

**EAST POINT SCHOOL**  
**HOLIDAYS HOMEWORK**  
**CLASS-XI (2020-21)**

**COMMERCE DEPARTMENT**  
**BUSINESS STUDIES**

**INTEGRATED PROJECT**

**Guidelines for Project Work:**

1. The project should be of 30-35pages long (excluding diagrams & graphs), preferably hand-written on A-4 size paper.
2. Credit may be awarded to original drawings, illustrations and creative use of materials.
3. The project report should be presented in a neatly bound folder.
4. The project report should be developed and presented in the following order:
  - Cover Page showing project title, student information, school and year.
  - Contents: List of contents with page numbers.
  - Acknowledgements: Acknowledging the institution, offices and libraries visited and persons who have helped.
  - Project Overview: Purpose, Aim, Methodology and experiences while doing the project.
  - Subject Matter: Topics with relevant headings.
  - Conclusions: Based on findings. (Summary and Suggestions).
  - Bibliography: It should have the title, pages referred, author, publisher, year of publication and if a website the name of the website with the specific website link which has been used.
  - All the photographs & sketches should be labelled and acknowledged.

**PART-I** Poster making on A-3 size sheet on the topic “Launching of any new product in market”.

- Utility of such product

- Additional features of product in comparison with competitor’s product.

**PART-II** In extension to launch of new product, visit website of any chain store and departmental store near you, pen down the following information:

- Name, nature and type of the store.
- Number of employees working, pricing policy, display criteria, rules and regulations.
- SWOT Analysis.

**PART-III** Along with this explain the meaning of wholesale and retail trade. Write the difference between both of them.

## **ECONOMICS**

### **Guidelines for Project Work:**

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3. The project report should be presented in a neatly bound folder.
4. The project report should be developed and presented in the following order:
  - Cover Page showing project title, student information, school and year.
  - Contents: List of contents with page numbers.

- Acknowledgements: Acknowledging the institution, offices and libraries visited and persons who have helped.
- Project Overview: Purpose, Aim, Methodology and experiences while doing the project.
- Subject Matter: Topics with relevant headings.
- Conclusions: Based on findings. (Summary and Suggestions).
- Bibliography: It should have the title, pages referred, author, publisher, year of publication and if a website the name of the website with the specific website link which has been used.
- All the photographs & sketches should be labelled and acknowledged

SL.NO	STUDENT	SUGGESTED TOPIC
1	Anjali , Vaibhav Patwal	Demonitization in India
2	Bhuwan Dhariwal , Tanmay Biswas	GST
3	Gaurav Swain, Varun Kaushik	Rural Development
4	Harsh Sharma, Ayush Mishra	Unemployment
5	Himanshu Tiwari, Anshul Gautam	Waste management in India
6	Jatin Joshi, Tanmay Tripathi	Foreign Direct Investment
7	Khushi Goyal, Rashmi Meena	Green Revolution
8	Lipika Rawat, Ansh Puri	Internationalization of Companies
9	Manav Sharma, Shweta, Asif Ansari	Sustainable Development
10	Nikhil Sharma, Aditya Bhatnagar	Alternate Fuel :Thechanged economy
11	Priyanshu Singh, Abhijeet Das	Human Development Index
12	Rajat Sharma, Anubhav Singh	Small Scale Industries

13	Rakshita Gupta, Chaitanya Choudhary	Taxes and Economic growth in India
14	Sakshi Sagar, Krishna Sharma	Human Capital Formation
15	Sampada Narula, Siddhi	Minimum Support Prices
16	Shalini Chaudhary, Dhruv kaushik	Perfect Competition Market
17	Shivansh Rawat, Hancey Dedha	Human Development Index
18	Sumit kr Mehta, Vinamra	Make in India
19	Vineet Singh, Jyoti Bhatia	Digital India
20	Pratham Jeenwal, Priyanshu Adhikari	Poverty
21	Tushar Goyal, Garvita Gaurav	Growth in Indian banking sector

## **ACCOUNTANCY**

### **TOPIC: VOUCHERS**

#### **Guidelines:**

You are required to develop a Project on Vouchers. For which following steps are to be followed:

1. Collection of different source documents such as bills, cheque, receipt, cash memo, pay-in-slip etc.
2. These old documents available at home can be pasted in files or print-out can be taken from the internet if not available at home.
3. Brief explanation of each source document is to be written against each pasted source document.
4. Meaning and types of Accounting voucher is to be written.
5. Preparation of the accounting vouchers from the collected source documents.

## **Project File**

You are required to prepare a Project File to record your work related to the problems attempted in the following format:

1. First page of the file should describe title of work, identity of student, school, and the teacher concerned.
2. Index to indicate columns for title of work, page no., date, teacher's remarks and signature.
3. The format for Project Work will be :
  - Statement of the problem/Name of the Project
  - Objectives
  - Period of Study
  - Source Material
  - Processing of the work

Project File should be neatly handwritten and presentable with page numbers. Each step of the solution needs to be highlighted. Conclusions drawn should be placed in boxes at the end.

## **FINANCIAL MARKET MANAGEMENT**

### **TOPICS**

Students have the following options to choose from:

1. Mutual Funds
2. Stock Exchange
3. Securities and Exchange Board of India (SEBI)
4. Financial Instruments
5. Primary and Secondary Markets

### **Guidelines:**

You are required to prepare a Project File to record your work related to the problems attempted in the following format:

1. First page of the file should describe title of work, Student name, school, and the teacher concerned.

2. Index to indicate columns for title of work, page no., date, teacher's remarks and signature.
3. The format for Project Work will be:
  - Name of the Project
  - Objectives
  - Processing of the project work
  - Diagrammatic/graphic presentation- pie-diagram, bar diagram and graphs if required
  - Derivations, Interpretation and Conclusion.
  - Bibliography and Source of Material.

Project File should be neatly handwritten and presentable with page numbers. Each step of the solution needs to be highlighted. Conclusions drawn should be placed in boxes at the end.

## **LEGAL STUDIES**

Differentiate between Ratio Decidendi and Obiter Dicta of any 5 case laws as discussed and mentioned below. The project should speak of the Facts, Issue, and the Decision of the case clearly differentiating between the Obiter and Ratio:

1. Vishakha and others Vs. State of Rajasthan and others
2. Golaknath Vs State of Punjab
3. SarlaMudgal Vs Union of India
4. SheelaBarse Vs Secretary Children's aid society
5. Sanjay Suri Vs Delhi Administration
6. Naveen Kohli Vs. NeeluKohli
7. Kerala Education Bill Case
8. Hasib Vs. State of Bihar
9. Balveer Singh Vs HarjeetKaur

### **Expected Checklist:**

- Introduction of the topic/ title or the case law.
- Identifying the facts, consequences and the issue of the case.

- Arguments with relevant precedents
- Decision/ Reasons for Decision
- Your analysis/ conclusion

Substantiate your study with pictures, flow charts and diagrams wherever applicable. Restrict your study to about 30 pages in A4 ruled sheets.

### **Guidelines:**

You are required to prepare a Project File for your work in the following format:

1. First page of the file should describe title of work, Student name, school, and the teacher concerned.
2. Index to indicate columns for title of work, page no., date, teacher's remarks and signature.
3. Checklist as mentioned above.
4. Bibliography and Source of Material.

Project File should be neatly handwritten and presentable with page numbers. Each step of the solution needs to be highlighted. Conclusions drawn should be placed in boxes at the end.

## **HISTORY**

These are instruction for the project work for the topics mentioned below:

1. Each of the student will prepare the individual project no any group concept .
2. Page Limit 30. Along with Front page, Acknowledgement page, Certificate, index and introduction pages.
3. You can choose A 4 size colourful page .
4. No excessive decoration work is required but you need to do thematic art work .
5. All will prepare one small synopsis of project and they will discuss with me before final draft .
6. All students will prepare 10 slides PPT of their project along with final project .
7. Its compulsory for all students no any second option .
8. Thematic and logical research is must required.
9. Don't do cut and paste.
10. Your project carry 20 marks for practical paper . So please keep in mind to prepare the best project.

Range of Topic For Project Works (based on theme of NCERT)

1. The Story of Human Evolution

2. Urbanization in Southern Mesopotamia: Temple and King
3. Gender, literacy and culture in Roman Empire
4. The Caliphate: Expansion, Civil Wars and Sect Formation
5. The Carrier of Genghis Khan
6. The three orders
7. Science and philosophy the Arab Contributions
8. Cortes and the Aztec
9. Women, Children and Industrialization
10. The Meiji Restoration

## **GEOGRAPHY**

### **Instruction:**

A. Complete the below in the white paper available at home .B Use only Pencil /Black ink for the diagrams.

1. Draw the conventional signs and symbols of topographical map.

1. Define with the picture of weather instruments- a) Thermometre b) Wet and dry Bulb Thermometre

c) Barometre d) Wind Vane e) Rain Gauge (draw or paste pic)

2. Draw the Weather symbols- i) Mist ii) Snow iii) Hail iv) Thunderstorm v) Dew vi) Sunshine vii) Rainbow

viii) Mirage ix) Haze x) Snow storm

3. Prepare a power point presentation on –‘The Climate of India’.

(A. Highlights- factors of Indian climate, seasons of India, importance of monsoon

B. Maximum 15 slides

C. Use video and map)



## PSYCHOLOGY

Make groups of 2-3 students and conduct a small research project on **any one** of the topics given below:

- a) Body image and stress
- b) *Social media addiction and adolescence*
- c) Social media and its influence on academic excellence
- d) Peer pressure
- e) Stress and Substance abuse
- f) Stress and adolescence

OR

Any other concept from the textbook

Student will work either individually or in a group of 2max and will have to maintain separate file work.

The steps to be followed are (Content should be written as per the following headings): -

- i) Certification
- ii) Acknowledgement
- iii) Selection of topic
- iv) Introduction of the topic
- v) Research question
- vi) Sample selection
- vii) Tool selection
- viii) Data collection
- ix) Results
- x) Analysis and discussion
- xi) Conclusion

xii) Bibliography

**Make study notes for chapters 1-4 and submit.**

## **POLITICAL SCIENCE**

1. Explain in detail the following fundamental rights (along with Articles)
  - RIGHT TO EQUALITY
  - RIGHT TO LIBERTY AND PERSONAL FREEDOMS
  - RIGHT TO FREEDOM OF RELIGION
  - RIGHT AGAINST EXPLOITATION
  - CULTURAL AND EDUCATIONAL RIGHTS OF MINORITY GROUPS
  - RIGHT TO CONSTITUTIONAL REMEDY
2. Explain the Directive principles of state policy? Write about their relationship with fundamental rights?
3. Which of the fundamental right is in your opinion the most important right? Summarize its provisions and give arguments to show why it is most important.
4. Write a short note on Fundamental Duties and Directive Principles.

### **General Instructions:**

Prepare a project file with following guidelines:

1. The total length of the project report should not be more than 15 written pages of foolscap size (A-4 size) sheet.
2. The project report should be handwritten and credit will be awarded to original drawings, illustrations and creative use of eco-friendly material. It should be well researched based on facts and figures, newspaper clippings and pictures.
3. The project report should be presented in a neatly bound simple folder.
4. The project report should be developed and presented in this order:

- a) Cover page showing project title, student information, school and year.
- b) List of contents with page numbers.
- c) Certificate page
- d) Acknowledgements (acknowledging the institution, offices and libraries visited and persons who have helped).
- e) Chapters with relevant headings.
- f) Summary and conclusions based on findings.
- g) Bibliography: should have the Title, author, publisher and if a website the name of the website with the specific website link which has been used.

(II) ACTIVITY: - ( Do it on An A-3 Size Sheet)

Find out about the articles, parts and schedules of Indian constitution and write about it with illustrations.

- 1. Local Government      2.National Human Rights Commission
- 3. Women Reservation

**NOTE: Read more about Indian constitution and Revise the syllabus done so far.**

## **COMPUTER DEPARTMENT**

### **INFORMATICS PRACTICES &COMPUTER SCIENCE**

#### **Project Work:**

1.Prepare a PowerPoint Presentation/Website/video on the following topic according to your Roll No.

- (1) Emerging trends in field of technology(Roll no 1-7)

(2) E-Learning (Roll no8-16)

(3) Mobility ( Roll no 17-24)

(4) IPv6 (Roll no 25-40)

2.Covid 19 your experiences during lockdown period (A detailed report based on facts after doing research on internet) in form of newsletter

**General Instructions:-**

1. Max. 20-25 slides per ppt.
2. Collect current, accurate and relevant information.
3. Create a user-friendly final draft, making it easy to reference without reading it.
4. Make points in a creative way.
5. original and innovative information.

Submission inform of softcopy in CD or via email

On [sgupta2k4@gmail.com](mailto:sgupta2k4@gmail.com)

[Sahusunita86@gmail.com](mailto:Sahusunita86@gmail.com)

**ASSIGNMENT**

**Topic:Fundamentals of Python programming**

Q 1:Is Python a high-level Language ?

Q2:Is Python interpreted?

Q 3:Is Python Object-Oriented Language ?

Q 4:How many modes are available in Python ?

Q5:Can Python be easily integrated with C++ ?

Q 6:Is Python supports GUI applications?

Q 7:Is Python compiler language or interpreter language?

Q 8:Compare C++ v/s Python.

Q 9:Which mode of Python invoking the interpreter with a script parameter begins execution of the script and continues until the script is finished?

Q 10: Do Python variables have to be explicitly declared to reserve memory space ?

Q11:Does Python allows you to assign a single value to several variables simultaneously?

Q 12:Give a example of immutable data type.

Q 13:Which type of values can be store in Number data types.

Q 14:Does Python allow for only double quotes ?

Q 15:Write the name of most versatile Python's compound data types.

Q16:Which data type consists of a number of values separated by commas ?

Q 17:What is IDLE?

Q18What factors guide the choice of identifiers in Programs ?

Q19:Classify the Python data types.

### **PROGRAMMING SKILL BASED QUESTIONS**

1.What is the output of the following code?

```
p, q, r = 10, 20 ,30  
print(p, q, r)
```

2.What is the output of the following code?

```
valueOne = 5 ** 2  
valueTwo = 5 ** 3
```

3.What is the output of the following code?

```
print(valueOne)  
print(valueTwo)
```

4.What is the output of the following code?

```
a = 4.5  
b = 2  
print a//b
```

### **CONCEPTUAL BASEDB QUESTIONS**

Q.1 Which of the following are not valid strings in Python?

(a)||Hello|| (b) \_Hello' (c)||Hello' (d) \_Hello|| (e) {Hello}

Q.2 Write Instructions in python to get the following result: (Do it in both interactive mode and script mode)

I am a student of KV Barabanki

I live in Barabanki

And I love Barabanki.

Barabanki is 20 KM away from Lucknow

This Place is famous for Dewa Sharif

Q3. what will the following code do: `a=b=18` ?

Q.4 Following code is creating problem `X = 0281`, find reason.

Q.5 Find the error in the following code:

(a) `temp=90` (b) `a=12` (c) `print("x="x)`

Print temp `b = a + b`

`print( a And b)`

(d) `a, b, c=2, 8, 4` (e) `x = 23` (f) `else = 21-4`

`print(a, b, c) 4 = x`

`c, b, a = a, b, c`

`print(a; b; c)`

Q6. Which of the following are syntactically correct strings? State reason.

(a) `"Python is nice Language"`

(b) `„He called me “Friend!” when he came“`

(c) `“Very Good“`

(d) `„This is a good book“`

(e) `“Namaste`

(f) `“I liked „Harry Potter“ very much”`

Q7.WAP to print the area of circle when radius of the circle is given by user.

Q.8.WAP to print the volume of a cylinder when radius and height of the cylinder is given

Q9.WAP to read a number in n and prints

$n*n$

$n*n*n$

**Note:All the assignments to be done in the notebook .**

## SCIENCE DEPARTMENT

# Summer Holiday Home Work Chemistry Project Topics – XI-C

- Each student should have their separate project files

S.NO.	Add. NO.	NAME	PROJECT ALLOTTED
1	4995	AANYA	Study of common food adulterants
2	4956	AKANSHA	
3	2093	AKSHIRA PANDEY	
4	1640	ANIRUDH JAYA PRASAD	Quantity of casein present in different samples of milk
5	2688	ANJALI DASS	
6	5110	ANMOL PUROHIT	
7	4950	ARYAN GUPTA	Fatty material of different soap samples
8	2108	CHARU PATHAK	
9	2096	DG SRIHARI	
10	3768	DEEPAK KUMAR	Effect of potassium bisulphate as a food preservative under vigorous condition
11	1648	GAGAN YADAV	
12	5035	HANSRAJ	
13	2957	JASPREET SINGH	Fermentation
14	1651	KAVYA	
15	1653	KRISHNA.BEERNALLY	
16	1846	KUMAR UTKARSH	Green chemistry: Biodiesel and Bio petrol
17	4154	KUNDAN KUMAR	
18	3720	KUSHAL SWAMI	
19	3275	PRIYANSHU DIMRI	Chemistry in black and white photography
20	5117	RAKSHIT CHAURASIA	
21	5056	RITIKA	
22	1657	ROBIN NEGI	Sterilization of water by bleaching powder
23	1833	SHIKHA SINGH	
24	4945	SHREYA DAS	
25	5832	SHREYA PAL	Study of common food adulterants
26	5012	SRINIBASH MISHRA	
27	3682	SHUBHANKAR	
28	1862	SNEH POKHRIYAL	Preparation of Invisible Ink



29	5006	SUJAL RAY	
30	2736	TRIPTI CHAUBEY	
31	3740	UJJWAL SHARMA	<b>Study of presence of Oxalate ion in guava fruit at different stages of ripening</b>
32	1663	VISHNU MANOJ	
33	5071	YASHVARDHAN UNIYAL	
34	4986	YATIN YADAV	<b>Chocolate analysis</b>
35	1666	YUGAL UPRETI	
36	3850	TUSHAR	
37	5862	NAVYA NARAYANI SINGH	<b>To study the presence of Caffeine in coffee samples</b>
38	4089	VINAY CHAUHAN	
39	4501	ARYAN TRIVEDI	
40	2904	ANMOL KHATANA	<b>Study of quantity of Vitamin C in different food samples</b>
41	2132	DEV GUPTA	
42	5044	RIDDHI	
43	1856	SHRISHTY	<b>Natural Resources</b>
44	1799	YUVRAJ CHAUDHARY	
45	2927	AMAN RAJ	
46	4849	AYUSH TIWARI	<b>Smoke bomb</b>
47	2168	HARSH VARDHAN SHARMA	
48	5855	DEV DARSHINIPATHRUNAGARJAN	
49	4509	VINAY CHAUDHARY	

Students will work either individually or in a group of 3 max and will have to maintain his/her separate file work.

Content should be written as per the following headings:

- Certificate
- Acknowledgement
- Introduction of the topic
- Description in detail
- Brief history
- Minimum 2 case studies / experiment details
- Results/inferences
- Discussions and conclusion

- Precautions
- Bibliography

## Chemistry Project Topics – XI-D

S.NO.	Add. NO.	NAME	PROJECT ALLOTTED
1	2121	ANUJ KUMAR	<b>Sterilization of water by bleaching powder</b>
2	1642	ANKUR BANDYOPADHYAY	
3	4130	AMAN KUMAR	
4	1971	VAIBHAV GAUTAM	<b>Study of common food adulterants</b>
5	5026	RIDA FATIMA	
6	1850	ANUNAY MURALI	
7	3033	RUPALI	<b>Preparation of Invisible Ink</b>
8	1643	ARDRA MOHAN	
9	1658	SNEHA M NAIR	
10	5039	UMANG BHATI	<b>Study of presence of Oxalate ion in guava fruit at different stages of ripening</b>
11	4566	VAMINI SHARMA	
12	1974	HANSIKA AGARWAL	
13	1845	JOSEPH MARTIN	<b>Chocolate analysis</b>
14	3370	ASHIFA	
15	4967	PRIYANSHU JANVI	
16	2080	KASHISH CHAUHAN	<b>To study the presence of Caffeine in coffee samples</b>
17	5602	UNNATI	
18	1852	AANJNEY VISHWAKIRAN	
19	3385	AMAN SHARMA	<b>Study of quantity of Vitamin C in different food samples</b>
20	4573	PRINCE SINGH	
21	4991	LAKSHAY BHANDARI	
22	3287	AMAN SINGH	<b>Natural Resources</b>
23	3358	ARYAN RAJESH SAWALE	
24	3257	TANISHK	
25	5854	KUSHAGRA GUPTA	<b>Fermentation</b>
26	1884	KAZI	

27	5038	SHAILA	
28	2895	MOHD. ASAD	

Students will work either individually or in a group of 3 max and will have to maintain his/her separate file work.

Content should be written as per the following headings:

- Certificate
- Acknowledgement
- Introduction of the topic
- Description in detail
- Brief history
- Minimum 2 case studies / experiment details
- Results/inferences
- Discussions and conclusion
- Precautions
- Bibliography

## PHYSICS Project Topics – XI-C

S.NO.	Add. NO.	NAME	PROJECT ALLOTTED
1	4995	AANYA	Velocity of a Pulse Propagated Through a Slinky
2	4956	AKANSHA	
3	2093	AKSHIRA PANDEY	
4	1640	ANIRUDH JAYA PRASAD	Calculation of mass of different body by Parallelogram Law of Vectors
5	2688	ANJALI DASS	
6	5110	ANMOL PUROHIT	
7	4950	ARYAN GUPTA	Verification of Archimedes principle
8	2108	CHARU PATHAK	
9	2096	DG SRIHARI	
10	3768	DEEPAK KUMAR	Conservation of angular momentum and application in daily life
11	1648	GAGAN YADAV	
12	5035	HANSRAJ	
13	2957	JASPREET SINGH	Elastic behaviour of different material
14	1651	KAVYA	
15	1653	KRISHNA.BEERNALLY	
16	1846	KUMAR UTKARSH	Analysis of Black Hole Thermodynamics
17	4154	KUNDAN KUMAR	
18	3720	KUSHAL SWAMI	
19	3275	PRIYANSHU DIMRI	Doppler Effect and the Fiber Gyroscope
20	5117	RAKSHIT CHAURASIA	
21	5056	RITIKA	
22	1657	ROBIN NEGI	Velocity of efflux by Bernoullis Principle
23	1833	SHIKHA SINGH	
24	4945	SHREYA DAS	
25	5832	SHREYA PAL	Velocity of a Pulse Propagated Through a Slinky
26	5012	SRINIBASH MISHRA	
27	3682	SHUBHANKAR	
28	1862	SNEH POKHRIYAL	Verification of Newton's laws
29	5006	SUJAL RAY	
30	2736	TRIPTI CHAUBEY	

31	3740	UJJWAL SHARMA	A dying star
32	1663	VISHNU MANOJ	
33	5071	YASHVARDHAN UNIYAL	
34	4986	YATIN YADAV	Hydraulic lift
35	1666	YUGAL UPRETI	
36	3850	TUSHAR	
37	5862	NAVYA NARAYANI SINGH	The effect of temperature on elasticity of rubber band
38	4089	VINAY CHAUHAN	
39	4501	ARYAN TRIVEDI	
40	2904	ANMOL KHATANA	Effect of mass on terminal velocity
41	2132	DEV GUPTA	
42	5044	RIDDHI	
43	1856	SHRISHTY	Energy conservation in two dimensions
44	1799	YUVRAJ CHAUDHARY	
45	2927	AMAN RAJ	
46	4849	AYUSH TIWARI	Verification of hooke's law
47	2168	HARSH VARDHAN SHARMA	
48	5855	DEV DARSHINI PATHRUNAGARJAN	
49	4509	VINAY CHAUDHARY	

### **Instructions:**

- i.** Each student should have their separate project files.
- ii.** Students will work either individually or in a group of 3 maximum.
- iii.** Content should be written as per the following headings:
  - Certificate
  - Acknowledgement
  - Introduction of the topic
  - Description in detail
  - Brief history
  - Experiment details
  - Results
  - Discussions and conclusion
  - Precautions
  - Sources of error
  - Bibliography

## PHYSICS Project Topics – XI-D

S.NO.	Add. NO.	NAME	PROJECT ALLOTTED
1	2121	ANUJ KUMAR	Hydraulic lift
2	1642	ANKUR BANDYOPADHYAY	
3	4130	AMAN KUMAR	
4	1971	VAIBHAV GAUTAM	The effect of temperature on elasticity of rubber band
5	5026	RIDA FATIMA	
6	1850	ANUNAY MURALI	
7	3033	RUPALI	Effect of mass on terminal velocity
8	1643	ARDRA MOHAN	
9	1658	SNEHA M NAIR	
10	5039	UMANG BHATI	Energy conservation in two dimensions
11	4566	VAMINI SHARMA	
12	1974	HANSIKA AGARWAL	
13	1845	JOSEPH MARTIN	Verification of hookes law
14	3370	ASHIFA	
15	4967	PRIYANSHU JANVI	
16	2080	KASHISH CHAUHAN	Elastic behaviour of different material
17	5602	UNNATI	
18	1852	AANJNEY VISHWAKIRAN	
19	3385	AMAN SHARMA	Analysis of Black Hole Thermodynamics
20	4573	PRINCE SINGH	
21	4991	LAKSHAY BHANDARI	
22	3287	AMAN SINGH	Doppler Effect and the Fiber Gyroscope
23	3358	ARYAN RAJESH SAWALE	
24	3257	TANISHK	
25	5854	KUSHAGRA GUPTA	Calculation of mass of different body by Parallelogram Law of Vectors
26	1884	KAZI	
27	5038	SHAILA	
28	2895	MOHD. ASAD	

# BIOLOGY – XI-D

1. Project on the given topic. The project must include: ( For XI project can be made in typed form or hand written with required data charts or pictures)

- Title
- Introduction, Material required if any
- History
- Epidemiological study (for disease based project)
- Main content, Data
- Recent trends of the chosen topic
- Diagnosis, Treatment, 2 case studies done by you and follow up (for disease based project)
- Conclusive content
- Bibliography

2. Make summary or mind maps for all chapters studies till now, on separate sheets.

3. Make Notes of characteristics of each division or class of organisms studied, mentioning:

- a. Habitat
- b. Mode of nutrition
- c. Thallus organisation
- d. Peculiar characteristics
- e. Reproductive structures
- f. Economic importance
- g. Example

## BIOLOGY Project Topics – XI-D

S. No.	Add.no.	Names	Project topic
1	2121	Anuj Kumar	Any Bacterial disease with a local case study
2	1642	Ankur Bandyopadhyay	
3	4130	Aman Kumar	
4	1971	Vaibhav Gautam	
5	5026	Rida Fatima	Effect of different light intensities (3) on seed germination
6	5038	Shaila	

7	3033	Rupali	
8	1643	Ardra Mohan	Study of viral disease
9	1658	Sneha M Nair	Study of viral disease
10	5039	Umang Bhati	Study of indoor plants
11	4566	Vamini Sharma	
12	1974	Hansika Agarwal	Viral Disease
13	1845	Joseph Martin	Any Viral disease with a local case study
14	3370	Ashifa	
15	4967	Priyanshu Janvi	
16	2080	Kashish Chauhan	
17	5602	Unnati	Vaccines, Vaccine testing and release
18	1852	Aanjney Vishwakiran	
19	3385	Aman Sharma	
20	4573	Prince Singh	
21	4991	Lakshay Bhandari	Non- Pathogenic disease of human body
22	3287	Aman Singh	
23	3358	Aryan Rajesh Sawale	
24	3257	Tanishk	
25	5854	Kushagra Gupta	Biodiversity around us (Scientific names and information of plants or animals around you) <b>OR</b> Flora of your home garden
26	1884	Kazi	
27	1850	Anunay Murali	
28	2895	Mohd. Asad	
29		Rachit	



## MATHS DEPARTMENT

Prove the following by principle of mathematical Induction For all  $n \in \mathbb{N}$

1.  $n(n+1)(n+2)$  is divisible by 6.
2.  $a^n - b^n$  is divisible by  $a - b$ .
3.  $5^{2n}$  when divided by 24, the remainder is always 1.
4.  $7^{2n} + 2^{3n-3} 3^{n-1}$  is divisible by 25.
5.  $(n+3) \leq 2^{n+3}$  for all  $n \in \mathbb{N}$
6.  $n < 2^n$  for all  $n \in \mathbb{N}$
7.  $\frac{n^5}{5} + \frac{n^3}{3} + \frac{7n}{15}$  is a natural number for all  $n \in \mathbb{N}$
8. Write the degree measure of  $1^\circ$ .
9. Write the radian measure of  $-47^\circ 30'$ .
10. If  $\sin x = \frac{1}{3}$  then write the value of  $\sin 3x$
11. If  $\cos x = \frac{-2}{5}$  then write the value of  $\cos 3x$ .
12. Solve  $3 \tan x + \cot x = 5 \operatorname{cosec} x$
13. Solve  $4 \sin x \cos x + 2 \sin x + 1 + 2 \cos x = 0$
15. Solve  $\sin x \tan x - 1 = \tan x - \sin x$
16. Solve  $\cos^2 x - \sin x - \frac{1}{4} = 0$
17. Prove that  $\frac{\cos 8A \cos 5A - \cos 12A \cos 9A}{\sin 8A \cos 5A + \cos 12A \sin 9A} = \tan 4A$
18. Prove  $\cos 10^\circ \cos 50^\circ \cos 60^\circ \cos 70^\circ = \frac{3}{16}$
19. Prove  $\sin A \sin(60^\circ - A) \sin(60^\circ + A) = \frac{1}{4} \sin 3A$

20. Prove  $\sqrt{2 + \sqrt{2 + 2\cos 4\theta}} = 2\cos\theta$

21. If  $A = \{x : x \in \mathbb{N} \text{ and } 1 \leq x \leq 3\}$   $B = \{y : y \in \mathbb{Z} \text{ and } -3 \leq y \leq -1\}$  then find  $A \times B$  and  $B \times A$ . Are  $A \times B$  and  $B \times A$  equivalent

22. If  $A = \{10, 12, 14\}$  and  $B = \{2, 5, 6\}$  then find ordered pairs  $(x, y)$  in  $A \times B$  such that  $x$  is a multiple of  $y$

23. If  $A = \{0, 1, 2, 3\}$  and  $R = \{(x, y) : x, y \in A, x = y\}$  then

(i) Write the elements of  $R$  (ii) Find the domain and range of  $R$ .

24. Let  $R$  be the relation on  $\mathbb{N}$  defined by  $R = \{(x, y) : x \in \mathbb{N}, y \in \mathbb{N}\}$  and  $x + 3y = 12$ . Then

(i) list the elements of  $R$  (ii) Find the domain and range of  $R$ .

25. Find the range of the following:

(i)  $f(x) = |x - 3|$  (ii)  $f(x) = \frac{1}{\sqrt{x-5}}$  (iii)  $f(x) = \frac{|x-4|}{x-4}$

26. Let  $f = \{(x, \frac{x^2}{1+x^2}) : x \in \mathbb{R}\}$  be a function from  $\mathbb{R}$  to  $\mathbb{R}$ . Determine the range of  $f$ .

27. Find the domain of each of the following real valued functions

(i)  $f(x) = \frac{1}{x-5}$  (ii)  $f(x) = \sqrt{25 - x^2}$  (iii)  $f(x) = \frac{1}{\sqrt{9-x^2}}$  (iv)  $f(x) = \frac{x^2 - 5x + 6}{x^2 + 6x + 8}$

28. If a function  $f: \mathbb{R} \rightarrow \mathbb{R}$  defined by

$$3x - 2, \quad x < 0$$

$$f(x) = 1, \quad x = 0$$

$$4x + 1, \quad x > 0$$

Find  $f(1), f(-1), f(0), f(2)$

29. A college awarded 38 medals in football, 15 in basketball and 20 in cricket. If these medals went to a total of 58 students and only three students got medals in all the three sports, how many students received medals in exactly two of the three sports?

30. Find the values of

(i)  $\operatorname{cosec} 1020^{\circ}$  (ii)  $\sec 480^{\circ}$  (iii)  $\cos(-330^{\circ})$

(iv)  $\sin(-660^{\circ})$  (v)  $\tan(-1380^{\circ})$  (vi)  $\cot(930^{\circ})$

Make the project on all the formulae of Trigonometry

## English Department

**Q.1. Read the passage given below and answer the following question:-**

1. The Mastermind quiz is billed as a “battle of minds”. This battle is fought in two halves. In the first, each of four participants faces a barrage of questions, for two minutes, on any topic of his or her choice. In the second round, the questions are on general knowledge. There are two points for each correct answer and zero for wrong answers and passes. In the event of a tie, the person who has passed fewer questions wins.
2. Questions can be bizarre, but they are answered none the less. “It absolutely amazes you that these guys know so much. In KBC, it used to be, that this guy knows so little,” says Basu after the show. Siddhartha Basu was the director of Kaun Banega Crorepati (KBC).
3. This year’s Mastermind final was won by Ramanand Janardhana, a 22 year-old software engineer from Pune. Janardhana had Agatha Christie’s ‘Tommy and Tupence’ novels as his specialist topic. He even knew that Tommy used asofoetida to create a stink in his room.
4. There are, of course, all sorts of quizzers. The diary-toting, Manorama yearbook, wielding variety will typically prepare for a contest by ‘studying’. He knows that the best questions, the ones that get the ‘wah-wahs’, are always repeated. He is a solid quizzier, because he knows the obvious.

5. There is the other kind, like Janardhana, who claim they do nothing extra to prepare for quizzes. They read the papers and magazines, watch TV, and become quizzers because they enjoy the test of recall.
6. It was a test the nation took when KBC fever was at its height. But long before KBC, there were quiz societies across the country, in places from Guwahati to Gandhinagar. Kolkata was the hub of the game; quizzing in India began here in 1967. Even now, the majority of quizzers are from Kolkata. Of the four 2002 Mastermind finalists, two were from that city.
7. Quizzing is big in school and college festivals. It's the 'literary' highlight of all fests. There are even professional quizzers, who, like mercenaries, play for money and the thrill of the game. They represent various organisations at different times.
8. Most quizzers grow out of active quizzing after college. Some, the really hardcore devotees of the game, keep at it. "I don't get tired of quizzing," says Pinaki Prasad Roy, a Mastermind finalist. "I get excited." Roy is a 46-year old finance professional from Kolkata, and has been a quizzer for three decades.
9. Curiosity is the most essential quality for a quizzer. A fantastic memory and instant recall help. And for Mastermind at least, the choice of specialist subject is critical. In this year's event, Janardhana took an unassailable lead in the specialist round itself.

**A. Answer the following questions by choosing the most appropriate option:**

1. **The Mastermind quiz is called a 'battle of minds' because.....**
  - (a) it is a duel of wits
  - (b) the participants are the most intelligent persons
  - (c) the participants face a shower of questions
  - (d) the mind is on the anvil
2. **The participants in the quiz seem 'masterminds' because.....**
  - (a) they seem to know so little
  - (b) they have very polished manner
  - (c) they show lot of self confidence
  - (d) they seem to know so much
3. **Ramanand Janardhana won as.....**
  - (a) he had mastery over the specialist topic

- (b) he had gone through the quiz columns in magazines
  - (c) he had chinks in his memory/recall
  - (d) he knew all the often repeated questions asked by quizmasters
4. **The studious quizzers are called ‘solid’ quizzers because.....**
- (a) they prepare expected questions
  - (b) they know the obvious
  - (c) they bank on general awareness
  - (d) they enjoy the test of recall
5. **The quality most essential for a quizzer is.....**
- (a) love of learning
  - (b) mathematical accuracy
  - (c) curiosity to know
  - (d) comprehensive learning
6. **The word ‘mercenaries’ in para 7 means.....**
- (a) those who seek mercy
  - (b) those who work on machines
  - (c) those who are lively and quick
  - (d) those who fight for money

**B. Answer the following questions in brief:**

7. Why did Ramanand Janardhana win mastermind final?
8. Who are called solid quizzers? Why?
9. Which is the most essential quality of a quizzer?
10. How is Kolkata associated with quizzing game?
11. Find the words from the passage which are similar in meaning to these words.
  - (a) Those who fight for money (para 7)
  - (b) Enthusiasts (para 8)

**Q.2 Read the passage given below and answer the following question:-**

1. Floods are not new to India and this sub-continent, but in recent years the problem has received much greater attention perhaps largely because it has led to much greater damage

than in the past. Even though information on the impending occurrence of floods is now more accurate and certainly more timely, often there is very little time or support infrastructure in place by which damage can be minimized. This is particularly true in the case of flash floods resulting from sudden and excessively heavy rain.

2. In the case of India flooding is very much a function of the seasonal nature of our rainfall. The monsoons are spread over a short period during the year and often bring a concentrated volume of rain, which cannot be absorbed by the earth and finds outlet only in the form of streams that join up with our major river systems. But, flooding is not confined only to the main rivers of the country, often smaller tributaries and streams can cause heavy damage as well. Once these streams spill over their banks they could cause excessive harm, mainly because those living near the banks of these streams particularly in mountain areas do not have easy recourse to moving away quickly.
3. One major factor that could lead to a higher severity of flooding in the future is the danger of climate change. While the evidence of the nature of impacts resulting from climate change on precipitation and flooding at the regional level is not entirely clear, it could happen that the Indian subcontinent witnesses and suffers the effects of a significantly changed pattern of monsoons. One set of scientists has estimated that the monsoons could be shorter in duration, but far more intensive. In other words, much greater precipitation would take place in a much shorter period of time, thereby increasing the danger of floods. Climate change is the result of human actions through the increased concentration of greenhouse gases in the atmosphere, of which carbon dioxide is the most prominent.
4. At the local level also human actions have heightened the danger of flood through the cutting of trees in the mountains as well as in the plains. In the case of India, the ecological damage through deforestation of the Himalayas has led to large-scale erosion of the mountain slopes and high levels of siltation. This leads to deposition of silt on the riverbeds in the plains and hence spill over of water whenever the volume in the river reaches a certain level. With siltation on the river beds, flooding occurs even at very shallow water levels. The vulnerability of the population has increased substantially because of population pressures, symbolized, for instance, by the stubborn and perhaps helpless settling of slum dwellers on the banks of the river Yamuna in Delhi, which is

merely a trickle most of the year, but bursting its banks during the monsoons as has been the case this year.

5. Flood forecasting is critical to minimizing the damage from floods. It is for this reason that the Central Water Commission has set up a network of forecasting stations, which cover the most important flood prone inter state rivers in the country. These stations produce forecasts that are used to alert the public and to mobilize various official agencies so that they take both preventive as well as relief measures whenever required. However, even in cases where forecasts have been timely and generally accurate, people have often been reluctant to move away, because in most cases they lack the means and physical options for moving away from a danger zone to one that is relatively safe. In the case of flash floods, forecasts are difficult to make, and often the time available for relief is very short.

**A. Answer the following questions by choosing the most appropriate option:**

1. **The problem of floods has been considered important recently because.....**
  - (a) there are flash floods
  - (b) floods are unpredictable
  - (c) the rivers change their courses
  - (d) these cause much greater damage
2. **The danger of floods is not minimised as.....**
  - (a) flood forecasting is inaccurate
  - (b) there is little time available for safety measures
  - (c) people are scared and act in panic
  - (d) support infrastructure is poor
3. **India suffers from floods during monsoons because.....**
  - (a) it rains very heavily and continually
  - (b) the embankments of the rivers are weak
  - (c) the streams and rivers spill over
  - (d) the streams are full of silt
4. **Climate change is the direct result of.....**
  - (a) increased concentration of green house gases

- (b) explosion of nuclear devices
  - (c) fire in oil wells in the gulf region
  - (d) significantly changed pattern of monsoons
5. **The worst hit people are slum dwellers because.....**
- (a) they are stubborn and helpless
  - (b) they do not have means to move away quickly
  - (c) they have concentrated in large numbers
  - (d) they have settled on the banks of the rivers
6. **The word 'precipitation' in para 3 means.....**
- (a) forming a precipitate
  - (b) separation of solid material from liquid
  - (c) falling of rain in an area
  - (d) the quality of being exact or accurate

**B. Answer the following questions in brief:**

- 7. Why does India suffer from floods during monsoons?
- 8. What is the result of greenhouse gases?
- 9. Who are the worst hit people?
- 10. Which human action have heightened the danger of flood?
- 11. Write the words from passage which are similar in meaning.
  - (a) Fall of rain in an area (para 3)
  - (b) Harshness (para 3)

**Notice Writing:**

**Q.3. Your School is celebrating its Silver Jubilee. As the Head Boy/Head Girl of your school, you are organizing a meeting of the Student's Council to discuss how to celebrate it. Write a notice informing the students about this meeting, giving necessary details in the meeting's agenda.**



**Q 4.** There is going to be an Inter-Class Debate of the students of class IX to XII on the topics 'Tobacco companies should not sponsor sports events'. As a Cultural Secretary, draft a notice providing all relevant details.

**Q.5.** You are Ashok and your pet dog, answering to the name 'Bruno' has run away from home yesterday. Write a notice to be put up at prominent points in your locality, giving details of the dog and offering a suitable reward to the finder.

**Q.6.** The R.W.A., New Friends Colony, Delhi, is organizing a Pooja Bazar in the locality. As the President of the association, draft a notice informing the residence about the same. Give other essential details about the Bazar.

**Q7. Letter to The Editor**

**1.** A book fair was organized in your city, Bhopal. Thousands of people including a large number of students visited the fair. It aroused a great interest in reading and buying books. You want that such book fairs are held in other cities of the state also to promote the habit of reading. Write a letter to the editor of a national daily giving your views. You are Ravi/ Riya , Malviya Nagar , Bhopal.

**2.** Write a letter to the Editor of a newspaper, complaining about the bad condition of water supply in your locality. You are Prabhu Verma living at H-19 Dayal Bagh Colony, New Delhi.

**3.** You are Manas/ Manasi at the Press Apartments of Sunder Nagar, Bihar. The main road leading to this colony has three manholes causing frequent accidents at night. There are no street lights on the main road. Write a letter to the Editor of the Times of India drawing attention of the government to this problem of the residents.

### **Q.8 Letter of Complaints (Authorities)**

- 1. You are Mohammad Ali, residing in 1545, Nai Basti Delhi. Write a letter to the Director of Police, drawing his attention towards the deteriorating law and order situation in the city.**
- 2. You carried a hit and run accident victim to a local hospital. You were shocked to see that in its casualty ward the conditions were chaotic. The patient was attended to after a lot of precious time was lost. You are Deepak/Deepa, 112/23 Roop Nagar, Delhi. Write a letter of complaint to the Chief Medical Officer of the hospital.**

### **Q.9 Letter to the Principal**

- 1. You are Rama/Raman, a member of Parent-Teacher Association of Little Valley Senior Secondary School, Shillong. Write a letter to the Principal of the school asking him to introduce vocational stream in the school providing facility of teaching subjects such as computers, photography etc. so that the students have other options to choose for in future.**
- 2. You are Rohan Sharma, an ex-school captain in Ramjas Sr. Sec. School, Anand Vihar, New Delhi. Write a letter to the Principal requesting him to provide you with the duplicate mark sheet of class XII as you have accidentally lost it.**

### **Q.10. Business Letter**

#### **Letters of Enquiry:**

- 1. You are Vishal / Veena, of 10, Green Park, New Delhi. You have recently appeared in your board exam and now is 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 the letter.**
- 2. You are the Tour Coordinator of Greenway Public School, Mayur Vihar. You are interested in organising a trip to Jaipur during winter vacation. Write a letter to Mohan Travel Agency, Jaipur seeking information in this regard. (invent necessary details)**

**Q.11. Read one of the following mentioned books and write a brief introduction of the author (50-100 words) and write about a character you like the most:**

- a. The Old Man and the Sea- Earnest Hemingway**
- b. Animal Farm- George Orwell**
- c. Chronicle of a Death Foretold- Gabriel Garcia Marquez**
- d. The Merchant of Venice- William Shakespeare**

## **PHYSICAL EDUCATION (048)**

***Record File shall include:***

**Practical-1:**

Labelled diagram of 400 M Track & Field with computations.

**Practical-2:**

Computation of BMI from family or neighbourhood & graphical representation of the data.

**Practical-3:**

Labelled diagram of field & equipment of any one game of your choice out of the below list.

**Practical-4:**

List of current National Awardees (Dronacharya Award, Arjuna Award & Rajiv Gandhi Khel Ratna Award)

**Practical-5:**

Pictorial presentation of any five Asanas for improving concentration.

***List of sports/games:*** - Athletics, Archery, Badminton, Boxing, Chess, Judo, Shooting, Skating,Swimming, Taekwondo, Tennis, Aerobics, Gymnastics, Rope-Skipping, Yoga, Bocce & Unified Basketball [CWSN (Children with Special Needs -Divyang)]

Note:

\*Only physical education practical files will be used.

\*All the headings and sub-headings should be bold or highlighted.

\*Handwriting should be neat and clean.

\*All the diagrams (playfield, court, table, equipment etc.) of sports/games should be draw by the pencil with full specifications.

## **PAINTING (048)**

### **1. Nature and Object Study**

Do practice of two or three natural and geometric forms in pencil with light and shade from a fixed point of view. Use natural forms like plants,vegetables,fruits and flower,etc.And use geometric forms of objects like cubes,cones,prisms,cylinders and spheres and two draperies (in different colors) for background and foreground.

(Three works to be done in different composition. Each work to be done on half imperial size cartridge sheet)

### **2. Painting Composition**

Do practice of simple exercises of geometrical and decorative designs in water or poster colors. (Three works to be done. Each work to be done on half imperial size cartridge sheet)

Make a **PORTFOLIO** of these works.