



Bal Bharati
PUBLIC SCHOOL

Sector-21, Noida, G.B. Nagar

WINTER HOLIDAY HOMEWORK[2021-22]
CLASS XI

1. ENGLISH

Prepared By: Rachna Sondhi

General Instructions:

- All the answers must be correctly numbered as in the assignment. Attempt the given assignment in a register, very neatly.
- Attempt each question carefully and follow the instructions given.

Q1) Read the following passage carefully:

1. Once, Lakshman Singh Potai, Santosh Kumar Usendi and Butia Ram Kurram may have hunted in the forests of Chattisgarh in their free time. Now they have social media accounts, know some English, and Potai at least is the proud owner of a selfie-stick. The first kids from Abujmarh-Gondi for “unknown highlands”-to take admission in Delhi University, will graduate from Hindu College this year with honours degrees in Physics.

2. Their move to Delhi in the summer of 2013 was momentous. The Chhattisgarh chief minister had organised a farewell; the governor had written a letter of introduction saying, “They are remarkable in the sense that they come from Abujmarh area of Bastar, which remained impenetrable to the administration till recently and is Naxal affected.” In 2014, a fourth teen, Nihal Nag from Matenar in Dantewada, joined DU. Three of them hope to be civil servants; Kurram wants to appear for CAT.

3. They owe much of their English skills to their friends. “Our Manipuri friends don’t speak Hindi at all,” explains Potai. He knows Chandni Chowk thanks to a group project in their first year; they’ve watched movies in Connaught Place theatres; sampled the fare at different college canteens and had Manipuri fish at a friend’s place near North Campus. When he goes home, Potai and Santosh buy sweets from a shop in Dwarka’s sector 11 and clothes from Karol Bagh. But the long commute between hostel and college (they stay at Utkarsh, Chhattisgarh government’s Tribal Youth Hostel in Dwarka) leaves little time for other things they’re good at, football and music. “They’re also doing well in class. They’re the youngest here but have set an example for the others who are preparing for civil service exams,” says Dinesh Jha, Assistant Commissioner with his office at Utkarsh. Potai has an average score of 80% over five semesters; Usendi has 56% and Kurram-currently at home recovering from fever-has about 70%. “This experience has given us confidence,” says Potai. He’d encouraged Nag to pick DU physics over engineering in Hyderabad.

4. Nag is a second-year Physics student at Deen Dayal Upadhyaya College. His mother, Kamala Vinay Nag, the District Panchayat President, is a bit of a phenomenon back home. “She was abandoned by her father in Tikanpal. Villagers raised her and funded her education. She’s studied till Class XII,” says Nag. His father passed away in 2013 and a younger brother has cancer. Their treatment so debilitated the family’s resources that when Nag came to DU they “didn’t have enough to eat.” On his 2014 winter

break, he'd encouraged his mother to contest elections and walked with her to the collector's office to file nominations. On his next visit, in Winter 2015, he scuttled a child marriage.

5. Their homes are changing too. Buses now reach more villages-Usendi's is 75 kilometres from Narayanpur, the district headquarters, but now has a road going to it-there are more CRPF personnel but electricity is still a problem. Nag says Dantewada is very different from its image. "It's developing and we have everything. I posted photos of Chitrakoot and Tirathgarh waterfalls on Facebook and got many likes. Our friends want to visit," adds Potai.

6. Abujmarh was inaccessible even to government surveyors for a long time. Till 2009, the Maoist stronghold was a no-go zone for "outsiders" and the government itself relied on NGOs to deliver basic services. Naturally, there's still much ground to be covered. "People either don't know about government schemes or how to sign up," says Potai.

7. Jha is convinced the boys will speed things up. Potai is already preparing to write the state public service exams and has an inch-thick folder of notes to show for it. "I want to be in a position to do something for my people." -- **Source: TOI-Delhi**

I. On the basis of your understanding of the passage answer the following questions by choosing from the options given below:

a. Potai, Usendi and Kurram hail from.....

- i. Manipur ii) Deep forests iii) Ajubhmarh-Gondi iv) outskirts of Delhi

b. When they moved to Delhi....

- i. the Chief Minister organised a reception
ii. the village Head man organised a reception
iii. their families were reluctant
iv. their friends came with them

c. When Potai goes home, he takes.....

- i. his Manipuri friends with him
ii. the Manager of the hotel
iii. sweets from a shop in Dwarka
iv. sweets from a shop in Connaught Place

d. Usendi's home is.....

- i. in Dwarka
ii. 75 kms from Narayanpur
iii. in Dantewada
iv. in the Maoist stronghold.

II) Answer the following questions briefly:

- a. When did the group move to Delhi and why was it remarkable?
b. How have the boys developed their English speaking skills?
c. Where do they stay in Delhi?
d. What opinion do the others have of them at the hostel?
e. What is Nag's home background?
f. Give three facts about Abujmarh.

III) Find words that are synonyms of the words given below:

- a. Difficult to reach (para6)
- b. Completely sure (para7)

Q2. Read the Passage carefully:

Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction. Particular applications of AI include expert systems, speech recognition and machine vision.

AI can be categorized as either weak or strong. Weak AI, also known as narrow AI, is an AI system that is designed and trained for a particular task. Virtual personal assistants, such as Apple's Siri, are a form of weak AI. Strong AI, also known as artificial general intelligence, is an AI system with generalized human cognitive abilities. When presented with an unfamiliar task, a strong AI system is able to find a solution without human intervention.

Because hardware, software and staffing costs for AI can be expensive, many vendors are including AI components in their standard offerings, as well as access to Artificial Intelligence as a Service ([AlaaS](#)) platforms. AI as a Service allows individuals and companies to experiment with AI for various business purposes and sample multiple platforms before making a commitment.

While AI tools present a range of new functionality for businesses, the use of artificial intelligence raises ethical questions. This is because deep learning algorithms, which underpin many of the most advanced AI tools, are only as smart as the data they are given in training. Since a human selects what data should be used for training an AI program, the potential for human bias is inherent and must be monitored closely.

Some industry experts believe that the term artificial intelligence is too closely linked to popular culture, causing the general public to have unrealistic fears about artificial intelligence and improbable expectations about how it will change the workplace and life in general. Researchers and marketers hope the label [augmented intelligence](#), which has a more neutral connotation, will help people understand that AI will simply improve products and services, not replace the humans that use them.

1. . On the basis of your reading of the above passage, make notes on it, using headings and sub headings. Use recognizable abbreviations and give an appropriate title.

Q.3. You are a fitness trainer in a Health Club. Design a poster in not more than 50 words, to emphasize the importance of exercise in maintaining mental and physical fitness. You are Prem/ Priya.

Or

You are a member of the SPCA(Society for the Prevention of Cruelty to Animals). Draft a poster in not more than 50 words, to create awareness on the need to prevent cruelty to animals. You are Suhas/ Suhasini.

Q4. You are Vishal / Veena, a student of class XII of 10, Green Park, New Delhi. You are extremely interested in learning languages. You come across an advertisement in The Times of India issued by The Institute of Foreign languages, New Delhi about the certificate course in Japanese offered by them. You decide to write a letter to the Director of the Institute seeking more information about the course duration, working hours, fee structure, etc. Write a letter of enquiry seeking answers.

Q.5. Write a debate on the topic ‘**The common man’s plight has not changed in India’s democracy**’.

Q6. In the passage given below, one word has been omitted in each line. Write the missing word along with the word that comes before and the word that comes after against the correct blank number. Underline the word that forms your answer.

The habit of reading is one of greatest resources of mankind. (a) ____

We enjoy reading books belong to us much more than if they (b) ____

are borrowed. A borrowed book is like guest in the house; it must (c) ____

be treated with punctiliousness or a certain considerate formality.

You must see that it sustains no damage; it not suffer while (d) ____

under your roof.

Q.8. Rearrange the words in each set to make meaningful sentences.

a) Friends / life / good / make / our / happy / extremely.

b) not / find / now a days / easy / good / is / It / friends / to / but

Q.9. Change the following from Direct to Indirect narration.

1. She said to her mother, “How can you be so sure that I will win the race?”

2. Nagaswamy said to his servant, “Disappear from this place within minutes or I will kill you.”

3. Nirmala said, “Can I ever give comfort to my parents?”

4. The woman said, “All my hard work has gone down the drain.”

5. Swati said, “What an exciting show it was!”

Q. 10. Read the lines given below and answer the questions asked:

When did my childhood go?

Was it the day I ceased to be eleven,

Was it the time I realized that Hell and Heaven,

Could not be found in Geography,

And therefore could not be,

Was that the day!

(a) According to the poet, what are the different possibilities that are instrumental in the cessation of childhood?

(b) What specific point of time according to the poet’s conjecture spells the end of childhood?

(c) How does a scientific approach of the child transform his thinking?

(d) What makes the child doubt the existence of Hell and Heaven?

Q11. Answer the questions in 40 – 50 words:

1. Who is a sadist? Why is Taplow afraid of Mr. Crocker – Harris though the latter is not a sadist?
2. When and where was the 'Green Movement' started and what has been its contribution?
3. Why is the earth compared to a patient?
4. What impression of Frank do you get as a teacher?

Q12. Answer the question in around 130-150 words-

- a. Albert Einstein found himself miserable both in the German school and his quarters at Munich. What were the reasons for his misery and how did he attempt to get out of the situation?
- b. With reference to the play, **Mother's Day**, explain how the problem faced in the story is fairly universal in nature.

2. HINDI

हिंदी

1. गद्य पाठों के आधार पर अपनी पसंद के अनुसार मूल भाव, मुख्य बिंदुओं को दर्शाते हुए कॉमिक स्ट्रिप बनाएँ जिसमें कम से कम आठ स्लाइड्स होनी चाहिएँ ।
2. सभी छात्र हिंदी का ई-पोर्टफोलियो पूर्ण करें जिसके अंतर्गत हिंदी विषय की सभी कार्यपत्रिकाएँ, ई-प्रमाणपत्र (अंतर्विद्यालयीय, अंतर्संदर्भ प्रमाण पत्र, अतिरिक्त प्रमाण पत्र, विशेष दिवस) तथा हिंदी भाषा के प्रति अपने योगदान को दर्शाएँ ।
3. गूगल कक्षा में अपलोड की गई कार्यपत्रिकाओं को पूर्ण कीजिए ।

3. PHYSICS

Prepared By: Ms Rani Vaid

Project Work :

“ Creativity is inventing , experimenting , growing , making mistakes and having fun “

This winter , be creative and design your own interesting and engaging Science based Toy .

Think of all Physics concepts related to your self designed toy and express your journey and explanation of related Physics concepts in a video of approx 60 seconds .

Grab the opportunity to feature on all social media handles of ATL if selected as best .

Project will be part of internal assessment too .

Websites for Reference :

- <https://www.real-world-physics-problems.com/science-toys.html> .
- <https://www.arvindguptatoys.com/toys.html>.
- <https://sciencetoymaker.org/>

General Instructions :

- The assignment is to be done on A4 size sheets .
- Date of Submission : 05 January 2022

Section A

1. In a hydraulic press used for compressing cotton, the area of the piston is 1 m^2 and the force exerted along the piston rod is 200 N. If the area of the larger cylinder is 0.8 m^2 find the pressure produced. in the cylinder and the total crushing force exerted on the bale of cotton.
2. Two pistons of hydraulic press have diameters of 30.0 cm and 2.5 cm What is force exerted by larger piston, when 50.0 kg wt. is placed on the smaller piston ? If the stroke of the smaller piston is 4.0 cm, through what distance will the larger piston move after 10 strokes?
3. The pressure difference between two points along a horizontal pipe, through which water is flowing is 1.4 cm of mercury If, due to non-uniform cross-section, speed of flow of water at the point of greater cross-section is 60 cm/s, calculate the speed at the other point.
4. Water flows into a horizontal pipe whose one end is closed with a valve and the reading of a pressure gauge attached to the pipe is $3 \times 10^5 \text{ N m}^{-2}$ This reading of the pressure gauge falls to $1 \times 10^5 \text{ N m}^{-2}$ when the valve is opened. Calculate the speed of water flowing into the pipe.
5. A liquid drop of diameter 4 mm breaks into 1000 droplets of equal size. Calculate the resultant change in surface energy, the surface tension of the liquid is 0.07 N/m.
6. A soap bubble is blown to a diameter of 7 cm. If 36,960 erg of work is done in blowing it further, find the new radius if the surface tension of soap solution is 40 dyne/cm.

7. The length of a needle floating on water is 2.5 cm. How much minimum force, in addition to the weight of the needle, will be needed to lift the needle above the surface of water ? Surface tension of water $= 7.2 \times 10^{-4}$

Section : B

Assertion – Reason Based Questions

Mark the correct choice as

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

8. Assertion: A large force is required to draw apart normally two glass plates enclosing a thin water film.

Reason: Water works as glue and sticks two glass plates.

9. ASSERTION The stream of water flowing at high speed from a garden hose pipe tends to spread like a fountain when held vertically up, but tends to narrow down when held vertically down.

REASON In any steady flow of an incompressible fluid, the volume flow rate remains constant.

10. Assertion. A hydrogen filled balloon stops rising after it has attained a certain height in the sky.

Reason. The atmospheric pressure decreases with and lower height and becomes zero when maximum height is attained.

11. Assertion. The shape of an automobile is so designed that its front resembles the streamline pattern of the fluid through which it moves.

Reason. The resistance offered by the fluid is maximum.

12. Assertion : The water rises higher in a capillary tube of small diameter than in the capillary tube of large diameter.

Reason : Height through which liquid rises in capillary tube is inversely proportional to the radius of the capillary tube.

Section C

Multiple Choice Questions

13. Bernoulli's equation is a consequence of conservation of

- (a) energy
- (b) linear momentum
- (c) angular momentum
- (d) mass.

14. The coefficient of viscosity for hot air is

- (a) greater than the coefficient of viscosity for cold air
- (b) smaller than the coefficient of viscosity for cold air

- (c) same as the coefficient of viscosity for cold air
- (d) increase or decrease depending on the external pressure

15. Scent sprayer is based on

- (a) Charles law
- (b) Boyle's law
- (c) Archimedes' principle
- (d) Bernoulli's theorem.

16. In old age arteries carrying blood in the human body become narrow resulting in an increase in the blood pressure. This follows from

- (a) Pascal's law
- (b) Stoke's law
- (c) Bernoulli's principle
- (d) Archimedes principle

17. An Incompressible fluid flows steadily through a cylindrical pipe which has a radius $2R$ at point A and R at a point B further along the flow direction. If the velocity at A is v , then that at B is

- (a) $v^{1/2}$
- (b) v
- (c) $2v$
- (d) $4v$

4. CHEMISTRY

Prepared By :Ms Vibha Jain

1. Under what conditions the heat evolved or absorbed is equal to the internal energy change?
2. What is the sign of ΔH for endothermic reactions and why?
3. What is the relationship between the standard enthalpy of formation and the enthalpy of a compound?
4. Why enthalpy of neutralization is less if either the acid or the base or both are weak?
5. Why the entropy of a diamond is less than that of graphite?
6. Is the enthalpy of neutralization of HCl is same as that of H_2SO_4 ? If so, why?
7. Is the experimental determination of enthalpy of formation of CH_4 possible?
8. For the reaction $NaCl(aq) + AgNO_3(aq) \rightarrow AgCl(s) + NaNO_3(aq)$, will ΔH be greater than, equal to or less than ΔE ?
9. What is the limitation of the I law of thermodynamics?
10. Which of the following is a state function?
 - (i) height of a hill
 - (ii) distance traveled in climbing the hill
 - (iii) energy consumed in climbing the hill.
11. What is the value of enthalpy of neutralization of a strong acid and a strong base?
12. Out of 1 mole of $H_2O(g)$ and 1 mole of $H_2O(l)$ which one will have greater entropy?
13. Name two intensive and extensive properties of a system.
14. For a reaction also ΔH and ΔS are positive. What is the condition that this reaction occurs spontaneously?
15. What is the sign of ΔS when N_2 and H_2 combine to form NH_3 ?

What is the effect of increasing temperature on the entropy of a substance?
16. What would be the heat released when 0.35 mol of HCl in solution is neutralized by 0.25 mol of NaOH solution?
17. Which of the following is/are exothermic and which are endothermic?
 - (i) $Ca(g) \rightarrow Ca^{2+}(g) + 2e^-$
 - (ii) $O(g) + e^- \rightarrow O^-(g)$.
 - (iii) $N_2(g) + e^- \rightarrow N_3^-(g)$.

18. Calculate $\Delta_r G^\ominus$ for the conversion of oxygen to ozone, $3\text{O}_2(\text{g}) \rightarrow \text{O}_3(\text{g})$ at 298 K, if K_p for this conversion is 2.47×10^{-29}

19. Find the value of the equilibrium constant for the following conversion reaction at 298 K.

$$\Delta_r G^\ominus = -13.6 \text{ kJ mol}^{-1}.$$

20. Why is it not possible to cool gas to 0 K?

21. What is the compressibility factor?

22. What is a Triple point?

23. The density of A gas is 3.80 g L^{-1} at STP. Calculate its density at 27°C and 700 torr pressure.

24. What is meant from Boyle point or Boyle temperature?

25. What is the difference between normal boiling point and standard boiling point?

26. Which are the two faulty assumptions in the kinetic theory of gases.

27. How do the real gases deviate from ideality above and below the Boyle point?

28. Account for the following;

(a) Aerated water bottles are kept underwater during summer.

(b) Liquid ammonia bottle is cooled before opening the seal.

(c) The tyre of an automobile is inflated at lesser pressure in summer than in winter.

(d) The size of the weather balloon becomes larger and larger as it ascends up to higher altitudes.

29. In a hospital, an oxygen cylinder holds 10 L of oxygen at 200 atm pressure. If a patient breathes in 0.50 ml of oxygen at 1.0 atm with each breath, for how many breaths the cylinder will be sufficient. Assume that all the data is at 37°C .

30. At what temperature centigrade, will the volume of a gas at 0°C double itself, pressure remaining constant?

31. A gas occupies a volume of 2.5 L at $9 \times 10^5 \text{ Nm}^{-2}$. Calculate the additional pressure required to decrease the volume of the gas to 1.5 L, keeping the temperature constant.

32. What volume of air will be expelled from a vessel containing 400 cm^3 at 7°C when it is heated to 27°C at the same pressure?

33. 10.0 g of O_2 were introduced into an evacuated vessel of 5-litre capacity maintained at 27°C . Calculate the pressure of the gas in the atmosphere in the container.

35. A steel tank containing air at 15 atm pressure at 15°C is provided with a safety valve that will yield at a pressure of 30 atm. To what minimum temperature must the air be heated to below the safety valve?

5. BIOLOGY

Prepared by : Vidhi O

Prepare a detailed research paper, PPT and Spiral bound file from the topic of your choice.

List of Investigatory projects-

- a) To isolate caffeine from tea leaves.
- b) To determine the amount of Vitamin C in selected samples of fruit juices.
- c) To determine the amount of casein present in different samples of milk.
- d) To study the presence of insecticides and pesticides in various fruits and vegetables.
- e) Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, taste etc.
- f) Proxymal Supraventricular Tachycardia, Epidermodysplasia verruciformis, Kawasaki Disease, Progeria, Hunter's Syndrome, Genetic Abnormalities, Vampire Disorder, Mad Cow Disease, Fibrodysplasia ossificans Progressiva, Abdominal Cocoon etc. Any case study of disease of your choice.

Complete the Investigatory project and Compile it according to the prescribed format.

- Cover page
- Certificate
- Acknowledgment
- Index
- Introduction
- Content (including pictures/graphs/tables/survey report etc.)
- Case Study
- Bibliography
- Assessment Criterion- Content, Presentation, Research Work, Case study, Viva-voce and Confidence.
- It is an individual activity and marks will be awarded in Annual Examination during practical Examination.

6. MATHS / APPLIED MATHS

Prepared By: Anjali Sharma

General Instructions : Attempt all the questions in your notebook

1. Find coordinates of point which divides the join of (1, -2, 3) and (3, 4, -5) in the ratio 2:3 externally.
2. In what ratio is the line joining the points (2,3,-1) and (4,-5,9) divided by the line joining the points (6,8,1) and (-3,-2,0).
3. Name the octants in which the following points lie (-4, -2, 3) , (1, -4, -7)
4. The centroid of a triangle ABC is at the point (1, 1, 1). If the coordinates of A & B are (3, -5, 7) & (-1, 7, -6) find coordinates of the point C.
5. How many words with or without meaning, each of 3 vowels and 3 consonants can be formed using letters of the word 'INVOLUTE'.
6. If A & B are points (3, 4, 5) & (-1, 3, -7) respectively, find the equation of the set of points P such that $PA^2 + PB^2 = K^2$, where k is a constant.
7. Find equation of the circle passing through the points (1,1) and (2,2) and having radius unity.
8. Find equation of the circle which touches both the axes and the line $3x-4y+8=0$ and lies in the third quadrant.
9. Find equation, centre and radius of the circle passing through the three points (5,7), (6,6) and (2,-2)
10. Find coordinates of the focus, axis of the parabola, equation of the directrix and length of the latus rectum for $y^2 = 20x$
11. Find equation of the parabola whose vertex is (0,0) and focus is (0,2)
12. Find equation of the parabola with vertex at origin, axis along axis and passing through (1,-4)
13. Find foci, vertices, length of major axis, minor axis, eccentricity for the ellipse $x^2/36 + 5y^2/16 = 1$
14. Find foci, vertices, length of major axis, minor axis, eccentricity for the ellipse $x^2/25 + y^2/100 = 1$
15. Find equation of the hyperbola having foci at (0, ± 13) and the conjugate axis of length 24
16. A cable of uniformly loaded suspension bridge hangs in the form of a parabola. The roadway which is horizontal and 100 meters long is supported by vertical wires attached to the cable, the longest wire being 30 meter and the shortest being 6 meters. Find the length of the supporting wire attached to the roadway 18 meters from the middle.
17. An arch is in the form of a parabola with its axis vertical. The arch is 10 meters high and 5 meters wide at the base. How wide is it 2 meters from the vertices of the parabola?
18. Find the eccentricity of the ellipse for which the major axis is double the minor axis.
19. Find equation of set of all points the sum of whose distances from the points (3,0) and (9,0) is 12
20. A rod of length 12 meters moves with its ends always touching the Coordinate axes. Find the equation of locus of a point P on the rod which is 3 meters from the end in contact with the x axis.

7. ACCOUNTANCY

Prepared By: Ruby Singh

General Instructions

- All questions are to be attempted in the proper format as guided.
- The assignment is to be done on A4 size sheets.
- Date of submission : 05 January 2022

CHAPTER: FINAL ACCOUNTS (WITH ADJUSTMENTS)

1. From the following Trial Balance prepare Trading and Profit & Loss Account for the year ended 31st March, 2012 and Balance Sheet as on that date :-

	Dr.(₹)	Cr. (₹)
Stock 1 st April, 2011	22,300	
Purchases and Purchases Return	2,30,000	5,200
Freehold Premises	1,00,000	
Incidental Trade Exp.	11,200	
Insurance	1,850	
Audit Fees	800	
Commission Received		2,700
Interest		1,400
Debtors and Creditors	32,400	24,830
Wages	30,200	
Salaries	15,200	
Capital		1,50,000
Drawings	12,000	
Income-Tax	3,600	
Investments	8,000	
Discount allowed & received	7,500	4,200
Sales Return & Sales	6,400	3,17,400
B/R	5,200	
Office Furniture	9,000	
Rent		2,600
Cash in hand	5,080	
Bank Balance	7,600	
	<u>5,08,330</u>	<u>5,08,330</u>

Adjustments :-

1. Stock at 31st March, 2012 is ₹70,000
2. Write off 5% Depreciation on Freehold Premises and 20% on office furniture.
3. Commission earned but not received ₹500.
4. Interest earned ₹600.

5. `200 for rent have been received in advance.
6. Charge interest on Capital @ 6% and `500 on Drawings.

2. From the following figures prepare the Trading and Profit and Loss Account for the year ended 31st March, 2001 and the Balance Sheet as on that date :-

	₹		₹
Stock (1 st April, 2000)	75,000	Sundry Debtors	82,000
Purchases	8,00,000	Loan from X	10,000
Sales	12,00,000	Interest on X Loan	1,500
Motor Car	1,50,000	Furniture	20,000
Car Expenses	42,000	Land and Building	2,00,000
Rent	5,500	Capital	2,50,000
Salaries	35,200	Sundry Creditors	91,300
Bad Debts	1,500	Returns Inward	7,500
Provision for bad debts	8,100	Returns Outward	6,000
Commission (Cr.)	4,600	Cash in hand	16,400
Wages	1,25,000		
Insurance	8,400		

Adjustments :

- i. Commission include `1,600 being commission received in advance.
- ii. Write off `2,000 as further Bad-debts and maintain Bad-debts provision as 5% on debtors.
- iii. Expenses paid in advance are : Wages `5,000 and Insurance `1,200.
- iv. Rent and Salaries have been paid for 11 months.
- v. Loan from X has been taken at 18% p.a. interest.
- vi. Depreciate furniture by 15% p.a. and Motor Car by 20% p.a.
- vii. Closing Stock was valued at `60,000.

3. Prepare a Trading and Profit & Loss account for the year ending March 31, 2012, from the balances extracted of M/s Rahul Sons. Also prepare a balance sheet at the end of the year

	₹		₹
Stock	50,000	Sales	1,80,000
Wages	3,000	Purchase return	2,000
Salary	8,000	Discount received	500
Purchases	1,75,000	Provision for bad debts	2,500
Sales Return	3,000	Capital	3,00,000
S. Debtors	82,000	Bills Payable	22,000
Discount allowed	1,000	Commission received	4,000
Insurance	3,200	Rent	6,000
Rent, rates and taxes	4,300	Loan	34,800
Fixtures and fittings	20,000		
Trade Expenses	1,500		

Bad debts	2,000		
Drawings	32,000		
Repair and renewals	1,600		
Travelling expenses	4,200		
Postage	300		
Telegram Expenses	200		
Legal fees	500		
Bills Receivable	50,000		
Building	1,10,000		
	<u>5,51,800</u>		<u>5,51,800</u>

Adjustments :-

- Commission received in advance `1,000.
- Rent receivable `2,000.
- Salary outstanding `1,000 and insurance prepaid `800.
- Further Bad-debts `1,000 and provision for Bad-debts @5% on debtors and provision for discount on debtors @ 2%.
- Closing Stock `32,000.
- Depreciation on Building @6% p.a.

4. From the following balances, prepare Final Accounts of Mr Bal Gopal :-

	`		`
Life Insurance Premium (self)	500	Capital	40,000
Stock (1-4-2-11)	7,500	Plant and Machinery	12,500
Returns Inward	1,000	Purchases	36,000
Furniture	4,600	Sundry Debtors	10,500
Freehold Property	10,000	Coal, Gas and Water	1,000
Carriage Inwards	400	Carriage outwards	100
Advertising	200	Sales	60,000
Sundry Creditors	4,850	Discount (Dr.)	400
Returns outwards	500	Rent for Premises Sublet	500
Commission (Cr.)	600	Trade Expenses	8,650
Lighting	250	Stationery	2,000
Loan from bank	5,000	Interest Charged by Bank	450
Wages & Salaries	7,500	Cash	7,900

Adjustments :-

- Stock on 31st March, 2012 was `10,000 and stationery unused at the end was `400.
- Rent of Premises Sublet received in advance `100.
- Provision for Doubtful Debts is to be created @ 10% on Debtors.
- Provision for discount on Debtors is to be created @ 2%.
- Stock of the Value of `4,000 was destroyed by fire on 25th March, 2012. A Claim of `3,000 has been admitted by Insurance Co.
- Bank Loan has been taken at 12% p.a. interest.

5. From the following Trial Balance, extracted from the books of Raga Ltd., prepare a Profit and Loss Account for the year ended 31st Dec., 2005 and a Balance Sheet as on that date :

Debit Balances	`	Credit Balance	`
Drawings Account	20,000	Sales	2,20,000
Land & Building	12,000	Capital	1,01,110
Plant and Machinery	40,000	Discount	1,260
Carriage Inward	100	Apprentice premium	5,230
Wages	500	Bills Payable	1,28,870
Salary	2,000	Purchase Return	10,000
Sales Return	200		
Bank charges	200		
Coal, gas and water	1,200		
Purchases	1,50,000		
Trade Expenses	3,800		
Stock (Opening)	76,800		
Cash at Bank	50,000		
Rates and Taxes	870		
Bills Receivable	24,500		
Sundry Debtors	54,300		
Cash in hand	30,000		
	<u>4,66,470</u>		<u>4,66,470</u>

The additional informations are as under :

- Closing stock was valued at the end of the year at `20,000.
- Depreciation on Plant and Machinery charged at 5% and on Land and Building at 10%
- Make a provision for discount on debtors at 3%
- Make a provision at 5% on debtors for Bad-debts.
- Salary outstanding was `100 and Wages prepaid were `40.
- The manager is entitled to a Commission of 5% on Net Profit after charging such Commission.

6. On 31st March, 2012 the following Trial Balance was extracted from the books of Sh.Ghanshyam Das :-

	Dr.(')	Cr. (')
Capital Account		2,00,000
Debtors and Creditors	40,000	25,000
Loan on Mortag		30,000
Interest on Loan	2,250	
Discount		1,800
Stock on 1 st April, 2011	20,000	
Motor Vehicle	50,000	
Cash at Bank	4,450	

Investments	16,000	
Wages	18,000	
Land and Building	2,80,000	
Bad-Debts	1,500	
Purchases and Sales	2,50,000	4,80,000
Purchases and Sales Returns	12,000	10,000
Carriage Outward	8,000	
Carriage Inward	6,500	
Salaries	7,200	
Outstanding Salaries		600
Rates, Taxes and Insurance	15,000	
Advertising	5,000	
General Expenses	6,400	
Bills Receivable and Payable	7,500	5,400
Prepaid Insurance	3,000	
	<u>7,52,800</u>	<u>7,52,800</u>

Prepare Trading and Profit & Loss Account for the year ended 31st March, 2012 and Balance Sheet as on that date, after making adjustments for the following matters:

1. Depreciate Land and Building at 2.5% and Motor Vehicles at 20%.
2. Interest on Loan at 15% p.a. is unpaid for six months.
3. Ghanshyam Das withdrew `2,000 for his private use. This amount was included in general expenses.
4. Interest on Investments is receivable for full year ~ 10%
5. Provide for Manager's Commission at 10% on Net Profit after charging such commission.
6. Stock in hand on 31st March, 2012 was valued at `25,000 (Market Value `22,000).

7. The following balances were extracted from the books of Modern Traders on 31st March, 2012 :

	`		`
Capital Account	85,000	Printing and Stationery	800
Drawings Account	5,000	Sundry Creditors	23,000
Plant & Machinery	40,000	Sales	1,20,000
Stock on 1-4-2011	15,000	Postage and Telegram	800
Purchases	82,000	Bad-Debts	400
Sundry Debtors	20,000	Provision for Doubtful Debts	800
Furniture	5,000	Discount received	400
Freight Inward	2,000	Rent Revenue	1,200
Carriage Outward	500	Insurance	700
Rent, Rates and Taxes	4,600	Salaries	20,000
		Wages	1,300
		Cash in Hand	6,200
		Cash at Bank	25,000

Prepare Final Accounts for the year ended 31st March, 2012 after taking into account the following :

- i. Stock on 31st March, 2012 was valued at ₹15,000.
- ii. Goods costing ₹6,000 were sent to a customer on "Sale on Return basis" for ₹7,200 on 26th March, 2012 and had been recorded in the books as actual sales.
- iii. Provision for Doubtful Debts is to be maintained at 5% of the Debtors.
- iv. Prepaid Insurance was ₹100.
- v. Provide Depreciation on Plant and Machinery @10% and on Furniture @5%.

8. Prepare a trading and profit & loss account of M/s Green Club Ltd for the year from the following figures taken from his trial balance :

Debit Balances	₹	Credit Balance	₹
Opening Stock	1,25,000	Sales	2,50,000
Purchases	35,000	Purchase Return	6,000
Return inward	25,000	Creditors	55,000
Postage and telegram	600	Capital	50,000
Salary	12,300	Discount received	1,000
Wages	3,000	Provision for bad debts	4,500
Rent and rates	1,000	Commission received	5,400
Packing and transport	500		
General expenses	400		
Insurance	4,000		
Debtors	50,000		
Cash in hand	20,000		
Closing Stock	40,000		
Machinery	20,000		
Lighting	5,000		
Discount	3,500		
Bad debts	3,500		
Investments	23,100		
	<u>3,71,900</u>		<u>3,71,900</u>

Adjustments :

- i. Depreciation charged on Machinery @ 5% p.a.
- ii. Further Bad-debts ₹1,500, provision for discount on debtors @5% and provision for Doubtful Debts on debtors @ 6%.
- iii. Wages prepaid ₹1,000.
- iv. Interest on investments @ 5% p.a.

9. From the following information prepare financial Statements of M/s Raj & Bros, for the year ending March 31, 2009.

	Dr. Bal ₹		Cr. Bal ₹
Stock (1-4-2008)	16,800	Capital	78,000
Sales Returns	8,000	Sales	3,09,000
Purchases	2,43,000	Returns Outward	5,700

Freight-in	8,600	Trade Creditors	4,800
Rent and Taxes	5,700	10% Bank Loan (1-7-2008)	24,000
Salaries	9,300	Income from Investment	3,600
Trade debtors	24,000	Discount Received	2,250
Bank interest	1,000		
Printing and Advertising	14,600		
Cash at bank	18,300		
Discount Allowed	1,340		
Investment	25,000		
Furniture	3,800		
General Expenses	3,610		
Audit Fees	500		
Insurance	800		
Travelling Expenses	3,000		
Plant & Machinery	30,000		
Drawings	10,000		
	<u>4,27,350</u>		<u>4,27,350</u>

Additional Information :

i. Depreciation on Plant and Machinery @ 10% p.a., a Machine has been purchased on July 01, 2008 for ₹12,000.

ii. The manager is entitled to a commission of 10% of the net profit before charging such commission.

iii. Closing stock in trade is valued at ₹6,000 (cost); ₹6,200 (Market Price).

8. POLITICAL SCIENCE

Prepared by : S. Walia

1. Prepare a digital news copy for the months of October and November and write your feedback on the important political news, related to the chapters of Term II :

- | | |
|----------------|-------------|
| 1. LEGISLATURE | 4. LIBERTY |
| 2. EXECUTIVE | 5. EQUALITY |
| 3. JUDICIARY | 6. JUSTICE |

2. Add cartoons, surveys, facts, pictures and statistics to enhance the important news.

3. Complete the question answers, sources, cartoons, boxes and extra questions of the chapter: One Party dominance. Make the table of the political parties with appropriate content and heading.



9. BUSINESS STUDIES

Prepared By: Ruby Singh

General Instructions

- All questions are to be attempted in the proper format as guided.
- The assignment is to be done on A4 size sheets.
- Date of submission : 05 January 2022

CHAPTER 7: SOURCES OF BUSINESS FINANCE

Very Short Answer Type Questions

- Q.1. The Directors of a Company have decided to set up a new plant at an estimated cost of rupees ten crores. State the sources of finance available.
- Q.2. Define Share.
- Q.3. Why equity share capital is called risk capital?
- Q.4. Name three national level financial institutions.
- Q.5. How are public deposits beneficial to both the depositor as well as to organization?
- Q.6. Distinguish between Debentures and Bonds.
- Q.7. What preferences are given to preferential shares?
- Q.8. It refers to the funds raised through loans or borrowings. Name it.

Short & Long Answers Type Questions

- Q.9. Why Business Finance is significant? Give reasons.
- Q.10. Mahindra and Mahindra was the first company in India to issue convertible debentures in Jan 1990. Recently, many other companies have got approval to issue debentures for raising LT debt capital. Give three reasons as why it is becoming popular?
- Q.11. As a source of finance, retained earnings/profits is better than other sources. Do you agree with this view? Give reasons for your answer.
- Q.12. If you have Rs. 50,000 for investment purposes, would you invest in equity shares, preferences shares, public deposits or debentures? Justify your answer.
- Q.13. Write a short note on:
- i. Borrowed fund
 - ii. Preference shares

Q.14. Compare Shares and Debentures as sources of long term finance.

Q.15. Define Preference Shares and explain the merits of raising funds through issue of Preference Shares.

Q.16. Fill in the Blanks:

- (i) Equity shares are known as _____.
- (ii) Debentures holders are known as _____.
- (iii) Preference shares carry _____ over Equity shares.
- (iv) Convertible Debentures can be converted into _____.
- (v) Public deposits can be raised for a maximum period of _____.
- (vi) Risk capital is provided by _____.
- (vii) _____ are called as an internal sources of finance.

Q.17. Briefly explain the role of Commerce Banks in providing finance to industrial units.

Q.18. Discuss the merits and demerits of raising funds through various financial institutions.

Q.19. Briefly explain the role of Public Deposits in India. Also stating its merits and demerits in brief.

Q.20. Distinguish between:

- | | |
|---|-----------------------------|
| (i) Equity shares and Preference shares | (iii) Shares and Debentures |
| (ii) Owned capital and Borrowed capital | (iv) GDR and ADR |

Q.21. What do you mean by Trade credit? List its merits and demerits.

10. ECONOMICS

National Income

1. In short period there is no change in _____ factors.
2. Increase in supply due to causes other than change in price is termed as _____ supply.
3. In case _____ the supply is inelastic.

i. Of decreasing marginal cost

ii. Of increasing marginal cost

iii. Of marginal cost remaining constant

iv. The law of increasing return is in operation

4. If marginal product is decreasing total product will increase at the _____ rate.

a. Short period

b. Long period

c. Intermediate period

d. Market period

5. In the _____ change in all factors of production is possible

a. Short period b. Long period c. Intermediate period d. Market period

6. Law of supply is _____

a. Quantitative b. Qualitative c. Both d. Neither of the two

7. Supply curve presents _____

a. Price of the commodity

b. Supply of the commodity

c. Relationship between price and supply of the commodity

d. Demand of the commodity

8. Product obtained from the additional factor of production is termed as _____

a. Marginal product b. Total product

b. Average product d. Annual product

9. If marginal product goes on increasing, it should be understood that law of _____ is

applying.

a. Increasing cost b. Decreasing cost

c. Constant cost d. None

10. In case, law of constant return is applicable _____

a. Marginal product will be more than average product

b. Marginal product will be lesser than average product

- c. Marginal and average product will be equal
- d. Total marginal and average product will be equal

SHORT ANSWER TYPE QUESTIONS (3 & 4 MARKS)

1. Complete the following table and identify the 3 phases of the law of variation proportion variation.

Unit of Variation	TPP	APP	MPP
1	10		
2	22		
3	30		
4	30		
5	25		

2. Complete the following table assuming that the law of diminishing returns is operating throughout.

Variation Input	MPP
1	10
2	
3	

- 3. State the behavior of Total Variable Cost. Draw Total Variable Cost, Total Cost and Total Fixed Cost Curves in a single diagram .
- 4. Explain the conditions of equilibrium of a firm based on marginal cost and marginal revenue. Use diagram.
- 5. Price elasticity of supply for a commodity is 5. When price of the commodity rises from Rs. 6 Per unit to Rs. 10 per unit, supply rises by 25 units. Calculate quantity supplied at Rs. 9 per unit.
- 7. Explain the difference between MC and AVC. Why should AVC always look like MC? Why is MC the same when computed from VC as from TC?
- 8. Why is MC curve in the short run U shape?
- 9. Why is AC curve in the short run U shaped?
- 10. How does the following effect the supply curve of a firm.
 - a. Technological purpose., Imposition of a unit tax.
 - b. Increasing in input price., Increasing in number of firms.

11. Is it correct to say that profit of a producer under perfect competition is maximum at a level at which $P = MC$, but MC is decreasing?
12. At a particular level of output, a producer finds that $MC > MR$. What will a producer do to maximize his profit?
13. TC is not the sum total of marginal costs. $TC \neq \sum MC$. Why?
14. Does MC include fixed cost? Why?
15. What change in total revenue will result in
- Decrease in marginal revenue.
 - An increase in marginal revenue
16. What change should take place in total revenue so that
- Marginal revenue is positive. (b) Marginal revenue is falling

11. PSYCHOLOGY

Prepared By: Ms. A. Gaur

INSTRUCTIONS TO PREPARE PRACTICAL FILE

1. Practical File should be neatly written.
2. Don't use red or pink ink pen.
4. Underline headings or use a different coloured pen (not red or pink)
5. Every practical report should follow the given format.

Instructions For practical exams

- a) Each student will be given one experiment for conduction as well as for writing (full report starting from objective to —conclusion).
- b) Viva will be taken on individual basis.
- c) Read Practical file and Project file thoroughly.
- d) Viva is based on your practical and related theory.
- e) One should know how to present the Project summary.

INTRODUCTION TO EXPERIMENTS

What is Psychology?

Psychology is defined formally as a science which studies mental processes, experiences and behaviour in different contexts.

EXPERIMENT- A carefully controlled scientific procedure conducted to determine whether certain variables manipulated by the experimenter have an effect on other variables
HYPOTHESIS- A possible explanation for a behaviour being studied that can be answered by an experiment or a series of observation. It can also be defined as tentative answer to a problem.

VARIABLES- Factors that can be varied and can assume more than one value.

INDEPENDENT VARIABLE- A variable that is controlled by the experimenter and is applied to the participants to determine its effect.

DEPENDENT VARIABLE- A measurable behaviour that is exhibited by a participant and is affected by the independent variable.

CONTROL GROUP- The group in which participants are treated identically to participate in the experimental condition, except that the independent variable is not applied to them.

EXPERIMENTAL GROUP- The group in which independent variable is introduced

ADVANTAGES OF EXPERIMENTAL METHOD-

- It helps in discovering the causes of behaviour.
- It also helps in understanding cause and effect relationship.

DISADVANTAGES OF EXPERIMENTAL METHOD

- It cannot be used to study all kinds of behaviour.
- The experiments may produce results that do not apply in real life situations.
- They have low external validity.

- It is difficult to know and control all the relevant variables.

PSYCHOLOGICAL TEST- A psychological test is a standardized instrument designed to measure objectively, one or more aspects of total personality by means of verbal or non verbal responses. Standardization means the test is objective, reliable and valid.

CHARACTERISTICS OF PSYCHOLOGICAL TEST

STANDARDIZATION- The procedures are specified precisely, so that different testers will follow the same procedures when they administer the same test to different subjects this means that test performance of different people or the same persons at different times or occasions can be compared directly.

OBJECTIVITY- Objectivity refers to the fact that if two or more researchers administer a psychological test on the same group of people, both of them would come up with more or less the same values for each person in the group. The items convey the same meaning to everyone. Specific instructions and the procedure for administering the test are specified. The impact of personal bias is kept under control.

RELIABILITY- It refers to the consistency of the scores obtained by an individual on the same test on two different occasions.

Types of Reliability

Test Retest reliability- it is computed by finding co-efficient of correlation between the two sets of scores on the same set of persons. It indicates the temporal stability or stability of the test scores over time.

Split Half Reliability-It gives an indication about the degree of internal consistency of the test. The test is divided into two equal halves employing odd even method.

VALIDITY- It refers to the extent to which the test measures what it is suppose to measure. **NORMS-** Norm is an average score on a particular test made by a specific population. Reference to a test table of norms enables us to rank an individuals performance relative to his own age group.

STANDARDISED INSTRUCTIONS

Standardized instructions are given in the manual. The tester gives these instructions only to maintain the uniformity.

UNIFORMITY IN CONDUCTION - The tester conducts the test in a uniform way irrespective of their culture.

USES OF PSYCHOLOGICAL TESTS

- These are used primarily for analysis and determination of individual differences in general intelligence, aptitude, personality traits etc.
- Psychological tests are also used for a variety of psychological, educational, cultural studies of groups as well as study of particular individuals.
- Test provides very useful information for educational and vocational guidance.
- In schools, tests can be used to identify students with low as well high intelligence.

- It helps in knowing the causes of behavioural problems.
- In clinics, psychological tests are used for individual diagnosis of factors associated with personal problems of learning, behaviour or specific interpersonal relations.
- In business and industry, tests are helpful in selecting and classifying personnel for placement in jobs.

OBSERVATION

It is an effective method of describing behaviour. Witnessing an event and recording.

STEPS OF OBSERVATION

- a. Selection- Psychologists select a particular behaviour for observation e.g. One may be interested to know how children behaviour behave on their first day in school.
- b. B) Recording- the researcher records the selected behaviour using different means such as marking tallies for a behaviour, taking notes describing each activity in detail.
- c. Analysis of data- Psychologists analyzes whatever they have recorded to derive meaning out of it.

TYPES OF OBSERVATION

NATURALISTIC OBSERVATION- This refers to observations done in natural and real life settings. The observer makes no effort to control or manipulate the situation. This type of observation is conducted in schools and hospitals.

Controlled observation- this type of observation is doe in laboratory experiments.

Participant observation- In this type of observation the observer becomes a part of the group being observed.

Non- Participant Observation- In this type of observation, group or people are observed from a distance or through a camera.

ADVANTAGES OF OBSERVATION METHOD

- Researcher obtains a data about a truly natural behaviour rather than a behaviour that is reaction to experimental situation.

DISADVANTAGES OF OBSERVATION METHOD

- It can be difficult and time consuming
- Controls are lacking
- Difficult to generalize results
- Scientific objectivity is lost if experimenter interacts with the participants

SURVEY METHOD

It is a technique for sampling a wide variety of behaviour and attitude e.g. finding out the attitude of people towards family planning. The survey research uses different techniques like interviews, questionnaires and observations etc.

It can also be used to predict behaviour. Researcher must be careful in choosing the sample. Advantage- It enables researcher to describe the characteristics of relatively small sample and the generalize that information to a larger population

INTERVIEW

It refers to a face to face conversation with a purpose to derive factual information, opinions and attitudes etc. there can be two broad types of interviews- structured or standardized and unstructured or non-standardized. A structured interview is the one in which the questions in the schedule are written clearly in a sequence. In an unstructured interview the interviewer has the flexibility to take decisions about the questions to be asked; the wordings of the questions and the sequence in which the questions are to be asked. Questions can be either open ended or closed ended. Closed ended questions have specified responses. Open ended questions can be answered the way respondent wants to.

CASE STUDY

It refers to in-depth study of a particular case. The case can be an individual with distinguishing characteristics or a small group of individuals having some commonality among them, institutions and specific events. A case study employs multiple methods for collecting information such as interview, observation and psychological tests. It provides in depth information about a person's life but at the same time validity in single case is quite challenging

CORRELATION STUDIES

Correlational studies are done to find relationships between variables for prediction purposes. The strength and direction of the relationship is determined by correlational coefficient and its value can range from +1.0 to -1.0. The coefficient of correlation is of three types- positive, negative

and zero. A positive correlation indicates that as the value of one variable increases, the value of other variable also increases. Negative correlation indicates as the value of one variable increases, the value of other variable decreases. Zero correlation indicates that there is no relationship between two variables.

QUESTIONNAIRE

It consists of predetermined set of questions. The respondent has to read the questions and mark the answers on the paper. Both open ended and closed ended questions can be used in the questionnaire. The questionnaire is mainly used for collecting background and demographic information, attitudes and opinions, knowledge about a particular topic. It is the most common, simple and low cost self report method of collecting information.

FIELD EXPERIMENT AND QUASI EXPERIMENTS

In field experiment the researcher may go to the natural setting where the particular phenomenon actually exists. For example teaching one group by demonstration method and other group by lecture method and then comparing their performance. It is more time consuming and expensive. In quasi experiment the independent variable is selected rather than varied or manipulated by the experimenter for example in the experimental group we can have children who have lost their parents in the earthquake and in the control group who experience the earthquake but did not lose their parents.

Difference between test and experiment

<u>TEST</u>	<u>EXPERIMENT</u>
It is standardized instrument used to measure intellectual and non intellectual characteristics of an individual through verbal or non verbal measures.	The researcher tries to manipulate the situation and tries to prove or disapprove a hypothesis.
It evaluates certain attributes of an individual.	It determines cause and effect relationship between variables.
It does not have an hypothesis	It has a hypothesis.
It is standardized and has norms	It does not have norms and is meant for verification of various principles.

Psychology Experiment

Aim: To study the effect of meaningfulness on learning using list of meaningful words and nonsense words.

Material required:

List of 10 Non sense syllables (Eg: Tuv, Pej)

List of 10 meaningful syllables (Eg: Tin, Net)

Paper , pencil

Design of the experiment: The experiment is designed in such a way that List A comprising of nonsense syllables is shown to the subject for 1 minutes. The subject is asked to read the list carefully and remember the words. After 1 minute the list is taken away and the subject is asked to recall all the words on the list. This process will be repeated until and unless the subject is able to recall all the words in the list. The same procedure is to be followed for List B comprising of meaningful words.

After the subject has successfully recalled all the words of list A and List B then compare the number of trials taken by the subject to recall all the words of List A and all the words of List B

Students are required to prepare a response sheet as given below and bring their results after conducting the experiment

LIST A (10 Non Sense Syllables)

Non Sense Syllable	T1	T2	T3...
TAH			
FEV			
XIJ			
YOB			

LIST B (10 Meaningful Words)

Meaningful syllable	T1	T2	T3...
BET			
DIP			
NAB			
CUT			

12. HOME SCIENCE

Prepared By: Ms. Neha Gupta

Prepare a detailed PPT and Spiral bound file from the topic assigned.

List of Topics / assigned to

1. **Red Ribbon Express** -- ADITYA AWANA & AKSHAT KUMAR
2. **NACO – National Aids Control Organization** --- ANSH WALIA & ARCHIT
3. **SEWA – Self Employed Women Association** --- DIYA SHARMA & GAZAL
4. **EDUSAT – Educational Satellite** --- HARSH CHAUDHARY & HARSHIT
5. **Project Village Chhatra** --- HARSHITA & HRIDAY
6. **SARI – The Sustainable Access in Rural India project in Tamil Nadu** – ISHA & MIHIKA
7. **CLCs - Community Learning Centres** --- LAKXAY & KARTIK
8. **E – governance** – NISHCHAY & SHEKHAR
9. **E – Caupal** – SHRISHTI & TRIPTI

Complete the project and Compile it according to the prescribed format.

- Cover page
- Certificate
- Acknowledgment
- Index
- Introduction
- Content (including pictures/graphs/tables/survey report etc.)
- Case Study
- Bibliography
- Assessment Criterion- Content, Presentation, Case study, Viva-voce and Confidence.
- Marks will be awarded in Annual Examination during practical Examination.

13. HISTORY

1. Write a manuscript on any one National Hero (women) and her contributions in the National struggle.
2. Borders, pictures and font as discussed.
3. Practice and paste the map work of Bricks, Beads and Bones and Mahajanpadas.
4. Complete the question answers ,sources and extra questions of the chapter :King ,peasants and farmers.



14. PAINTING

Prepared By:Mr.Niladri S.Das

General Instructions:

Q.1.SHORT QUESTION:

2 marks questions

(Answers for to be written in about 80-100 words each.)

- a. Write a short note on 'Chaitya'.
- b. Write a short note on 'Vihara'
- c. What is Fresco.
- d. What is Mural.
- e. Write a note on colours used in Ajanta paintings.

LONG QUESTIONS :

5 marks questions

(Answers to be written in about 150-200 words each.)

- Q.2. Write a note on Technique of Ajanta's painting and Mural.
- Q.3. Write a note on subject matter of Ajanta's painting and sculpture.
- Q.4. Write a critical note on "Bhodistava Padma pani" of Ajanta.
- Q.5. Present an aesthetic report on Ajanta painting.
- Q.6. write a short note on Ajanta cave Paintings.
- Q.7. What are the main characteristic of Ajanta paintings?
- Q.8. Where is Ajanta located? How many caves are there? Give the brief description of them.
- Q.9. What do you think about the Ajanta caves art? Give a brief explanation about it.
- Q.10. Difference Fresco and Secco.With Proper example.

15. ENTREPRENEURSHIP

PROJECT WORK

Learning outcome:

- To analyse and evaluate real world scenarios using theoretical knowledge.
- To demonstrate the application of critical and creative thinking skills.
- To develop communication skills and abilities for presentation.

Steps involved in the conduct of the project:

Choose a topic



Collection of research material/data



Organization of material/data



Analyzing the material/data for conclusion



Draw relevant conclusion



Presentation

All students to complete their allotted project work. Please prepare a proper file for the same.

16. INFORMATICS PRACTICES

Prepared By: Meetu Tripathi

General Instructions :

- Attempt all the questions

Q1. Find out the output:

```
L = [100, 120, "Book", 3, "Computer"]  
print(L[-2])  
print(L[-4:-1])
```

Q2. Write a python program to input 10 numbers in a list. Print the total and average of the given elements.

Q3. Write a python program to create a dictionary named Flowers add 5 flowers and its colours in a dictionary. Flower name as key and colour as value. Display colour of the flower as per the flower name given.

Q4. Write a python program to input a list of 10 integers. Count and print the total number of positive and negative numbers entered in the list.

Q5. Write a python program to input a string from the user. Count and print the number of words and vowels present in the given string.

Q6. What are variable naming conventions in Python?

Q7. Write a Python Program to input number N. Calculate and print the first 10 multiples of the given number N.

Q8. Write the output of the following:

```
P = [90,30,10,60]  
K = ['A','B','C']  
print (K)  
P.pop( )  
K.append(90)  
print(P,K)
```

Q9. Differentiate between append () and extend() functions.

Q10. What is the output produced by the following code:

```
d1 = {1:10,2:20,3:30,4:40,5:50}  
del d1[3]  
print(d1)
```

Q11. What is the error in following code. Rewrite the correct code and underline the correction.

```
30 = T  
For I in range(7)
```

```
print(l + T)
T = + 4
```

Q12. Write the corresponding Python assignment statement.

- a) Assign True to a variable Check and 10 to a variable M .
- b) Assign Square as the square of M variable.

Q13. Start with the M[10,19,80]. Do the following using list function:

-Add element 40 in the list M.

Q14. Python Command to insert single line comment.

Q15. Divya wants to store "XIA", Help her to choose the correct data type in Python.

Q16. Python is a/anlanguage.

Q17. Write a program to input a string count and print the total number of words presents in the given string.

Q18. Write a program to input a list of numbers. Print the sum of all numbers divisible by 2 and 6.

Q19, Write a program to input a dictionary of n elements. Each element consist of month name as key and number of days as value.

Q20. Write a program to input a list of numbers. Print the list in reverse order.

17. COMPUTER SCIENCE

Prepared By: Meetu Tripathi

General Instructions:

- Attempt all the questions

Q1. Find the output of the following:

```
L1 = [10,9,3,4,5]
START = 1
SUM = 0
for C in range(START,4):
    SUM = SUM + L1[C]
    SUM = SUM + L1[0]*10
print(SUM)
```

Q2. Which is the correct form of declaration of dictionary?

Day={1:'ramit',2:'ayush',3:' arpan'}

Day=(1:' ramit',2:'ayush',3:' arpan')

Day=[1:' ramit',2:'ayush',3:' arpan']

iv. Day={1' ramit',2'ayush',3'arpan'}

Q3. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
x = int(input("Enter a number:"))
if (ab(x)== x):
    print("Positive Number")
else:
    x* = -1
print("Number made positive,x)
```

Q4. How many times is the word "HELLO" printed in the following statement?

S = "Welcome All"

for ch in S[3:8]:

print("HELLO")

Q5. What is the difference between break and continue statements?

Q6. Can tuple be used as a key to dictionary? State yes or no. Also, justify.

Q7. What is the difference between break and continue statements?

Q8. Consider the string str = "Open Source". Write statements in Python to implement the following:

To display the last 3 characters

To repeat the string 5 times

Q9. Write the output of the following:

```
L = [2, 4, 5, 6, 2, 3, 4, 4, 7]
```

```
count = L.count(4)
```

```
print(count)
```

```
L.sort( )
```

```
print(L)
```

Q10. What type of error will be produced when you type:

Result = "Hello" + 5

Name the error and state the error message.

Q11. Write a program to display the sum of even numbers up to number n entered by user.

Q12. What will be the output of the following program:

```
a, b = 5, 7
```

```
a, b = a + 2, b + a
```

```
print(a,b)
```

Q13. Find and write the output of the following python code :

```
Text = "Cbse@exam"
```

```
L = len(Text)
```

```
ntext = ""
```

```
for i in range (0,L) :
```

```
    if Text[i].isupper( ):
```

```
        ntext = ntext + Text[i].lower( )
```

```
    elif Text[i]. isalpha( ):
```

```
        ntext = ntext + Text[i].upper( )
```

```
    else :
```

```
        ntext = ntext + '@@'
```

```
print(ntext)
```

Q14. Write a program to obtain temperatures of 07 days and then display average temperature of the week.

Q15. Write a program that input a List 'L' of 6 elements, add 5 in all the odd values and 10 in all the even values of the list L. Also display the List.

Q16. Write a program to input number from the user and check whether a number is divisible by 5 and 11 or not.

Q17. Write a program that prints out the index of every 'i' in 'Mississippi'.

Q18. Convert the following while loop into for loop:

```
X = 15
```

```
while (X < 50) :
```

```
    print(X + 10)
```

```
    X += 5
```

Q19. In python we do not specify types, it is directly interpreted by the compiler, so consider the following operation to be performed.

```
>>>x = 17 / 2
```

objective is to make sure x has a integer value, select all that apply

(python 3.xx)

a) x = 17 // 2

b) x = int(17 / 2)

c) x = 17 % 2

d) All of the mentioned

Q20. Differentiate between Lists and Tuples objects in Python language with example.

18. ARTIFICIAL INTELLIGENCE

1	Explain the process of Design thinking?
2	<div>Which type of visualization should never be used in a business setting?</div> <div>answer choices</div> <div>1 Pie Chart 2 100% Stacked Bar Chart 3 100% Stacked Area Chart 4 3D Chart</div>
3	<div>When should we use a table instead of a chart?</div> <div>answer choices</div> <div>1 When the data is very complex 2 When there are no real patterns in the data 3 When we are interested in looking up specific values in the data set 4 When the data is very simple</div>
4	Difference between supervised and unsupervised learning?
5	Explain Brain storming?
6	What are the steps of storytelling with data?
7	What are the types of Correlation?
8	Difference between covariance and Correlation?
9	<div>Which of these visuals is most commonly used to show the distribution of a single continuous variable?</div> <div>answer choices</div> <div>1 Histogram 2 Scatter plot 3 Line Bar 4 Bar Chart</div>
10	What is correlation? Give examples.
11	What is positively distributed data?
12	Draw the graph of negatively distributed data?
13	Which is the best level of measurement?
14	Which is the lowest level of measurement?
15	Difference between qualitative and quantitative data?

19. PHYSICAL EDUCATION

Prepare a detailed research paper, PPT and Spiral bound file from the topic of your choice.

List of projects/ Games-

Basketball, Football, Kabaddi,

Kho-Kho, Volleyball,

Handball, Hockey, Cricket,

Bocce and Unified Basketball

Complete the Investigatory project and Compile it according to the prescribed format.

- Cover page
- Certificate
- Acknowledgment
- Index
- Introduction
- Content (including pictures/graphs/tables/survey report etc.)
- Case Study
- Bibliography
- Assessment Criterion- Content, Presentation, Research Work, Case study, Viva-voce and Confidence.
- It is an individual activity and marks will be awarded in Annual Examination during practical Examination.