



**THE BISHOP'S CO-ED SCHOOL, UNDRI.
CLASS X – PROJECT TOPICS (2022 – 2023)**

SUBJECT : ENGLISH LITERATURE

Attempt 'Two' questions in all. 'One' from Section-A (DRAMA) and 'One' from Section-B (POETRY AND PROSE).

Section – A.

DRAMA- 'THE MERCHANT OF VENICE'. ATTEMPT ONE QUESTION ONLY.

QUESTION 1.

How does the theme of Anti – Semitism revolve around William Shakespeare's 'The Merchant of Venice'? 'Shakespeare has portrayed his times reflecting European society and their perspective towards religious tolerance through the play.'- Research the statement.

QUESTION 2.

Compare and contrast the character traits between Jessica and Portia as depicted in the play 'The Merchant of Venice'. Give views on the state of relationships they cherish between their fathers and their husbands respectively.

Section – B

POETRY AND PROSE. ATTEMPT ONE QUESTION ONLY.

QUESTION 3

'and the very dust upon which you now stand responds more lovingly to their footsteps than yours, because it is rich with the blood of our ancestors, and our bare feet are conscious of their sympathetic touch.' Considering the given statement from 'Chief Seattle's Speech', highlight the Violation of Human Rights not only towards Chief Seattle's tribe but also to every Native American Indian by the white colonizers.

QUESTION 4

Robert Southey has emphasized through his Poem 'After Blenheim' that wars are senseless, futile and evil and that, in war, there are no real winners. Provide supporting evidence for the same. Also give solutions to promote peace.

IMPORTANT INSTRUCTIONS

- i. The cover page of the project must be written and not printed. It should include the name of your project, subject and the academic year. Eg: ICSE English Literature Project, 2022-2023.
- ii. The cover page should also include your Name, Class, Section and your Roll Number on the bottom left hand side.
- iii. The first page should include the Letter of Transmittal followed by the Acknowledgement on the second page. An Index needs to be maintained on the next page: Eg.. INDEX

SR NO	TOPIC	PAGE
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- iv. Marks will be awarded according to Presentation, Content, Relevance and Expression.
- v. The last page may be used to cite your references. [Bibliography]
- vi. Make your project visually appealing by using relevant pictures. You may submit your project sheets attached(tied) by a ribbon neatly.
- vii. Your project should have a word limit of 800-1200 words.
- viii. Projects may be on blue/black lined sheets.
- ix. Date of Submission for the project is scheduled on the 20th of June 2022.
- x. Make sure that on the bottom of the cover page, you mention and leave space for the signature of the Internal Examiner on the left side and signature of the External Examiner on the right side respectively.
- xi. No plastic covers or folders will be accepted. The project sheets need to be punched and tied sideways with a silk ribbon only.

(Note- For English Language, Aural and Orals will be scheduled during the Academic year.)

SUBJECT : HINDI

HINDI : (Date of submission – 21st June, (2022-2023)

हिंदी परियोजना कार्य (2022-2023)

कक्षा -10

कुल अंक 20

प्रश्न १) निम्नलिखित प्रश्नों के उत्तर अपने शब्दों में लिखिए।

- 1 ' भीड़ में खोया आदमी ' नामक पाठ के लेखक का परिचय देते हुए बताइए कि पाठ के माध्यम से लेखक ने क्या संदेश देना चाहा है? (3)
- 2 'बड़े घर की बेटी' कहानी के शीर्षक की सार्थकता पर प्रकाश डालिए। (3)
- 3 मीनू ने मनोहर की सहायता किस प्रकार की? (2)
- 4 लड़कियों की शादी के बारे में समाज के क्या नियम हैं? (2)

प्रश्न 2) कोरोना की विश्व्यापी महामारी से बचाव के लिए टीकाकरण के साथसाथ स्वच्छता का पालन भी अनिवार्य है इस कथन के पक्ष में अपने विचार रखें।

अथवा

" पिताजी के मार्गदर्शन से ही आज मैं इस योग्य बना हूँ"- इस वाक्य से अंत करते हुए मौलिक कहानी लिखिए। (10)

आवरण पृष्ठ (cover page)

नाम-

कक्षा एवं वर्ग-

विद्यालय-

अनुक्रमांक-

आंतरिक परीक्षक

बाह्य परीक्षक

संप्रेषण पत्र

मैं _____ द बिशप्स को एड स्कूल उंड्री कक्षा दसवीं का छात्र छात्रा उद्घोषणा करता करती हूँ कि मैंने प्रस्तुत हिंदी परियोजना कार्य आई सी एस ई काउंसिल के नियम अनुसार संपूर्ण किया है। यह परियोजना कार्य पूर्णतः मेरे द्वारा किए गए अनुसंधानों का परिणाम है। इस परियोजना कार्य को पूर्ण करने में मैंने किसी बाहरी व्यक्ति या संस्थान की मदद नहीं ली है।

नाम-

हस्ताक्षर-

दिनांक- २१ जून २०२२

Page 2

आभार पत्र

मैं अपनी अध्यापिका अध्यापक श्रीमती श्रीमान ~~द्वारा~~ का हार्दिक धन्यवाद एवं आभार प्रकट करता/करती हूँ जिन्होंने मुझे यह अवसर प्रदान किया कि मैं परियोजना कार्य सफलतापूर्वक कर सकूँ इस परियोजना के समय मैंने उनकी सहायता से अनुसंधान कार्य किया जिससे मुझे कई नई- नई चीजें जानने का अवसर मिला। साथ ही साथ मैं अपने माता-पिता व मित्रों को भी धन्यवाद देना चाहता/चाहती हूँ जिन्होंने इस परियोजना को निर्धारित समय पर पूरा करने में मेरी सहायता की।

इसके अतिरिक्त इस परियोजना को पूर्ण करने में जिन्होंने प्रत्यक्ष और अप्रत्यक्ष रूप से सहायता प्रदान की मैं उनको भी हार्दिक आभार प्रकट करता/करती हूँ।

Page 3

तालिका

क्रम संख्या

पृष्ठ संख्या

विषय

क्रम संख्या	विषय	पृष्ठ संख्या

ग्रंथ सूची एवं सहायक सामग्री(Bibliography)

Last Page

परियोजना संबंधी निर्देश (Instructions)

- 1 प्रत्येक प्रश्न का आरंभ नए पृष्ठ से करें।
 - 2 प्रश्नों के उत्तर 80 से 100 शब्दों में दें।
 - 3 स्वच्छता तथा वर्तनी पर पूरा- पूरा ध्यान दें।
 - 4 निबंध 450 से 500 शब्दों में लिखें।
 - 5 परियोजना कार्य में कम से कम 5 चित्र लगाएं।
 - 6 परियोजना को दो भागों में विभाजित करें:
 - 1- हिंदी भाषा
 - 2- हिंदी साहित्य
 - 7 परियोजना में निम्नलिखित बिंदुओं का होना आवश्यक है:
 - आवरण पृष्ठ- नाम विषय कक्षा अनुक्रमांक
 - संप्रेषण पत्र
 - आभार पत्र
 - तालिका अनुक्रमणिका (टिब्टएड्डह)
 - विषय वर्णन
 - ग्रंथ सूची एवं सहायक सामग्री
-

Topic :

I. Un Dialogue: Vous voulez réserver deux chambres dans un hôtel. Vous appelez à la réception. Vous discutez les détails suivants.

- a. Saluer la personne
- b. La date (arriver.... quitter)
- c. Combien de nuits
- d. La réceptionniste donne les détails des chambres disponibles.
- e. Elle fait une comparaison entre les chambres.
- f. Vous choisissez les chambres
- g. Vous remerciez.

II. La Traduction.

- a. Un texte à traduire vers Français
- b. Un texte à traduire vers anglais.

Instructions to follow

1. Cover page to be hand written. Should contain all student's details
2. The order of the project: Cover page>Acknowledgement letter > Letter of transmittal> index> project >Bibliography.
3. Bibliography can be printed.
4. Stick relevant pictures for the dialogue writing only on the blank side of the page.

Stick pictures of :

Chambre avec deux lits

Chambre avec un grand lit

Un lit superposé (pour les enfants)

Chambre avec salle de bain

Chambre avec WC et une douche. This vocabulary is to be included in the dialogue as well.

5. For the translation and dialogue writing no help to be taken from any online sources.
 6. Project should be authentic work of the student.
-

SUBJECT : MATHEMATICS

DATE OF SUBMISSION: 22.6.2022

TOPIC: GOOD AND SERVICES TAX

INSTRUCTIONS

- Written work to be done on the ruled side of the project sheets.
- Relevant pictures or diagrams to be stuck / drawn on the blank side of the project sheets.

The cover page of the project must be typed and printed. Students must use the following template for the cover page.

<p>THE BISHOP'S CO-ED SCHOOL UNDRI MATHEMATICS PROJECT 2022-2023</p> <p>GOODS AND SERVICES TAX</p> <p>NAME CLASS SECTION ROLL NO. COMPUTER CODE</p> <p>EXTERNAL EXAMINER SIGNATURE</p> <p>INTERNAL EXAMINER SIGNATURE</p>
--

- SECOND PAGE- ACKNOWLEDGEMENT
- THIRD PAGE – LETTER OF TRANSMITTAL
- FOURTH PAGE – TOPIC NAME

- The index page must be made in the following format :

INDEX		
SR. NO	TOPIC	PAGE NO.

- Every title with the relevant content must be on a new page. Use the following format for the same :

- 1] Introduction: What is GST? Different types of GST.
 - 2] Advantages of GST
 - 3] GST rate
 - 4] Difference between GST & VAT
 - 5] Input Tax Credit [ITC]
 - 6] Computation of GST
 - 7] Collect 5 bills of your purchase. Find the GST paid on each purchase.
 - 8] Intra-state sales
 - 9] Inter-state sales
 - 10] GST paid by each dealer : To be explained with the help of 5 examples .
 - 11] Conclusion
 - 12] Bibliography .
-

SUBJECT : HISTORY & CIVICS

DATE OF SUBMISSION: 23RD JUNE 2022

TOPIC: HISTORY: CAUSES AND RESULTS OF WORLD WAR 1

CIVICS: THE SPEAKER, ROLES AND FUNCTIONS

INSTRUCTIONS TO BE FOLLOWED FOR THE PROJECT

1. Title page – should include the title of the project, personal information like full name, roll number, class and division, computer code and date of submission.

At the bottom of the page to the extreme left type (Internal Examiner) and to the extreme right type (External Examiner). The title page must be printed.

The rest of the project should be strictly handwritten in black ink only. Only headings and sub headings can be coloured.

2. Index page – should have four headings namely a. Serial number b. Title (Name of the topic and sub topics c. Page number d. Signature.

3. Letter of Transmittal

4. Letter of Acknowledgment

5. Content matter (Every topic should begin with an introduction and end with a conclusion)

6. Glossary (word meanings)

7. Bibliography (references done)

8. The Letter of transmittal and Letter of Acknowledgement is the same as given last year.

9. Draw margins on both sides of the page and write the content matter within the margins.

10. Use one side ruled and one side blank page. Stick pictures on the blank page with borders for each picture. Put a caption for each picture.

11. Secure your project with a ribbon only.

12. Your project should not exceed 30 pages including the cover page, Letter of Transmittal etc.

SUBJECT : GEOGRAPHY

Date of Submission: 24/06/2022

Topic: Environment – Conservation of wildlife in India

The project will be for 20 marks. The project should consist of the following:

Cover page –

- Topic must be written in the centre
- Submitted to Internal examiner and External examiner to be written left and right respectively at the bottom.
- Submitted by – Your name, class, division, and Roll.no (on the left- or right-hand side bottom).
- Make the cover page creative by sticking pictures/drawings which are related to the topic.
- It should not be done by free hand (*You are the architect of your project. So, make your project beautiful and interesting*).

1. Index – There should be three columns
i) Serial number ii) Topic iii) Page number

2. Letter of Transmittal – One page

3. Letter of Acknowledgement – (one page.) The people you want to thank for helping and guiding you through the completion of the project.

4. Introduction to the topic

5. Wildlife conservation

6. Major dangers to wildlife

7. Wildlife Conservation Initiatives Taken by the Government of India.

8. Wildlife Conservation Initiatives Taken by the NGO's.

9. Wildlife Sanctuaries in India.

10. Conclusion

11. Bibliography - The sources from where you have taken the help for making the project. (Website, magazines, and other books to be mentioned)

- Each sub-topic should have at least 3 to 4 pages of matter written by hand and relevant pictures to be pasted on the left-hand side of the page.
- The project should be neatly written, and the content of the given topic should have relevant points with factual evidence
- Nothing to be computer printed

Special Instructions:

- a) Use the interleaved project sheets.
 - b) Page limit 20 - 25 pages.
 - c) You can take the help of magazines, encyclopaedia, internet etc. to make your project original. The matter should not be copied from the textbook.
 - d) Pictures related to the topic should be pasted to make it creative.
-

SUBJECT : PHYSICS

INSTRUCTIONS FOR WRITING THE LAB MANUAL

Only the experiments mentioned below should be copied in the Physics lab manual.

Written matter of the experiments to be done on the ruled side of the page.

Diagrams and observation tables to be done on the blank side of the page.

All diagrams to be drawn with pencil only (no colour pencils to be used).

Diagrams to be proportionate to the original diagrams.

Each experiment should begin on a new page.

Observation table should be written in pencil on the blank side.

The above experiments will be performed after school reopens and the values in the observation table are to be filled thereafter.

Do not copy Viva -voce.

The following headings for each experiment are to be written in block letters-
(AIM OF THE EXPERIMENT, APPARATUS, THEORY, PROCEDURE, RESULT, PRECAUTIONS.)

LIST OF EXPERIMENTS

Experiment 1: - To find the mass of the given metre scale (Page 2)- write only the Second method

Experiment 2: - To use metre rule as a lever with different possibilities (Page 5)

Experiment 3: - To trace the course of different rays of light through a rectangular glass slab at different angles of incidence, measure the angles of incidence, refraction and emergence. Also, measure the lateral displacement (Page 11)

Experiment 4: - To determine the focal length of a convex lens by the distant object method (Page 14)

Experiment 5: - To determine the focal length of a convex lens by using a needle and a plane mirror (Page 15)

Experiment 6: - To find the focal length of a convex lens using u-v method and the formula $f=uv/u+v$ (Page 17)

Experiment 7: - To study the variation of the angle of deviation of a ray of light passing through a prism with angle of incidence. And to verify $i_1 + i_2 = A + \delta$, and $r_1 + r_2 = A$ (Page21)

Experiment 8: - To verify Ohm's Law and hence find the value of an unknown resistance (Page 35)

DATE OF SUBMISSION- 27TH JUNE 2022

SUBJECT : CHEMISTRY

INSTRUCTIONS FOR WRITING THE LAB MANUAL

1. Only the below mentioned experiments should be copied in the Chemistry Lab manual.
2. Please **copy the experiments** from the **pdf only** that will be uploaded on **Teams** → **Class** → **General Channel** → **Files** → **Chemistry Folder** → **Project Sub Folder**.

The experiments will also be uploaded on TBS.

3. Writing matter of the experiments to be done on the ruled side of the page.
4. The result and equations to be written on the blank page on the left of the experiment written.
5. Leave the index page blank.
6. Do not write the date for the experiments written.
7. Each experiment should begin on a new page.
8. Only black ink to be used for writing the experiments.
9. Write the experiments neatly and avoid over-writing.
10. Completion date for the Chemistry lab manual-**28/06/2022**

Effect of Heat on Some Compounds

Experiment No.1: Effect of heat on Mercuric oxide.

Experiment No.2: Effect of heat on Lead Dioxide.

Experiment No.3: Effect of heat on Zinc Carbonate

Experiment No.4: Effect of heat on Red Lead.

Experiment No. 5: Effect of heat on Copper Nitrate.

Experiment No. 6: Effect of heat on Lead Nitrate

Experiment No.7: Effect of heat on Hydrated Sodium Carbonate.

Experiment No. 8: Effect of heat on Hydrated Copper Sulphate.

Experiment No. 9: Effect of heat on Iodine crystals.

Experiment No. 10: Effect of heat on Ammonium Dichromate.

Detection of Cations

Experiment No. 11: To identify the presence of Ferrous ions.

Experiment No. 12: To identify the presence of Ferric ions.

Experiment No. 13: To identify the presence of Lead ions.

Experiment No. 14: To identify the presence of Zinc ions.

Experiment No. 15: To identify the presence of Copper ions.

Experiment No. 16: To identify the presence of Calcium ions.

Detection of Anions

Experiment No.17: To identify the presence of Carbonate ions.

Experiment No. 18: To identify the presence of Sulphite ions.

Experiment No 19: To identify the presence of Sulphide ions.

Experiment No. 20: To identify the presence of Chloride ions.

Experiment No. 21: To identify the presence of Nitrate ions.

Experiment No. 22 : To identify the presence of Sulphate ions.

SUBJECT : BIOLOGY

(DATE OF SUBMISSION: 29th JUNE 2022)

Experiment No. 1: To study the different stages of mitosis.

Experiment No. 2: To demonstrate the process of diffusion.

Experiment No. 3 A: To demonstrate osmosis by thistle funnel experiment.

Experiment No. 3 B: To study osmosis with the help of a potato osmoscope.

Experiment No. 4: To demonstrate the process of absorption of water by roots in plants.

Experiment No. 5 A: To demonstrate process of transpiration.

Experiment No. 5 B: To compare the rate of transpiration on the two surfaces of dorsiventral leaf using a cobalt chloride paper.

Experiment No. 5 C: To study the rate of transpiration and water uptake in a leafy shoot with the help of a Ganong's potometer.

Experiment No. 6 A: To show that starch is produced by the leaves as a result of photosynthesis.

Experiment No. 6 B: To show that sunlight is necessary for photosynthesis.

Experiment No. 6 C: To show that carbon dioxide is necessary for photosynthesis.

Experiment No. 6 D: To show that chlorophyll is necessary for photosynthesis.

Experiment No. 6 E: To show that oxygen is evolved during photosynthesis.

Experiment No. 7 A: To identify the parts of the urinary system and internal structure of kidney with the help of charts or models.

Experiment No. 7 B: To identify the internal structure of human heart with the help of charts.

Experiment No. 7 C: To study the structures of human brain by charts or models.

Experiment No. 8: To identify different blood cells.

Experiment No. 9 A: To study the internal structure of the eye.

Experiment No. 9 B: To study the internal structure of the ear.

Experiment No. 10 : To identify and locate endocrine glands (Adrenal, Pancreas, Thyroid and Pituitary gland) with the help of model or a chart.

INSTRUCTIONS FOR BIOLOGY PROJECT

Students have to copy the experiments from the lab manual in the Lab manual itself.

Please copy the experiments in the order as given in the manual.

Do not change the sequence.

The students should follow the given chronological order:-

AIM

Materials Required

Principle (if mentioned copy)

Procedure

Observations Conclusion

Precautions (if any)

Do not copy the 'Theory' and the 'Viva- Voice'.

The matter of the experiment is to be copied neatly on the ruled side of the page. Do not use any colour pencil or Sketch pen or highlighter.

Diagrams to be drawn on the blank page with ***pencil only. Do not colour*** the diagrams.

Diagrams should be symmetrical to the original diagrams.

Do not trace the diagram or stick a Xerox copy of the same on the blank page.

Cover the manual with brown sheet.

The completed Biology lab manual must be submitted on the date specified.

Copy the following in your Index page. Donot write the dates.

BIOLOGY PROJECT

INDEX

Experiment No. 1: Structure of Chromosomes, Cell cycle and Cell Division

Experiment No. 2: Absorption by Roots

Experiment No. 3 A: Absorption by Roots

Experiment No. 3 B: Absorption by Roots

Experiment No. 4: Absorption by Roots

Experiment No. 5 A: Transpiration

Experiment No. 5 B: Transpiration

Experiment No. 5 C: Transpiration

Experiment No. 6 A: Photosynthesis

Experiment No. 6 B: Photosynthesis

Experiment No. 6 C: Photosynthesis

Experiment No. 6 D: Photosynthesis

Experiment No. 6 E: Photosynthesis

Experiment No. 7 A: The Excretory system

Experiment No. 7 B: The Circulatory system

Experiment No. 7 C: The Nervous system

Experiment No. 8 : The Circulatory system

Experiment No. 9 A: Sense organs

Experiment No. 9 B: Sense organs

Experiment No. 10: The Endocrine system

Please note:

Please follow the instructions given carefully.

SUBJECT : COMMERCIAL STUDIES

(DATE OF SUBMISSION: 28th JUNE 2022)

1. Cover Page – Name of the school, Topic, your name, Class/Section, roll number, Subject (This must be printed and NOT hand written)
2. Index- The Index to be made with four columns (Sr no. Content, Page no, Signature)
3. Letter of Acknowledgement
4. Letter of Transmittal
 - Assignment 1(10 pages)
 - Introduction
 - Content
 - Conclusion
 - Assignment 2(10 pages)
 - Introduction
 - Content
 - Conclusion
 - Assignment 3(10 pages)
 - Introduction
 - Content
 - Conclusion
5. Bibliography (references done)

Assignment 1:

Advertising Agency 'Business firms and other organisations advertise their products services, ideas, products on a regular basis. These institutions are called Advertising Agencies.'

You are expected to write on Any One Advertising Agency

Suggested sequence of the topic will be

- 1) Introduction- The meaning of an Advertising Agencies
- 2) Functions of Advertising Agencies (WRITE ALL 7 FUNCTIONS)
- 3) A detailed description of the services provided by the Advertising agency. You could mention the following points
 - Introduction
 - History
 - Location of the selected Advertising Agency
 - Services provided like Web designing development, Outdoor Media, Celebrity and Model Management, Clients Example: (Refer to the link <https://www.genesisads.com/>)
- 5) Conclusion (What have you learnt from this project)

Assignment 2: E-Commerce

'E-Commerce means Commercial transactions conducted over the internet using Computers and telecommunication.'

You are expected to write a detailed report on

- a) Effects of Pandemic on World of Commerce /Trade.
- b) Is the Pandemic been a boom(a period of increased commercial activity) for E-Commerce?

Sequence for writing the details are as follows

1. Introduction of the topic. (Meaning of E-Commerce and difference between E-business AND E-Commerce)
2. Benefits of E-Commerce over traditional Commerce (refer to points from the DC 8/9)
3. Effects of the pandemic on world trade.
4. Is the pandemic a boom for E-Commerce (Write your views in favour or against this statement?)

Some Pointers to keep in mind:

- a. You could mention how Amazon (or any other E-commerce portal) has been delivering goods and services during the lockdown.
- b. Effects of the pandemic during the year 2020 -2021 on sales of amazon for example (any online portal can be mentioned like flipkart/ snapdeal)
For example: <https://time.com/5870826/amazon-coronavirus-jeffbezos-congress/>
- c. How Amazon managed the coronavirus crisis and came out stronger.

5. Conclusion (What have you learnt from this project)

Assignment 3

Introduction to the topic- Save the Environment, Save the world

1. A detailed report on any one initiative (project/programme) taken up by the Government of India to conserve the environment and natural resources (for example: The Namami Ganga programme)
2. Students can refer to chapter 15- Striving for a better Environment and base their project on any government programme on any one form of the conservation of Water, Forests, Ocean Resources, Soil and Wildlife. (This should cover content for 5-6 pages)
3. Enumerate the Functions of the Central Pollution Control Board (can refer to the textbook) or refer to other sources like Google). This is to be written in your own words. (This should cover content for 3-4 Pages)
4. Conclusion

Additional instructions:

1. The Project should be written in Black ink only. Heading and Sub-headings to be coloured Ink.
2. Draw margins on both sides of the page and write the content within the margin.
3. Used one side ruled and one side blank page. Stick pictures on the blank pages with borders for each picture. Put caption for each picture.
4. Do not over decorate your project. Remember it is a formal presentation.
5. Secure your project with a ribbon only. If you use a file or any other form of plastic covering you will have to remove it before submitting the project.

6. The project should be submitted on the allotted day only late submission will not be accepted.

7. Title page/Cover page- Should include the name of your school, the title of the project, personal information- like full name, roll number, class and section, subject, Computer code and date of submission.

8. At the bottom of the page, to the extreme left (internal examiner), and to the extreme right (external examiner)

9. The assignments need to be supported with pictures, graphs, Slogans, New papers cut outs to enhance the project and make it more informative.

10. Students to refer to different books, Google or any other resource to give an original touch to their report.

SUBJECT : ECONOMICS

(Date of submission 17th JUNE 2022)

TOPICS:

1. A study on Money, its functions and its types

Guidelines: - Students are expected to explain the following -Definition of money, explanation of its functions and types in detail.

2. Conduct a survey of a market or a store and collect information from any five customers to analyze the factors affecting their demand.

Guidelines: -Students are expected to include the following information- Meaning of demand, factors affecting demand, questionnaire based on customer's feedback.

Or

3. Conduct a survey on a commercial bank which includes a detailed study of various functions of the bank.

General Instructions for the project-

- 1. Students can choose any one among the second and third topic, the first topic is compulsory.**
 - 2. The students are expected to use project sheets (interleaved) to write the project or a blank sheet has to be added in between the ruled sheets for charts, tables or pictures.**
 - 3. The project should be written in black ink only. Color pens can be used to write the headings and sub-headings.**
 - 4. Total number of written pages should not exceed 30 including acknowledgement, index, introduction, content, conclusion and bibliography.**
 - 5. The project should consist of:**
 - **Cover page (should be a printed one)**
 - **Index**
 - **Letter of transmittal**
 - **Acknowledgement**
 - **Index**
 - **Introduction**
 - **Content/Matter**
 - **Conclusion**
 - **Bibliography**
-

SUBJECT : COMPUTER APPLICATIONS

(Date of Submission: 31st August'22)

INSTRUCTIONS:

1. Type the programs in BlueJ, compile and execute.
2. Save all the programs within a separate project in BlueJ, the softcopy is also required to be submitted.
3. Once the programs are working in BlueJ, write them in the project sheets.
4. First page of the project should be the cover page, listing details such as student name, subject, class, section, roll no., external and internal examiner's signature
5. Index should **list names of the chapters**.
6. Use the ruled pages to write the Java programs neatly.
7. Each new program should begin from a new ruled page.
8. After the program draw the DDT on the ruled page.
9. Also draw the output on the blank page.
10. Write the question as multi-line comment in the beginning of the program.
11. Write one single line comment at the end of the code.

PROGRAMMING QUESTIONS :

Chapter 1 – Revision of class IX syllabus

1. Display the ASCII value of 2 characters taken as parameters. Also find the difference between their ASCII values. (HINT – use type conversion - Explicit)

Sample input : A and D

Sample output : ASCII of A = 65

ASCII of D = 68

Difference in ASCII codes = - 3

2. A menu driven program to perform the following task :-
 - a. Area and circumference of a circle.
 - b. Volume and total surface area of a cylinder.
 - c. Area and perimeter of a rectangle.

Note :

Area of a circle = πr^2 and circumference = $2\pi * r$

Volume of a cylinder = $\pi r^2 h$ and total surface area = $2\pi r^2 + 2\pi r h$

Area of a rectangle = length*breadth and perimeter = $2*(length+breadth)$

3. A mobile phone company offered a new scheme to its customers in which they would talk for at most 20 mins in one call. Input the duration of call through Scanner class and print the charge payable.

Call duration	Call charge in Rs.
First 5 mins	9
Next 5 mins	7
Next 5 mins	5
Next 5 mins	3

4. An e-store announced the following seasonal discounts on certain items purchased. Input the item name and its total cost. Calculate and print the discount. Also print the amount payable.

Item name	Discount on total cost
LandPhone	50%
Mobile	30%
Tab	25%
Laptop	40%
Otherwise	10%

5. Input a number through the terminal window and count how many even / odd digits and '1s' are present in the number.

Example – Input :- 683109

Output :-

Even digits = 2

Odd digits = 3

No. of 1s = 1

6. Write a menu driven program to print the following series / pattern :-

a) 105, 5, 110, 10, 115, 15.....upto 12 terms

b) 12345

2345

345

45

5

Chapter 2 – Library Classes

7. Find the sum of 1st digit and product of the last digit, present in all 3 digit numbers.
Join the sum and the product to form a single number.
Display the concatenated number.
Note – 3 digit numbers start from 100 and end at 999
8. Write a program in Java to allow the user to keep on entering a character from the Terminal window and count the total number of special characters entered. Terminate the input when the user enters an alphabet or a digit. Display the count of special characters.

Chapter 3 – Arrays

9. Pass an integer array as a parameter and print the maximum and minimum after sorting it in ascending order using Bubble sort technique.
10. A company has 4 machines available for assignment to 4 tasks. Any machine can be assigned to any task, and each task requires processing by one machine. The time required to set up each machine for the processing of each task is given in the table below.

Sample input – **TIME (Hours)**

Machine / Task	Task 1	Task 2	Task 3	Task 4
Machine 1	13	4	7	6
Machine 2	1	11	5	4
Machine 3	6	7	2	8
Machine 4	1	3	5	9

Write a program in Java that accepts the above data from the user using the **Terminal window** and stores it in a **DDA** (Double dimensional array) or a 2D array of size 4,4. Calculate the total time taken to perform a particular task as well as the total time consumed by each machine to perform all the tasks.

Sample output –

Time to perform –
Task 1 = 21 hours
Task 2 = 25 hours
Task 3 = 19 hours
Task 4 = 27 hours

Time taken by –

Machine 1 = 30 hours

Machine 2 = 21 hours

Machine 3 = 23 hours

Machine 4 = 18 hours

Chapter 4 – String Handling

11. Accept a sentence and display each word on a new line.

Eg. Input :- India is my country

Output :- India
is
my
country

12. Design a class to overload a method **fnTab()** given that :-

(i) String fnTab(String s, char cd)

- to create a new string from argument string **s** such that character **cd** is removed from it. (if present)

(ii) StringfnTab(String s1, String s2)

- to concatenate the shorter string behind the longer string and return that. For equal length of both strings, return "0".

Write a suitable **main()** function.

Chapter 5 – User-defined Methods

13. Create a function PRIME() which accepts an integer as parameter and returns true if it is a prime number otherwise returns false. Create another function PALINDROME() which accepts an integer as parameter and returns true if it is a palindrome otherwise returns false.

In the main() method display all 3-digit pal-prime number. Pal-prime numbers are such numbers which are both palindrome as well as prime numbers.

For eg. 101,131,151,181,191,313,353,373,383,727,757,787,797,919 and 929 are all 3-digit pal-prime numbers

Chapter 6 – Class as the basis of all computation

14. Define a class HOTEL, described as below :

Data Members:

Rno – room number of int type
Name – customer name of String type
Tariff – stores per day charges of float type
NOD – no. of days of int type

Member Methods:

Compute () – To calculate and return Amount as $NOD * Tariff$ and if the value of $NOD * Tariff$ is more than 10,000 then return $1.05 * NOD * Tariff$
CheckIn () – To enter Rno, Name, Tariff and NOD
CheckOut () – To display Rno, Name, Tariff, NOD and Amount by calling Compute()

Chapter 7 – Constructors

15. Define a class Mortgage, described as below :

Data Members: loan (int), time, rate, interest and repay (double)

Member Methods:

Mortgage (int p, double r, double t)
– Constructor to initialize data member loan to p, rate to r, time to t and rest to null.
Estimate () – To calculate the Interest using the formula –
$$\text{interest} = \frac{(\text{loan} \times \text{rate} \times \text{time})}{100}$$

Also calculate amount to repay as loan + interest.
Display () – To print all the member data.

Write a main() method to create an object of the class and call the above member methods.

SUBJECT : PHYSICAL EDUCATION

(Date of submission 30th June 2022)

Topic: Football, Basketball, Volleyball and Cricket (Write any two sports of your choice in Project)

The project should be consisting of:

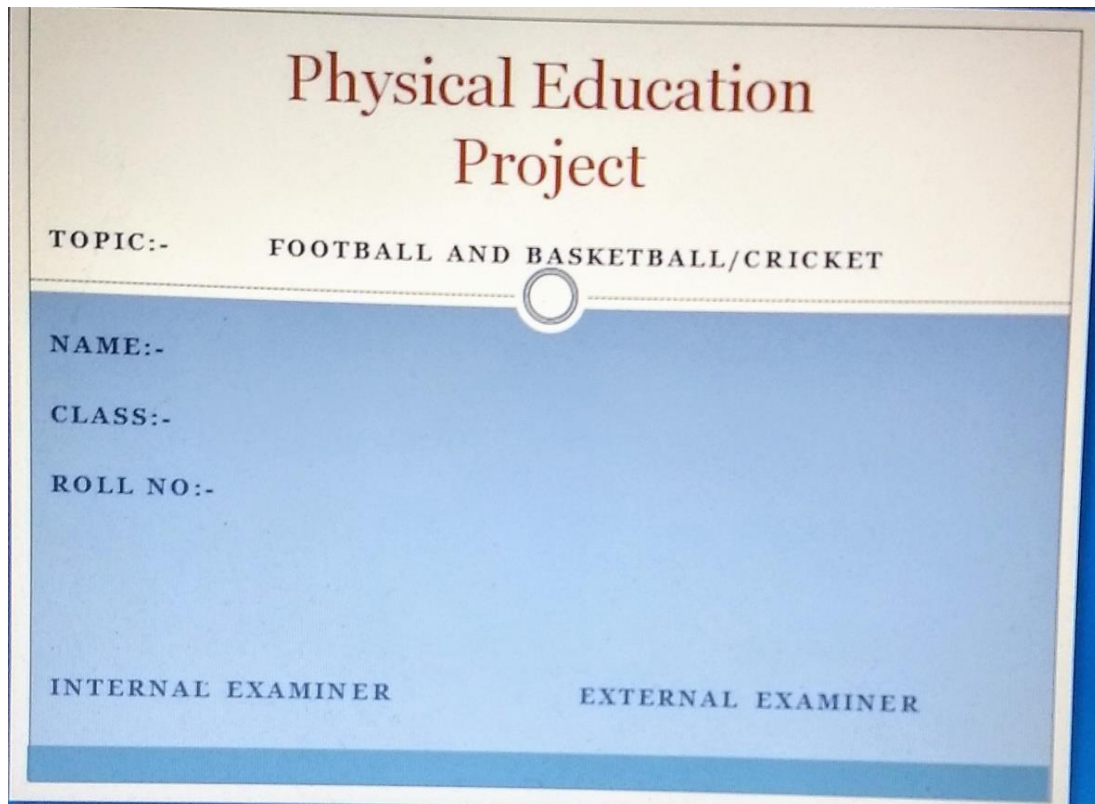
1. Cover page
2. Acknowledgement. 1 page
3. Letter of Transmittal. 1 page
4. Index. 1 page
5. Content: -
 - History of the specific game.
 - Diagram of the field/court (no sticking picture, only **drawing by hand using pencil**).
 - Fundamental Skills of the Game.
 - Laws of the game.
 - Rules and Regulation.
 - Fouls and Violations (official duties also need to be written)
 - Terminologies.
 - Sports Awards in specific game
6. Conclusion: Effects of game in our daily life. 1 page
7. Bibliography. 1page

Instruction to follow:

- Cover page should be printed with student's details (e.g. image is given at last).
- Total pages should not be exceeded more than **30** pages (12pages maximum of each game) including the cover page to Bibliography page.
- The students are only requested to **draw** a Diagram of the ground/court with pencil on the left (Blank) side but famous person's Photographs can be used and pasted on the left side of the project sheet.
- Measurement of the ground can be written from the book "**Tips to Remember**".
- All the matter should be hand written.
- Use Black pen only and blue pen for Heading.
- Avoid using color pen/pencil.
- Avoid unnecessary decoration in project.
- First start with the content **of one game** and after completed, same way startswith the content of **second game**.
- No separate of Index, conclusion and Bibliography of each game

Cover page(Sample)

Students can add volleyball as well if you are opting for it.



SUBJECT- ART

Project Work

1. Draw any 08 drawings of your choice and do proper shading.
 2. Draw any 02 drawings of your choice and do coloring in any medium.
- * Work should be done on A3 (Quarter size) drawing sheet.
 - * Date of submission 06 June 2022 to 10 June 2022
