

HOLIDAY HOMEWORK CLASS :XI A&B

		H.W		
1.	Two finite sets have a of first set is 64 more	m and n elements resp re than the total num	pectively. The total number of subsets of the s	mber of subsets second set. The
	values of m and n re (a) 7, 6 (b	espectively are.	(c) 6, 3	(d) 8, 7
2.	Which of the following(a) Set of even prime(b) Set of composite(c) Set of prime num(d) Set of odd composite	ing is a null set? e numbers. numbers less than 10 bers less than 2. osite numbers.	0.	
3.	If $A = \{1, 2, 6\}$ and A and $a + b$ is odd. $\}$, (a) 2 (b)	R be the relation def , then no. of elements b) 3 (c) 4	Fined on A by $R = \{(a, s) \in R \text{ is equal to} \\ (d) 5 \}$, b): a ∈ A, b ∈
4.	Find the angle in rac cm and tip describes (a) 7/25 (b	dian through which a s an arc of length 18 c o) 6/25	a pendulum swings it cm. (c) 8/25	its length is 75 (d) 3/25
5.	Express 50° 37' 30" (a) $7\pi/32$ (b)	in radian. b) $5\pi/32$	(c) 9π/32	(d) π/32
6.	If $f(x) = x^3 + \frac{1}{x^3}$, the	en f (x) + f(-x) is equ	al to	
	(a) $2x^3$ (b)	b) $2\frac{1}{x^3}$	(c) 0	(d) 1
7.	The values of a and $(a) -2, 5$ (b)	b, if ordered pair is (2 5) 2, 5	(a - 5, 4) = (5, b + 6) (c) 5, 2	(d) 5, -2
8.	Which of the follow quadrant?	wing cannot be the	value of Sin A if A	lies in second
	(a) 1/4 (b	o) 3/4	(c) 2/4	(d) -3/4
	1. 2. 3. 4. 5. 6. 7. 8.	1. Two finite sets have of first set is 64 movalues of m and n re (a) 7, 6 (f) 2. Which of the follow (a) Set of even prim (b) Set of composite (c) Set of prime num (d) Set of odd comp 3. If A = {1, 2, 6} and A and a + b is odd.} (a) 2 (f) 4. Find the angle in ra cm and tip describes (a) 7/25 (f) 5. Express 50° 37' 30'' (a) $7\pi/32$ (f) 6. If f (x) = $x^3 + \frac{1}{x^3}$, th (a) $2x^3$ (f) 7. The values of a and (a) -2, 5 (f) 8. Which of the follow quadrant? (a) 1/4 (f)	H.W 1. Two finite sets have m and n elements responsible of first set is 64 more than the total numerical values of m and n respectively are. (a) 7, 6 (b) 5, 1 2. Which of the following is a null set? (a) Set of even prime numbers. (b) Set of composite numbers less than 10 (c) Set of prime numbers less than 2. (d) Set of odd composite numbers. 3. If A = {1, 2, 6} and R be the relation defind and a + b is odd.}, then no. of elements (a) 2 (b) 3 (c) 4 4. Find the angle in radian through which a comparison of length 18 comparison (a) 7/25 (b) 6/25 5. Express 50° 37' 30" in radian. (a) $7\pi/32$ (b) $5\pi/32$ 6. If f (x) = x ³ + $\frac{1}{x^3}$, then f (x) + f(-x) is equal (a) $2x^3$ (b) $2\frac{1}{x^3}$ 7. The values of a and b, if ordered pair is (for (a) -2, 5 (b) 2, 5) 8. Which of the following cannot be the quadrant? (a) 1/4 (b) 3/4	H.W 1. Two finite sets have m and n elements respectively. The total nu of first set is 64 more than the total number of subsets of the s values of m and n respectively are. (a) 7, 6 (b) 5, 1 (c) 6, 3 2. Which of the following is a null set? (a) Set of even prime numbers. (b) Set of composite numbers less than 10. (c) Set of prime numbers less than 2. (d) Set of odd composite numbers. 3. If A = {1, 2, 6} and R be the relation defined on A by R = {(a, A and a + b is odd.}, then no. of elements in R is equal to (a) 2 (b) 3 (c) 4 (d) 5 4. Find the angle in radian through which a pendulum swings it cm and tip describes an arc of length 18 cm. (a) 7/25 (b) 6/25 (c) 8/25 5. Express 50° 37′ 30″ in radian. (a) $7\pi/32$ (b) $5\pi/32$ (c) $9\pi/32$ 6. If f (x) = x ³ + $\frac{1}{x^3}$, then f (x) + f(-x) is equal to (a) $2x^3$ (b) $2\frac{1}{x^3}$ (c) 0 7. The values of a and b, if ordered pair is $(2a - 5, 4) = (5, b + 6)$ (a) $-2, 5$ (b) $2, 5$ (c) $5, 2$ 8. Which of the following cannot be the value of Sin A if A quadrant? (a) 1/4 (b) 3/4 (c) 2/4

	 9. If A = {3, 6, 9, 12, 15, 18, 21}, B = {4, 8, 12, 16, 20}, C = {2, 4, 6, 8, 10, 12, 14, 16}, D = {5, 10, 15, 20}; find (A ∪ B) ∩ (C ∪ D). 10. Find the domain and range of the function (a) f(x) =√9 - x² (b) x-2/(x-3) 11. In a class of 60 students, 25 students play cricket and 20 students play tennis and 10 students play both the games. Find the number of students who play (a) neither cricket nor tennis. (b) only cricket. 12. Define different types of functions and draw their graphs. Write their domain and range? 13. Represent the following using Venn diagrams. (a) (A ∪ B) (b) (A ∩ B) ∩ C (c) (A ∩ B) ∪ (A ∩ C) (d) (A ∪ B)' (e) (A ∩ B)'
ENGLISH (Mrs. Unaiza)	 Design a poster on the topic- 'How CNG can be the best alternative to diesel and petrol. (50 words) On behalf of the Principal of your school, write an advertisement inviting applications for the post of PGT (English) teacher. Can the act of stealing be justified? Give your views in the context of reading 'The Summer of the Beautiful White Horse.' Learn the Q/A and read all the chapters & poems done in class from both the books 'Hornbill and Snapshot.' To read a Novel of your choice, then in June an activity will be based on it.
HINDI (Mrs. Jaya Verma)	1 कार्य परियोजना मुंशी प्रेमचंद जी का जीवन परिचय, साहित्यिक रचनाएं तथा उनकी प्रसिद्ध रचनाओं पर विश्लेषण करते हुए एक कार्य परियोजना स्पाइरल बाईडिंग में प्रस्तुत करें। 2 कला समेकित परियोजना मध्यप्रदेश एवं बिहार के खानपान ,वेशभूषा,लोकनृत्य, लोकनाटक, लोकगीत,साहित्यकार,कलाकेंद्र,पर्यटन और पर्व पर एक ब्रोशर बनाएं। 3 अनुच्छेद लिखें

	'विद्यार्थी और शिष्टाचार'- विषय पर 120 शब्दों में
Physics (Mr. Vaseem)	 <u>Topic: Dimensional Analysis</u> 1. The value of stefan's constant is σ = 5.67 x 10⁻⁸ s⁻¹ m⁻² K⁻⁴. Find its value in cgs system. [Ans: 5.67 x 10⁻⁵ erg s⁻¹ cm⁻² K⁻⁴] 2. Convert one atmospheric pressure (=10⁵ N m⁻²) into dyne cm⁻². [Ans: 10⁶ dyne cm⁻²] 3. If the unit of force, energy and velocity are 10N, 100J, and 5ms⁻¹, find the units of length, mass and time. [Ans: 10 m, 4 kg ; 2 s] 4. The height of the mercury column in a barometer in a Calcutta laboratory was recorded to be 75 cm. Calculate the pressure in SI and cgs units using the following data: specific gravity of mercury = 13.6, density of water = 10³ kg/m³, g = 9.8 m/s² at Calculate. Pressure= h p g in usual symbols. [Ans: 9.996 x 10⁴ N/m², 9.996 x 10⁵ dyne/cm²]
	CHECKING THE CORRECTNESS OF FORMULAE
	 5. Volume V of water which passes any point of a canal during t sec is connected with the cross section A of the canal and the velocity u of water by the relation V = KAtu, where K is dimensionless constant. Verify the correctness of the relation. [Ans: correct] 6. the viscous force F acting on the body of radius r. moving with a velocity u in a medium of coefficient of viscosity η is given by F = 6 π η r u. check the correctness of the formula. [Ans: correct] 7. The dimensions of (angular momentum/ magnetic moment) are [MA⁻¹ T⁻¹]. Is it correct? [Ans: yes]
	THE FACT THAT QUALITIES HAVING SAME DIMENSIONS CAN BE
	8. The velocity u of a particle depends upon time t. according to equation U
	 = a + bt + c/d+t write the dimensions of a, b, c and d. Ans: [LT⁻¹], [LT⁻²],[L], [T] 9. Write the dimensions of a/b in the relation F = a √x + bt² where F is force, x is distance and t is time. [Ans: L^{-1/2} T²] 10. Write the dimensions of a/b in the relation P = a - t²/b x where where P pressure, x is distance and t is time. [Ans: [M¹ T⁻²] DERIVATION OF FORMULAE 11. If force, velocity and the time are taken as fundamental qualities , what would be the dimensions of work? [Ans: F u t] 12. Experiments shows that frequency (n) of a tuning fork depends on the length (l) of the prong, density (d) and the young's modulus (y) of its material. On the basis of dimensional analysis, drive an expression for frequency of tuning fork. [Ans: n= K/l √y/d] 13. The velocity (u) of the transverse waves on a string may depend upon (i) length (l) of the string, (ii) tension T in the string and (iii) mass per unit

length (m) of the string. Derive the formula dimensionally. [Ans: $k\sqrt{T}/m]$

- 14. Assuming that the mass m of the largest stone that can be moved by a flowing river depends on the velocity u, the density ρ and the acceleration due to gravity g, show that m varies directly as the sixth power of velocity of flow.
- 15. Using the method of dimensions, drive an expression for the rate of flow (V) of a liquid through a pipe of radius (r) under a pressure gradient (P/l). given that V also depends on coefficient of viscosity (η) of the liquid. [Ans: k= P r⁴/1 η]

Chapter: Motion in a Straight Line

1. An automobile travels on a straight road for 40 km at 30 km/h. It then continues in the same direction for another 40 km at 60 km/h. Calculate the average speed of the car during this 80 km trip.

2. The position of an object moving in a straight line is given by $x = 0.3 t - 4 t^2 + t^3$, where x is in meters and t in seconds. (a) Calculate the position of the object at t = 1.0, 2.0, 3.0, and 4.0 s. (b) Calculate the object's displacement between t = 0 and t = 4.0 s. (c) Calculate the average velocity for the time interval from t = 2.0 to t = 4.0 s.

3. Two trains, each having a speed of 30 km/h, are headed toward each other on the same straight track. A bird that can fly 60 km/h flies off the front of one train when they are 60 km apart and heads directly for the other train. On reaching the other train it flies directly back to the first train, and so forth. Calculate the total distance the bird travels before the trains crash.

4. A particle had a velocity of 18 m/s and 2.4 s later its velocity was 30 m/s in the opposite direction. Calculate the average acceleration of the particle during this 2.4 s interval.

8. The position of a particle moving along the x-axis depends on clock reading according to the equation $x = at^2 - bt^3$, where x is in feet and t in seconds. (a) What dimensions and units must a and b have? For the following, let their numerical values be 3.0 and 1.0, respectively. (b) Calculate the clock reading when the particle reaches its maximum positive x position. (c) Calculate the total length of path the particle covers in the first 4.0 s. (d) Calculate the displacement of the particle during the first 4.0 s. (e) Calculate the particle's speed at the end of each of the first 4 s.

9. A rocketship in free space moves with constant acceleration equal to 9.8 m/s².

\mathbf{V}_{11} II II SUMULS HUMILIUSE HUMV HUMY WITT HELMKU, HEMMULUU A SUKAAL UHK = KAUTH HUML HUM
(a) If it states from rest, now rong with it take to acquire a speed one term that of $1 + 1 + 2 + 1 + 2 + 2 + 2 + 2 + 2 + 2 + $
light? (b) How far will it travel in so doing? (The speed of light is 3.0x10° m/s.)
10. An object has a constant acceleration of 3.2 m/s^2 . At a certain clock reading
its velocity is +9.6 m/s. Determine its velocity (a) 2.5 s earlier and (b) 2.5 s later.
1. Find dy/dx, when (i) $Y = 3x^4 - 7x^2 + 5x + 9$ (ii) $Y = 1/(x^2 + 3)$ (iii) $Y = \sqrt{x} - 1/\sqrt{x}$ (iv) $Y = (3x + 2)(4x - 5)$ (v) $(x^2 - x + 1)/(x^2 + x + 1)$ (vi) $(x + 1)/(x + 2)^2$ (vii) If $x = at^2$, $y = 2at$, find dy/dx. (viii) If $x = a (\cos \theta + \theta \sin \theta)$ and $y = (\sin \theta - \theta \cos \theta)$, find dy/dx. (ix) If the motion of the particle is represented by $S = t^3 + t^2 - t + 2$, find the position, velocity and acceleration of the particle after 2 s.
Home work
Home work Very Short Answer Type Questions

	Q.1 What is None literal in Python? Q.2 What is the error in following code: x, y =7 ? Q.3 what will the following code do: $a=b=18$? Q.4 Following code is creating problem X = 0281, find reason. Short Answer Type Questions
	 Q.1 What is the difference between a keyword and an identifier? Q.2 What are literals in Python? How many types of Literals allowed in Python? Q.3 How many types of sequences are supported in Python? Q.4 What factors guide the choice of identifiers in program? Q.5 What is the difference between an expression and a statement in Python? Q.6 What are tokens in Python? How many types of tokens allowed in Python? Q.7 What are operators? What is their function? Give examples of some unary and binary operators. Q.2 What are tokens to obtain the program is Quality and the program.
	 Q.8 Write a Program to obtain temperature in Celsius and convert it into Fahrenheit using formula – C X 9/5 + 32 = F Q.9 WAP to read todays date (only date Part) from user. Then display how many days are left in the current month. Q.10 WAP to print the area of circle when radius of the circle is given by user. Q.11 WAP to print the volume of a cylinder when radius and height of the
	cylinder is given by user. Q.12 WAP that asks your height in centimeters and converts it into foot and inches. Q.13 WAP to find area of a triangle. Q.14 WAP to calculate simple interest. Q.15 WAP to read a number in n and prints n2, n3, n4
	Chapter – 3: DATA HANDLING Short Answer Type Questions
	Q.1 What are data types? What are Python"s built-in core data types? Q.2 Which data types of Python handle Numbers? Q.3 Why is Boolean considered a subtype of Integers? Q.4 What do you understand by term "immutable"? Q.6 What are mutable and immutable types in Python? List both of them. Q.7 What are augmented assignment operators? How are they useful?
Physical Education (Mr Deepak Sir)	
ACCOUNTS AND	Accounts-
BUSINESS STUDIES	*Assignment on History of Accounting
(Mr Dhanraj sir)	*Process of accounting
	Types of accounting
	i ypes of accounting.
	Accounting terminology .

	Business studies-
	*Assignment on History of Trade and Commerce.
	*Important Trade Centre in India.
ECONOMICS	*Students As part of your Assignment prepare a 15 page analytical
(Mrs Archana Mam)	project on any one of the given topics using diagrams and tabular
	presentation submit in a file on 19th June 2023.
	*Link between Poverty and Crime in India
	*Globalisation and its impact on Indian Economy

Compiled by: (Mr Vaseem)