

JAGANNATH INTERNATIONAL SCHOOL

SUMMER HOLIDAY HOMEWORK 2024-2025 CLASS - XII

SESSION 2024-25

HOLIDAY HOMEWORK

CLASS XII

ENGLISH

- Make a detailed project on the topics mentioned below with student names according to CBSE guidelines.
- Students can use any medium to write the project (typed or handwritten).
- Follow the following pattern page-wise.
- 1. Cover page
- 2. Acknowledgment
- 3. Certificate
- 4. Index
- 5. Objective
- 6. Detailed information / Analysis about the topic (include colourful pictures also)
- 7. Learnings/ Reflection
- 8. Bibliography
- Revise the syllabus done so far.

| S.NO | NAME | ΤΟΡΙϹ |
|------|-----------|----------------------------------|
| 1 | Bhavya | Education |
| 2 | Chanda | Digital India |
| 3 | Chayan | Online Social Networking |
| 4 | Devansh | Child Labour |
| 5 | Janvi | Poverty |
| 6 | Kanish | Technology |
| 7 | Kartik | Dependence of technology |
| 8 | Keshav | Environment |
| 9 | Mehak | Make in India |
| 10 | Niharika | Cashless India |
| 11 | Nishtha | Corruption in India |
| 12 | Palak | Ethics and Values |
| 13 | Prachi | Censorship |
| 14 | Rudraksh | Human Rights |
| 15 | Sai Jyoti | Media and Society |
| 16 | Satvik | Video Game |
| 17 | Shikha | Online Learning |
| 18 | Shreya | Life of Buddha and his teachings |
| 19 | Srishti | New Education Policy 2020 |
| 20 | Surbhi | Indian Tourism |
| 21 | Tanishka | Global Warming |
| 22 | Тіуа | Climate Change |
| 23 | Vansh | Sustainable Development |

| 24 | Ayush | Preservation of wildlife |
|----|-------------|--|
| 25 | Abhishek | Mental health |
| 26 | Bhumi | Women's aspirations |
| 27 | Charvi | India's changing face |
| 28 | Cheshtha | Ecotechnology and the environment |
| 29 | Dhanveen | Current developments in India's educational system |
| 30 | Gaurvi | Dreams |
| 31 | Kartik | Life after death |
| 32 | Krishankant | Music has the power to heal |
| 33 | Kuljot | Leadership cannot be taught |
| 34 | Lakshay | Man is the architect of his own fate |
| 35 | Laveena | Festivals of india |
| 36 | Lavisha | Culture |
| 37 | Lovepreet | Adventure |
| 38 | Rhythm | Mystery |
| 39 | Rishi | Entertainment |
| 40 | Tanmay | Music |
| 41 | Vedish | Humour and wisdom |
| 42 | Aryaman | Future of electrical vehicles in India |
| 43 | Janvi | Mechanisms adopted to combat terrorism |
| 44 | Masuma | Population explosion |
| 45 | Mishank | Artificial intelligence |
| 46 | Pearl | Old buildings must be preserved |
| 47 | Pihu | The Bermuda triangle is fact, not fiction |
| 48 | Raghav | Racism will never die out |
| 49 | Reshu | No one is too old to go study |
| 50 | Saumya | Democracy |
| 51 | Saygun | Depression is not a disease |
| 52 | Shoyab | Smartphones VS Smartpeople |
| 53 | Vanshika | Right to education |

 $\overline{\mathbf{x}}_{1}^{*} \rightarrow \overline{\mathbf{x}}_{1}^{*} \rightarrow \overline{\mathbf{x}}_{1$

MATHEMATICS

- 1. Concept Review and Assignment- Revise chapters 1 to 4 using your NCERT textbook and class notes. Complete the assignment related questions in the assignment booklet. You must submit Mathematics register by July 1, 2024.
- 2. Self- Assessment Tests- Attempt the Self-Assessment Tests for chapters 1-4 in the assignment booklet, recording your work in your registers. Check your answers using the solutions provided.
- 3. Math Lab Activity- Complete 5 activities in your Mathematics lab manual file, as discussed in class. The activities are available in assignment booklet.

PHYSICAL EDUCATION

- 1. Revise 1st and 2nd chapter.
- 2. Prepare assignment of chapter-3 (Yoga).
- 3. Write about the causes of diabetes and asanas for its prevention.
- 4. Write about the causes of obesity and asanas for its prevention.

PSYCHOLOGY

- 1. Complete the given assignment in your psychology register.
- 2. Select one topic and prepare case profile (consult sample project and Psychology book Pg. No. 199)
- 3. Prepare Model as per discussion in class (Roll no. 1 to 5)

POLITICAL SCIENCE

All details are given below for the same:

- 1. Project work (as per CBSE guidelines)
- 2. Revision work (Ch-1,2,3,4 and 5)
- 3. Assignments (objective type, very short answer & passages)
- 4. Cartoon based questions (book-1)

Guidelines for Project Work

The expectations of the project work are that-

- 1. Learners are complete only one project in each academic session
- 2. Project should be hand written
- 3. It will be an independent, self-directed piece of study. Scope of the project.

Learners will work upon the following lines as suggested here;

- 1. Choose a tittle/topic
- 2. Certificate
- 3. Acknowledgement
- 4. Index
- 5. Introduction
- 6. Causes, Main event, Origin, history
- 7. Research Questions
- 8. Selection of Respondents
- 9. Methodology
- 10. Questionnaire
- 11. Report Writing/presentation of data
- 12. Draw the relevant Conclusion
- 13. Limitations

14. Bibliography

Suggestive List of Projects (Choose any one).

Book -1

- 1 NAM-1961 to present times.
- 2 Division of Germany with Special focus on the construction and dismantling of the Berlin Wall
- 3 Disintegration of USSR with special focus on Gorbachev.
- 4 Cover the negative as well as positive aspects of relationship between India and the following countries. Focus on any one of the following (current updates should be highlighted.
- 5 Relationship between India and Russia
- 6 Relationship between India and China
- 7 Relationship between India and Pakistan
- 8 Relationship between India and Bangladesh
- 9 ASEAN
- 10 European Union and BREXIT

11 India's Nuclear Policy

1. United Nations with focus on India's candidature in Security Council. (Please collect newspaper clippings for the same)

Book -2

- 1. Comparison between NITI AAYOG and Planning Commission and their contribution in India's Development
- 2. Partition of India-Theory behind it and its legacy
- 3. Emergency A blot on Indian Democracy
- 4. Election 2019-Rise of BJP and Downfall of Congress (1989-2019)
- 5. NDA III and NDA IV–Social and Economic welfare programmes.

Note:

. Student will choose any one topic and use interleaf A4 size sheet for project work. (read instructions carefully)

- . Assignments you all will get weekly; it can be in the form of google forms or pdf file.
- . All cartoons analysis needs to do in your political science notebook.
- . Every child will revise all work done in class.

ECONOMICS

> Write the synopsis of the discussed CBSE projects in the class e.g.

| TOPIC : XII | | |
|---|---|--|
| Micro and Small Scale Industries | Food Supply Channel in India | |
| Contemporary Employment situation in India | Disinvestment policy of the government | |
| Goods and Services Tax Act and its Impact on | Health Expenditure (of any state) | |
| GDP | | |
| Human Development Index | Inclusive Growth Strategy | |
| Self-help group | Trends in Credit availability in India | |
| Monetary Policy Committee and its functions | Role of RBI in Control of Credit | |
| Government Budget & its Components | Trends in budgetary condition of India | |
| Exchange Rate determination – Methods and | Currency War – reasons and repercussions | |
| Techniques | | |
| Livestock – Backbone of Rural India | Alternate fuel – types and importance | |
| Sarva Shiksha Abhiyan – Cost Ratio Benefits | Golden Quadrilateral- Cost ratio benefit | |
| Minimum Support Prices | Relation between Stock Price Index and | |
| | Economic Health of a Nation | |
| Waste Management in India – Need of the | Minimum Wage Rate – Approach and | |
| hour | Application | |
| Digital India- Step towards the future | Rain Water Harvesting – A solution to water | |
| | crisis | |
| Vertical Farming – An alternate way | Silk Route- Revival of the past | |
| Make in India – The way ahead | Bumper Production- Boon or Bane for the | |
| | farmer | |
| Rise of Concrete Jungle- Trend Analysis | Organic Farming – Back to the Nature | |

| Aatmanirbhar Bharat | • e-Rupee (e- ₹) |
|---|---|
| Sri Lanka's Economic Crisis | Sustainable Development Goals (SDG's) |
| Environmental Crisis | Comparative Study of Economies (Maximum |
| | three economies) |
| New Education Policy (NEP) 2020: A Promise | G-20: Inclusive and Action Oriented |
| for a New Education System | |
| Amrit Kaal: Empowered and Inclusive | Cashless Economy |
| Economy | |
| Any other newspaper article and its | Any other topic |
| evaluation on basis of economic principles | |
| | |

<u>OBJECTIVE-</u> The objectives of the project work is to enable learners to:

- Probe deeper into theoretical concepts learnt in classes XI and XII
- Analyze and evaluate real world economic scenarios using theoretical constructs and arguments
- Demonstrate the learning of economic theory
- Follow up aspects of economics in which learners have interest
- Develop the communication skills to argue logically

SCOPE OF THE PROJECT- Learners may work upon the following lines as a suggested flow chart:

- Choose a title/topic
- Collection of the research material/data
- Organization of material/data
- Present material/data
- Analysing the material/data for conclusion
- Draw the relevant conclusion
- Presentation of the Project Work

PRESENTATION-

- It will be an independent, self-directed piece of study
- Students will complete ONE project. Project should be of 3,500-4,000 words (excluding diagrams & graphs). It will be an independent, self-directed piece of study.
- At the end of the stipulated term, each learner will present the research work in the Project File to the External and Internal examiner.
- The questions should be asked from the Research Work/Project File of the learner.
- The Internal Examiner should ensure that the study submitted by the learner is his/her own original work.
- In case of any doubt, authenticity should be checked and verified.
- The project should be handwritten on A4 size sheet.
- Students will prepare economics project as per following headings:
- Acknowledgement
- Index

- Cover page
- Introduction of the concept
- Analysis/explanation and interpretation
- Conclusion
- Credits/list of resources used/bibliography

SOLVE THE FOLLOWING QUESTIONS IN YOUR NOTEBOOK:

- 1. What do you mean by CIRCULAR FLOW OF INCOME? Explain its different phases in details.
- 2. Differentiate between stock and flow on the basis of meaning, time dimension, nature of concepts and give at least 6 examples.
- 3. Write about types of circular flow? As real flow and money flow.

4. Introduce the following terms: -

Domestic Territory, Normal residents, Factor income and transfer income Final goods and intermediate goods, Consumption goods and capital goods, Net investment and gross investment, NIT, Subsidies, Factor cost and market price, Tell about NFIA and its components

- 5. Define various aggregates of national income?
- 6. Differentiate between National income and Domestic income?
- 7. Write the steps of all the methods of calculating National Income and its precautions.
- 8. Solve 10 Numerical Questions of each value added method, Income method and Expenditure method.
- 9. Discuss the functions of Central Bank in detail.
- 10. Outline the process of money creation by the commercial banking system.

ACCOUNTANCY

- Revise all chapters covered in class and solve practice questions in your notebook: Ch 1: Accounting for Partnership firms-Fundamentals Ch 2: Goodwill: Nature and Valuation Ch 3: Change in Profit sharing Ratio among existing partners Ch 4: Admission of a Partner
- Research on a Company and take print out of Financial Statement for financial year(2023-24) and paste in your notebook.

BUSINESS STUDIES

᠄ᢝ᠄ᠵᡯᢩ᠄ᢝ᠈ᡵᡯᢩ᠄ᢝ᠈ᡵᡯᢩ᠄ᢝ᠈ᡵᡯᢩ᠄ᢝ᠈ᡵᡯ᠈ᢞ᠅ᡘᡵ᠅ᡩ᠈ᠵᡯᢩ᠄ᢝ᠈ᡵᡯᢩ᠄ᢝ᠈ᡵᡯᢩ᠄ᢝ᠈ᡵᡯ᠈ᢞ᠅ᢞ᠈ᡵᡯ᠈ᢞ᠅ᡘᢋ᠅ᢞ᠈ᡵᡯ᠈ᢣᡯ᠈ᡵᡯ

• Solve the case studies of Ch 1 to 3 from book of Case studies (Author- Subhash Dey) shared with you in class group:

Chapter 1: Nature and significance of management

Chapter 2: Principles of Management

Chapter 3: Business Environment

Solve all case studies in your fair notebook

 Prepare model on following topic: Marketing Mix (Roll No 1-5)
 E-Commerce (Roll No 6-10)
 Private Bank vs Public Bank (Roll No 11-15)
 Retail Business (Roll No 16 to 19)
 Channel of Communication (Roll No 20-23)

PHYSICS

- Solve the given assignment in your register.
- > Complete Practical files.
- Prepare a working model on the topics assigned in the groups as discussed in the class. Link has been shared for reference.

| S NO. | TOPICS | LINK |
|-------|---|--|
| 1 | Carbon Purification in Industries | Carbon Purification for industries Save environment Project science Project part 2 (youtube.com) |
| 2 | Floating Chair/ Antigravity Structures | Insane Floating Tensegrity Chair (youtube.com) |
| 3 | Water Level Indicator | Water Level indicator project 12th #science Project step by step (youtube.com) |
| 4 | Watering using Solar Power | Watering using Solar Power easy school project for competition (Working Model) (youtube.com) |
| 5 | Road Safety Model | (3) [PART-2]Award Winning Accident Prevention Road Safety Model With Speed Breaker Power Generator - YouTube |

CHEMISTRY

- ➤ Prepare Investigatory Project on the desired topic as per CBSE guidelines.
- ➤ Solve the given assignment in your register
- 1. State Henry's law correlating the pressure of a gas and its solubility in a solvent and mention two applications of the law.
- 2. Calculate the temperature at which a solution containing 54 g of glucose, (C6 H12 O6) in 250 g of water will freeze. (Kf for water =1.86 K mol kg -1)
- 3. State Raoult's law for solutions of volatile liquids. Taking suitable examples explain the meaning of positive and negative deviations from Raoult's law. OR Define the term osmotic pressure. Describe how the molecular mass of a substance can be determined by a method based on measurement of osmotic pressure?
- 4. Define osmotic pressure. How is it that measurement of osmotic pressures is more widely used for determining molar masses of macromolecules than the rise in boiling point or fall in freezing point of their solutions?
- 5. Derive an equation to express that relative lowering of vapour pressure for a solution is equal to the mole fraction of the solute in it when the solvent alone is volatile.
- 6. Differentiate between molality and molarity of a solution. What is the effect of change in temperature of a solution on its molality and molarity?
- 7. Define the following terms: (i) Mole fraction(ii) Van't Hoff factor

8. Calculate the freezing point depression for 0.0711 m aqueous solution of sodium sulphate(Na2 SO4), if it is completely ionised in solution. If this solution actually freezes at -0.320 °C, what is the value of Van't Hoff factor for it at the freezing point? (Kf for water is 1.86°C mol-1) 8 What is 'reverse osmosis'?

- 9. Non-ideal solutions exhibit either positive or negative deviations from Raoult's law. What are these deviations and why are they caused? Explain with one example for each type.
- A solution prepared by dissolving 1.25 g of oil of winter green (methyl salicylate) in 99.0 g of benzene has a boiling point of 80.31°C. Determine the molar mass of this compound. (B.P. of pure Benzene = 80.10°C and Kb for benzene = 2.53°C kg mol-1)

11. A solution of glycerol (C3H8O3; molar mass = 92 g mol-1) in water was prepared by dissolving some glycerol in 500 g of water. This solution has a boiling point of 100.42°C. What mass of glycerol was dissolved to make this solution? Kb for water = 0.512 K kg mol-1.

12. Define the terms, 'osmosis' and 'osmotic pressure'. What is the advantage of using osmotic pressure as compared to other colligative properties for the determination of molar masses of solutes in solutions.

13 What mass of NaCl (molar mass = 58.5 g mol–1) must be dissolved in 65 g of water to lower the freezing point by 7.5°C? The freezing point depression constant, Kf , for water is 1.86 K kg mol–1. Assume van't Hoff factor for NaCl is 1.87.

14 What mass of ethylene glycol (molar mass = 62.0 g mol-1) must be added to 5.50 kg of water to lower the freezing point of water from 0°C to -10.0°C? (Kf for water = 1.86 K kg mol-1)

15 15 g of an unknown molecular substance was dissolved in 450 g of water. The resulting solution freezes at - 0.34°C. What is the molar mass of the substance? (Kf for water = 1.86 K kg mol-1).



• Prepare a project on a suitable topic from your book.(as discussed)

 \mathcal{X} \mathcal{X}

- Complete the practical file.
- Learn the chapters 1, 2 and 3.
- <u>Do all these questions in biology register.</u>

CHAPTER-2 (REPRODUCTION IN FLOWERING PLANTS)

- 1. Banana is a true fruit, but is also a parthenocarpic fruit. Give a reason?
- 2. Why do corn cobs have long tessels?
- 3. What is meant by monosporic development of female gametophyte?
- 4. Give the technical term for the type of pollination which ensure genetic recombination?
- 5. Name the tallest flower?
- 6. Name the seeds that have retained their viability for thousands of years?

7. How is it possible in Oxalis and Viola plants to produce assured seed sets even in the absence of pollinators?

8. A bilobed dithecous anther has 100 microspore mother cells per microsporangium. How many male gametophytes can this anther produced?

9. In the T.S. of a mature anther given, identify "A" and "B" and mention their functions.



CHAPTER-3 (HUMAN REPRODUCTION)

- 1. Name the cells that nourish the germ cells in the testes? Where are these cells located in the testes?
- 2. Define spermiogenesis. Where does it occur?
- 3. Mention the difference between spermiogenesis and spermiation?
- 4. At what stage is meiosis I suspended in a primary oocyte?
- 5. Diagramatically show the levels of LH and FSH during menstrual cycle.
- 6. Explain the various phases of menstrual cycle with reference to changes in ovary and uterus and hormonal cycle.

INFORMATICS PRACTICES

Instructions:

- Apart from Holiday homework complete all work that was taught in offline and online class in your class notebook.
- Cover your class notebook
- First complete Class work then write heading Holiday Homework on one page start your Holiday HW.
- > Apart from the questions given here some worksheet will also be sent. Do that also in Holiday HW.
- Revise chapter 1 (Data Handling using Pandas) and chapter 3 Review of Database Concepts & SQL. Just after PT-1 your class test will be conducted.
- Execute all program in your system for practical file(will be sent in group) and save it in a folder XII-A-YourName.

| 1. | Create a pandas.Series from a list of integers [10, 20, 30, 40, 50] and display it. |
|-----|--|
| 2. | Create a pandas.Series from a dictionary {'a': 1, 'b': 2, 'c': 3, 'd': 4} and display it. |
| 3. | Given a pandas.Series s = pd.Series([5, 10, 15, 20, 25]) , access the element at index 2 and display it. |
| 4. | Create two pandas.Series, s1 = pd.Series([1, 2, 3, 4, 5]) and s2 = pd.Series([10, 20, 30, 40, 50]). Add them together and display the result. |
| 5. | Given a pandas.Series s = pd.Series([5, 15, 25, 35, 45]) , filter and display the elements greater than 20. |
| 6. | Create a pandas.Series with the values [1, 2, None, 4, None, 6] . Replace the missing values with the mean of the series and display it. |
| 7. | Create a pandas.Series from the list [10, 20, 30, 40, 50] with custom index labels ['a', 'b', 'c', 'd', 'e'] and display it. |
| 8. | <pre>Create a pandas.DataFrame from the following dictionary and display it: data = { 'Name': ['Alice', 'Bob', 'Charlie', 'David', 'Eve'], 'Age': [24, 27, 22, 32, 29], 'City': ['New York', 'Los Angeles', 'Chicago', 'Houston', 'Phoenix'] }</pre> |
| 9. | Given the DataFrame df from the previous question, display only the 'Name' and 'City' columns. |
| 10. | Using the same DataFrame df, display the first three rows. |
| 11. | Add a new column 'Salary' with the following values [50000, 60000, 55000, 70000, 65000] to the DataFrame df and display it. |

| ·* 	 * ** 	 * ** 	 ** ** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 *** 	 **** 	 *** 	 *** 	 *** 	 *** 	 ** | | |
|--|---|--|
| 12. | Filter the DataFrame df to display only the rows where the 'Age' is greater than 25. | |
| 13. | Delete the 'City' column from the DataFrame df and display the result. | |
| 14. | Write a Python program to read a CSV file named students.csv into a pandas.DataFrame and display the first five rows. Assume students.csv contains the following data: | |
| | Name,Age,Grade Alice,24,A Bob,27,B | |
| | Charlie,22,C | |
| | Eve, 29, A | |
| 15. | Create a pandas.DataFrame with the following data and write it to a CSV file named new_students.csv | |
| | data = { | |
| | 'Name': ['John', 'Emily', 'Michael', 'Sarah', 'Jessica'], | |
| | 'Age': [21, 23, 20, 22, 25], | |
| | 'Grade': ['B', 'A', 'C', 'B', 'A'] | |
| | } | |
| 16. | Read the students.csv file and display only the 'Name' and 'Grade' columns. | |
| 17. | Read the students.csv file and filter the rows where the 'Age' is greater than 25. | |
| | Display the filtered DataFrame. | |
| 18. | Write SQL queries for | |
| | a) Create a table named Students with the following columns: | |
| | StudentID (INTEGER, Primary Key) | |
| | Name (TEXT) | |
| | Age (INTEGER) Grade (TEXT) | |
| | b) Insert the following data into the Students table: | |
| | | |
| | StudentID: 1, Name: 'Alice', Age: 17, Grade: 'A' | |
| | StudentID: 2, Name: 'Bob', Age: 18, Grade: 'B' | |
| | StudentID: 3, Name: 'Charlie', Age: 16, Grade: 'B' | |
| | | |
| | c) Update the grade of the student with StudentID 2 to 'A'. | |

| *** * ******************************** | | ┶╺╸┷╴┷╶┙╴┷╴┷╶┙╴┷╴┷╶┙╸┷╶┶╶┷╴┷╶┙╸┷╶┷╶┷╶┷╶┷╶┷╶┷╶┷ ┿╶╆┶┇┿╶╈┶┇┿╶╈┶┇┿╶╈┶╪┿╌╈┶┇┿╶╈┶┇┿╶╈┶┇┿╶╈┶┇┿╶╈┶╴┿ | |
|---|----|--|--|
| | e) | Retrieve all data from the Students table. | |
| | f) | Retrieve only the Name and Grade columns from the Students table. | |
| | g) | Calculate the average age of all students. | |
| | h) | Calculate the count of students in each grade. | |

COMPUTER SCIENCE

Instructions:

- Apart from Holiday homework complete all work that was taught in offline and online class in your class notebook.
- Cover your class notebook
- First complete Class work then write heading Holiday Homework on one page start your Holiday HW.
- > Apart from the questions given here some worksheet will also be sent. Do that also in Holiday HW.
- Revise Chapter 1 Review of Python basics, Chapter 7 Relational Database and SQL, Chapter 8 Interface Python with SQL and solve all solved questions in book . Just after PT-1 your class test will be conducted.
- > Make your project by using Interface Python with MySQL and send me softcopy.
- Execute all program in your system for practical file (will be sent in group) and save it in a folder XII-B-YourName.

| 1. | Create a dictionary named student with the following key-value pairs: |
|----|--|
| | |
| | 'name': 'Alice' |
| | • 'age': 18 |
| | • 'grade': 'A |
| | Write code to print keys and values, to delete keys and values, to change value of age as 20 |
| 2. | Write a program to create a list L1=[10.20.30.40.50] and use all the functions of |
| | list. |
| 3. | Write a program to create a string STR= "Hello World" and perform all operation |
| | on string by using string function. |
| 4. | Explain the basic steps to connect Python to a MySQL database. |
| 5. | Explain the process of inserting data into a MySQL database table using Python |
| 6. | Explain the concept of parameterized queries and why they are important in |
| | database interactions with Python |
| 7. | Write SQL queries for |
| | a) Create a table named Students with the following columns: |
| | |
| | StudentID (INTEGER, Primary Key) |

| | Name (TEXT) Age (INTEGER) Grade (TEXT) | |
|-----|--|--|
| | b) Insert the following data into the Students table: | |
| | StudentID: 1, Name: 'Alice', Age: 17, Grade: 'A' | |
| | StudentID: 2, Name: 'Bob', Age: 18, Grade: 'B' StudentID: 3, Name: 'Charlie', Age: 16, Grade: 'B' | |
| | c) Update the grade of the student with StudentID 2 to 'A'. | |
| | d) Delete the student with StudentID 3 from the Students table. | |
| | e) Retrieve all data from the Students table. | |
| | f) Retrieve only the Name and Grade columns from the Students table. | |
| | g) Calculate the average age of all students. | |
| | h) Calculate the count of students in each grade. | |
| 8. | To write a python program to pass list to a function and double the odd values and half even values of a list and display list element after changing | |
| 9. | Write a random number generator that generates random numbers between 1 and 6 (simulates a dice). | |
| 10. | Write program to display a) * b) A ** B C *** D E E | |
| | **** GHIJ | |