m$		1. 1	al plane from a point A
		Cul Los of a torward	tanding on a horizont	al Dialle Hulli a Dulli a
14.	The angle of elevati	ion of the top of a tower st	tanding on a horizont	of alovation is found to
	The angle of elevati After walking a dist	tance <i>d</i> towards the foot o	f the tower the angle	of elevation is found to
	The angle of elevati After walking a dist	tance <i>d</i> towards the foot o	f the tower the angle	of elevation is found to
	The angle of elevati After walking a dist The height of the to	tance <i>d</i> towards the foot o ower is	of the tower the angle	of elevation is found to
	The angle of elevati After walking a dist The height of the to	tance <i>d</i> towards the foot o ower is	of the tower the angle	of elevation is found to
	The angle of elevation After walking a distribution of the height of the to (a) $\frac{d}{\cot \alpha + \cot \beta}$	tance <i>d</i> towards the foot o ower is (b) $\frac{d}{\cot \alpha - \cot \beta}$	If the tower the angle $\frac{d}{(c)} \frac{d}{\tan \beta - \tan \alpha}$	(d) $\frac{d}{\tan\beta + \tan\alpha}$
	The angle of elevation After walking a distribution of the height of the to (a) $\frac{d}{\cot \alpha + \cot \beta}$	tance <i>d</i> towards the foot o ower is (b) $\frac{d}{\cot \alpha - \cot \beta}$	If the tower the angle $\frac{d}{(c)} \frac{d}{\tan \beta - \tan \alpha}$	(d) $\frac{d}{\tan\beta + \tan\alpha}$
15.	The angle of elevation After walking a dist The height of the to (a) $\frac{d}{\cot \alpha + \cot \beta}$ The tops of two pole	tance <i>d</i> towards the foot o ower is (b) $\frac{d}{\cot \alpha - \cot \beta}$ les of height 20 m and 14	f the tower the angle d (c) $\frac{d}{\tan \beta - \tan \alpha}$ m are connected by	(d) $\frac{d}{\tan\beta + \tan\alpha}$
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15.	The angle of elevation After walking a dist The height of the to (a) $\frac{d}{\cot \alpha + \cot \beta}$ The tops of two polo angle of 30° with how (a) 12 m	tance <i>d</i> towards the foot o ower is (b) $\frac{d}{\cot \alpha - \cot \beta}$ les of height 20 m and 14 orizontal, then the length (b) 10 m	f the tower the angle of the tower the angle of $\frac{d}{(c)} \frac{d}{\tan \beta - \tan \alpha}$ m are connected by of the wire is (c) 8 m	(d) $\frac{d}{\tan\beta + \tan\alpha}$ a wire. If the wire mak
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15. 16. J (17. T II (a	The angle of elevation After walking a dist The height of the to (a) $\frac{d}{\cot \alpha + \cot \beta}$ The tops of two pole angle of 30° with how (a) 12 m From the top of a cli- angle of depression of (a) 25 m The angles of depress of the ships are 100 m (b) $\frac{50}{\sqrt{3}+1}$ m	tance <i>d</i> towards the foot of ower is (b) $\frac{d}{\cot \alpha - \cot \beta}$ les of height 20 m and 14 prizontal, then the length (b) 10 m iff 25 m high the angle of of the foot of the tower. (b) 50 m sion of two ships from the mapart, the height of the (b) $\frac{50}{\sqrt{3}-1}$ m	f the tower the angle of the tower the angle of $\frac{d}{(c)} \frac{d}{\tan \beta - \tan \alpha}$ m are connected by of the wire is (c) 8 m of elevation of a towe The height of the tow (c) 75 m e top of a light house e light house is (c) 50 ($\sqrt{3} - 1$) m	(d) $\frac{d}{\tan\beta + \tan\alpha}$ a wire. If the wire make (d) 6 m r is found to be equal to ver is (d) 100 m are 45° and 30° towards (d) 50 ($\sqrt{3}$ + 1)r
15. 16.] (17.] I (a (17.] I (a (18.] I	The angle of elevations After walking a dist The height of the total (a) $\frac{d}{\cot \alpha + \cot \beta}$ The tops of two poles angle of 30° with how (a) 12 m From the top of a cliphon angle of depression of the angles of depress f the ships are 100 m (a) $\frac{50}{\sqrt{3}+1}$ m The angle of elevations the angle of elevations	tance <i>d</i> towards the foot of ower is $\frac{d}{(b)} \frac{d}{\cot \alpha - \cot \beta}$ The soft height 20 m and 14 orizontal, then the length (b) 10 m iff 25 m high the angle of of the foot of the tower. (b) 50 m sion of two ships from the mapart, the height of the	f the tower the angle of $\frac{d}{(c)} \frac{d}{\tan \beta - \tan \alpha}$ m are connected by of the wire is (c) 8 m of elevation of a towe The height of the tow (c) 75 m e top of a light house is (c) 50 ($\sqrt{3} - 1$) m	(d) $\frac{d}{\tan\beta + \tan\alpha}$ (d) 6 m (d) 6 m (e) 6 m (f) 100 m (f) 100 m (f) 100 m (g) 100 m (g) 100 m (h) 10

. 179 (a) 200 m (b) 500 m (c) 30 m (d) 400 m **19.** The height of a tower is 100 m. When the angle of elevation of the sun changes from 30° the shadow of the tower becomes x metres less. The value of x is «15°, (a) 100 m (d) $\frac{100}{\sqrt{3}}$ m (b) 100√3 m (c) $100(\sqrt{3}-1)m$ 20. Two persons are a metres apart and the height of one is double that of the other. If fro [®]the middle point of the line joining their feet, an observer finds the angular elevation of the ops to be complementary, then the height of the shorter post is (b) $\frac{a}{\sqrt{2}}$ (a) (c) $a\sqrt{2}$ (d) $\frac{u}{2\sqrt{2}}$ Estd. 1994

		$\frac{2}{3}$	(b)	16	1.	9		249
12	. W.	hich of the f	ollowing ca	Innot he u	(C)	9 25	(d) $\frac{5}{6}$	
	(a)	hich of the f $\frac{2}{3}$	(h)	and be th	e probabili	ty of an e	event?	and the second
		3	(0)	-1.5		15%	(d) 0.7	
13	. If .	P(E) = 0.05, - 0.05					(4) 0.7	
			(b)	0.5	(c)	0.9	(d) 0.05	Species.
14	(a)	0.2	ollowing ca	nnot be th	e probabili	ty of occ	(d) 0.95 currence of an event?	1
					(c)	0.8	(d) 1.6	
15.	(a)	e probability	or a certai (b)				(-) 10	
	15				(c)	1/2	(d) no existent	1.1.1
16.		e probability			ent is			
	(a)		(b)		(c)	1/2	(d) non-existent	149
7.	Aaı is tl				prize:		prizes. If Priya purchased a tick	et, what
	(a)	$\frac{19}{20}$	(b)	$\frac{1}{25}$	(c)	1	(d) $\frac{17}{20}$	
0								a là gh
8.	of 3	or 5?		-			nat is the probability that it is a	multipl
	(a)	$\frac{13}{25}$	(b)			$\frac{12}{25}$	(d) $\frac{23}{50}$	-
9.	An	nonth is sele	ected at rar	ndom in a	year. The j	orobabili	ity that it is March or October,	is
	(a)	$\frac{1}{12}$	(b)	$\frac{1}{6}$	(c)	$\frac{3}{4}$	(d) none of these	
).	From		s of the wo	ord "MOB	ILE", a lett	er is sele	ected. The probability that the	letter i
		1	and search	3	1	1	(d) $\frac{1}{2}$	
	(a)	9	(b)	/	(c	-	2	
ι.	A di	e is thrown	once. The	probabili	ty of gettin	ng a prir	ne number is	
		2		1	(c	1		CBSE 2
	(a)			0				
	(a) $\frac{1}{3}$ (b) $\frac{1}{3}$ (c) $\frac{1}{2}$ (c) $\frac{1}{2}$ (c) $\frac{5}{2}$ [CBSE :							
		1	0 0	1	10	1	(d) $\frac{5}{6}$	[CBSE 2
	(a)	2	(b)	3	((6	0	om the
ι.	A box contains 90 discs, numbered from 1 to 90. If one disc is drawn at random from the the probability that it bears a prime number less than 23, is							
	and J	7		10		4	(d) $\frac{9}{89}$	[CBSE
	(a)	-	(b)	10 90	(0	$\frac{4}{45}$	om the numbers 1, 2, 3,,15	

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Information Technology

Part-B - Learn - Web Application and Security

Practical-

Make an invitation for friends of your Birthday party with the help of (
 character and paragraph style) & using *Template* .Submit in Soft copy.

Art & Craft

Draw the following-

- 2 landscape (colored pencil shading)
- 2 Nature study (leaves, flower)
- 1 Still life
- Page 37 (2 birds, 2 animals and trees with colors)

Physical Education

GINGH

1. Athletics

- Draw 400 meters Track.
- 2. Draw track of : Running, Jumping , Throwing field events.

3. Write about any one game mentioned in Sports file (Cricket or Volleyball or Badminto etc).

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4. Paste and mention write up about 15 Yoga asana.

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