SGJ DAV SEN SEC PUBLIC SCHOOL, HARIPURA

Holidays Homework

Class 12th   **Session 2020-21**

Subject : English

Instructions.

1.   It is mandatory for all the students to complete the assigned home work.
2.   Internal assessment will be based on the completion of holidays' homework.
3.   Punctuality in early submission will be benefitted by awarding extra marks.

1. Read the following extracts and answer the questions: 15

Poem My Mother at Sixty-Six :

Driving from my parent's
home to Cochin last Friday
morning, I saw my mother,
beside me,
doze, open mouthed, her face
ashen like that
of a corpse and realised with pain
that she was as old as she
looked but soon
put that thought away, and
looked out at Young
Trees sprinting, the merry children spilling
out of their homes, but after the airport's
security check, standing a few yards
away, I looked again at her, wan, pale
as a late winter's moon and felt that old
familiar ache, my childhood's fear,
but all I said was, see you soon, Amma,
all I did was smile and smile and
smile......

1. Find meanings of the following words   4
   doze, ashen, corpse, sprinting, merry, spilling, realised, wan,
2. Who is 'I'?
3. What did I realize with pain?
4. Why was the realization painful?
5. Identify & name the figure of speech used in the poem.

6. What did she noted in the world outside?
7. What worried the poet when she looked at her mother?
8. Why did she put that thought away?
9. What did she see the children doing?
10. Why did the poet compare her mother's face to a late winter's moon?
11. What do the poet's parting words suggest?
12. Why did the poet look at her mother again?   1x11=11

2. Chapter The Last Lesson   20
1. Find meanings of the following words   5
   Apprentice, commotion, fright, scolding, dread, solemn, grave, cranky, reproach,
   pretend.
2. What was Franz expected to be prepared with for school that day?
3. What had been put on the bulletin board?
4. What changes did the order from the Berlin cause in the school that day?
5. How did Franz feeling about Mr. Hamel & the school change?
6. What are Mr. Hamel's views about the French language?
7. To occupied the back benches on the day of the last lesson, why?
8. What is linguistic chauvinism?
9. Why did Mr. Hamel write "Vive La France" on the blackboard?
10. Why was there a crowd in front of the bulletin board at the town hall?
11. Why was Franz afraid when he was going to school that day?   1x10=10

Long question: 5

 1. What was the order from Berlin? How did that order affect the people of Alsace,
    particularly Mr. Hamel and his students?

4.   Project work: 35

1. Prepare a PPT based on the poem My Mother at 66.   10
   Hints:- Introduction of the Poet, Poem Text, Word meanings, Literary Terms, Extracts
   etc.

 2. Prepare a poster, educating the people on the precautions to be taken-

 i) COVID-19,

 ii) Natural disasters like Earth quakes.

 iii) To save water.   15

3. Read the chapters from http://ncert.nic.in/textbook/textbook.htm and write their main
points.   10

Flamingo

i) Lost spring

ii) Deep Water

Vistas

iii) The Tiger King

5. ASL   **20**

1. Prepare your own video on any one of the following topics and send it on ranusharmadavharipura@gmail.com   10

Topics of Speaking
(Speaking Parameters:- Accuracy, pronunciation, presentation & fluency)
a) Value of Discipline
b) Grow more Trees
2. Listening (Parameters: Accuracy, relevance & presentation)   10
Listening test by Self created audio with MCQs

6. Tests based on Poem & Chapters through Google forms.   **10**

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Subject : Business Studies

Homework is divided into 3 sections

Section	Matter of section	marks
A	Assignment	35
B	Activity/ project	35
C	Test	30

Section: A

Do it on your notebook.

1. Radhika is engaged in manufacturing earthen coolers by using environmental friendly methods of productions. Which management objective is discussed:

(a) social objective   (b) organisational objective

 (c) personal objective   (d) none of the above

2. Ankita has started a new business of providing organic vegetables and fruits. Although she is not having many competitors, but still she is trying to offer goods at minimum price so that she is able to survive in market and make sure people with limited income can also afford her vegetables and fruits. State the two objectives she is trying to achieve:

 (a) organisational and personal   (b) organisational and social

 (c) social and personal   (d) all of the above

3. XYZ Power Ltd. Set up a factory for manufacturing solar lanterns in a remote village as there was no reliable supply of electricity in rural areas. The revenue earned by the company was sufficient day by day, so the company decided to increase production to generate higher sales. For this they decided to employ people from the nearby villages as very few job opportunities were available in that area. The company also decided to provide training to their employees, for updating their knowledge. Dentify the objectives of management discussed above by quoting lines.

 Q4.Human Resources are an organisation's greatest assets. Despite all developments in technology "getting work done from people" is still a major task of manager". Identify the dimension of management being described above.

(a) Management of work   b) Management of people

 (c) Management of operations   d) All of above.

Q 5.Management always work by keeping an end result or aim of the organisation. All activities o f managers are directing towards the end result. It is related to which feature of management:

(a) Management is multidimensional.   (b) Managbent is continuous

(c) Management is intangible.   (d) Management is a goal oriented process

Q6. Is planning, organising, staffing, directing and controlling applied in organisations such as school, club, restaurant, hospitals, etc.? If yes which characteristics of management does it signify? Explain that characteristic.

Q7. The task of management is to make people work towards achieving the organisational goals by making their strengths effective and their weakness irrelevant. Identify the dimension of management.

Q8. On introduction of any changes in the organisations , all employees hesitates to accept changes, Managers convince the employees and guide them to adopt the changes willingly.This is related to which importance of management:

A) Mangement help in achieving group goap

b) management increases efficiency

c) management creates a dynamic organisation

d) management helps in achicving personal objectives

Q9In order to become a lawyer one has to register himself as a member of Bar Council of India. Which feature of profession being revealed

a) Restricted Entry   (b) Service Motive   (c) Ethical code of conduct   (d) Presence of professional associations

Q10. State the common feature of Science, Art and Profession which is present in management also:

(a) Systematic body of knowledge   (b) Use of Ethical codes

(c) Based on practice and creativity   d) Universal validity

Q11. As middle level of management make sure that department has the necessary personnels or employees, which level of management make sure right number of workers are there and they are having good working conditions: (a) top level (b) middle level (c) supervisory level (d) none of the above Q12. If superintendent belongs to supervisory level then plant-superintendent will belong to: (a) top level(b) middle level (c) supervisory level (d) none of the above

Q13. It bridges the gap between where we are and where want to go (a) Planning (c) Staffing b) Organising (d) Directing

Q14. It establish Reporting Relationship a) Planning (b) Organising (e) Staffing (d) Directing .

Q15. Successful organization do not achieve their goal by chance but by following a deliberate process. What is that process.

2 Marks Question.

Q16.Dominos Pizza's keepintroducingnewvariety of Pizzas in its menu. Which characteristics of management is highlighted in this? Explain any other two characteristics of management.

Q17. AshutoshGoenka was working in 'Axe Ltd, a company manufacturing air purifiers. He found that the profits had started declining from the last six months. Profit has an implication for the survival of the firm, so he analysed the business environment to find out the reasons for this decline.

(a) Identify the level of management at which AshutoshGoenka was working.

(b) State three other functions being performed by AshutoshGoenka.

Q18. During festival season ABC Ltd. received a new order of 10,000 mobile phones to bel delivered in 10 days, failing which the contract will be null and void. I0 complete this production manager planned to outsource the production so that order couldl be delivered on time. The outsourcing resulted in increase in cost by 30%.

(i) Do you think the production manager performed duties effectively and efficiently?

ii) Give any two points of difference between effective and eficiency.

Q19 ABC Ltd, a garment manufacturing Company set the target production of 100 garments per month at the estimated cost of 200 per garment. Mohan, a worker worked double shift and manufactured around 150 garments but at the estimated l cost of 230 per garment. On the other hand, Ravi another worker focus on cost and handled resources veryl carefully so he manufactured 90 garments but at the estimated cost of ? 190 per l garment. Third worker maintained the balance and achieved target of 100 garment at the estimated cost of 200 per garment.

(a) Identify the quality possessed by Ravi, Mohan and what they are lacking.

(b) What quality is possessed by third worker?

(c) Which worker is preferred by management?

3 marks Question.

Q20. ABC Ltd. is running a chain of fast food restaurants in India. The business walfourishing but over last two years they observed that the revenue and profitis declining. The management observed that with the entry of new fast food chain from across the world the people are shifting to these restaurants, so the management planned to add new variety of food items in their MENU, for that they sent their eficient employees abroad for training and imported machines to maintain the quality of food. The company make sure only fresh food is served to their customerns so at night they distribute left over food in nearby slum area. To increase prolt margin, the supervisors take special care that there is minimum wastage and maximum utilisation of resources. Identify the three points of importance from the above para by quoting lines.

Q21. Management has evolved like a discipline. There are number of books on management. Students are learning from these books various principles and theories of management. But all students of MBA do not become successful only by learning these principles. The success depend upon creative application of these principles. Today many companies have started giving importance to corporate social responsibility and Business Ethics In the above para one feature of Science, Art and Profession each are given. Identify each one of them by quoting lines.

Q22.RishitoshMukerjee has recently joined AMV Ltd., a company manufacturing refrigerators. He found that his department was under-staffed and other departments were not cooperating with his department for smooth functioningofthe organisation. Therefore, he ensured that his department has the required number of employees and its cooperation with other departments is improved. (a) Identify the level at which RishitoshMukerjee was working. (b) Also, state three more functions required to be performed by RishitoshMukerjee at this level. [CBSE (AI) 2017]

Q23. The marketing manager of Alpha Ltd. fixed the target for all the sales executives and gave them all the possible authority to achieve it. They were asked to submit to him their performance report at the end of the month. All of them did the same. On the receipt of report the expected and actual results of sales executives

were compared, on this basis future course of action was decided. The sales executives also wrote in their report the expectations of the customers from the company. The majority of them had written that they wanted the company to cooperate in the construction of Dharamshala, going on in the city. The marketing manager placed this demand before the Board of Directors. This was happily accepted. dentify the functions of management highlighted in above para by quoting relevant lines

Section:2

Activity: Make a Blue print of a Unique business idea. Which will give good earning in near future. Also explain its all expenses and income. How you manage it with steps of management. About requirement of men, material, machinery etc.

Section :3

Two tests

1. Topic of 1st Test: Meaning (including efficiency and effectiveness) and Functions of management).

2. Topic of 2nd Test: Characteristic and Objectives of Management.

Subject : Accountancy

Homework is divided into 3 sections

Section	Matter of section	marks
A	Assignment	35
B	Activity/ project	35
C	Test	30

Section: A

Do it on your notebook.

ABSENCE OF PARTNERSHIP DEED   (1*5=5)

Q1. X and Y are partners. They do not have any partnership agreement (partnership deed). What should be done in he following cases'

a) X spends twice the time that Y devoted to busines. X claims that he should get salan of 6,000 per month for his extra time spent

b) Y has provided a capital of 50,000 whereas X has provided 2 5,000 only as capital X however, has provided 10,000 as loan to the firm, What interest (if any) will be given to X and Y?

C)X wants to introduce his son Z into his business. Y objects to it.

d) Y wants that profit should be distributed in the ratio of capitals but X wants thatit should be distributed equally.

e) X works excessively and claimed salary of Rs. 5000 p.m.

INTEREST ON CAPITAL   (3*8=24)

Q1.Rahul, Rohit and Karan started partnership business on April 1, 2006 with capitals of Rs. 20,00,000, Rs. 18,00,000 and Rs. 16,00,000, respectively. The profit for the year ended March 2007 amounted to Rs. 1,35,000 and the partner's drawing had been Rahul Rs. 50,000, RohitRs. 50,000 and Karan Rs. 40,000. The profits are distributed among partner's in the ratio of 3:2:1. calculate the interest on capital @5% p.a.

Q2.Sunflower and Pink Rose started partnership business on April o1, 2006 with capitals of Rs. 2,50,000 and Rs. 1,50,000, respectively. On October 01, 2006 they decided that their capitals should be Rs. 2,00,000 each. The necessary adjustments in the capitals are made by introducing or withdrawing cash. Interest on capital is to be alloued @ 10% p.a. Calculate interest on capital as on March 31, 2007

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Q3. On March 31, 2006 after the close of accounts, the capitals of Mountain, Hill and Rock stood in the books of the firm at Rs. 4,00,000,Rs.3,00,000 and Rs. 2.00,000, respectively. Subsequently. it was discovered that the interest on capital @ 10% p.a. had been omitted. The profit for the year amounted to Rs. 1,50,000 and the partner's drawings had been Mountain: Rs. 20,000, Hill Rs. 15.000 and Rock Rs. 10.000. Calculate interest on capital

Q4. M and N have capital of 7 1.00.000 and 7 50.000 on lstAprl 2014. Interest on capital is allowed @ 10% p.a. find out the interest on capital for the year ended 31" March 2015 and pass journal entry for the interest on capital

Q5.C and D have capitals of (70,000 and (90,000 on 1st Aprl, 201 4. C made an addition oft 40,000 to his capital on 1st October, 2014 Interetis allowed e 10% p.a. on the capital. Pass journal entry for interest on captal for the year ended 31st March, 2015.

Q6.A and B started business on 1-4-2014 with capitals oft 60,000 and 40,000 respectively. During the year A introduced 7 10,000 to the firm as additional capital on 1-10-14. They withdraw 7 500 p.m. for household expenses in Lieu of profits. Interest on capital is to be allowed @ 10% Calculate the interest payable to A and B for the year ending 31-3-15.

Q7. X and Y are in partnership in the ratio of 3: 2. They are allowed interest on capital @ 12% p.a. on the opening capital and 10% p.a. on the additional capital contnbuted during the year. The opening capitals of X and Y on IstAprl 2014 were 30,000 and 20,000 respectively. X, on Ist Aug. 2014 made an addition of ? 9.000 to his capital, while Y contributed 27,000 on 1st Oct. 2014 to his capital. Find out interest on capital for the year ending 31st March, 2015

Q8.The following is the information available from the books of a firm : M N 1.0000 80.00020.000 10.00012% p.a. 10.000 5.00012% pa Captal 1-4-2014 Additions to Capital 1-7-2014 Loan to firm Drawings Interest on Capital Find out interest on capital upto 31-3-2015.

PROFIT AND LOSS APPROPRIATION ACCOUNT   (1*6=6)

Q1. Ankur , Bhawna and Disha are partner in a firm. On 1st april,2017, the balance in their capital accounts stood at Rs. 14,00000, 600000 and 400000 respectively. They shared profits in the proportion of 7:3:2 respectively. Partners are entitled to interest on capital @ 6% per annum and salary to Bhawna @50000 p.a. and a commission of Rs. 3000 per month to Disha as per the provisions of partnership deed .Bhawna's share of profit (excluding interest on capital) is guaranted at not less than 170000 per annum. Disha's share of profit (including interest on capital but excluding commission) is guaranteed at not less than 150000 p.a. .any deficiency arising on that account shall be met by Ankur. The profit of the firm for the year ended 31st march 2018 amounted to 950000.
Prepare profit and loss appropriation account for the year ended 31st march 2018

Section : 2

ACTIVITY: Journalise 5 transactions daily of your household Activities on your note book.

Section:3

Two tests

1. Topic of first test is profit and loss appropriation account.

2. Topic of Second test is Interest on Capital.

Subject : Economics

(A)	Written Assignment	40 Marks
(B)	Activity / Project	30 Marks
(C)	Tests	30 Marks

01Q. Answer the following Question :-

(i)   What is co-operative farming ?

(ii)   What do you mean by consolidation of Holidays ?

(iii)   Briefly explain the role of Agriculture in Indian Economy ?

(iv)   What are main cause of backwardness of Indian Agriculture ?

(v)   What steps should be taken to promote Agriculture Sector in India ?

(vi)   Comment on Agriculture policy of 2000 in India .

(vii)   Define green Revolution in India . What are its main causes ?

02Q. Answer the following Question :-

(i)   Explain industrial development and its importance in brief ?

(ii)   What is meant by industrial Licensing system in India ? What is objectives ?

(iii)   Point out the feature or strategy of New Industrial Policy (1991) in brief.

03Q. Answer the following Question :-

(i)   Briefly explain any four features of Indian Economy on the eve of Indian Economy ?

(ii)   What structural changes occurred in Indian economy during british regime ?

(iii)   What was the state of foreign trade during British rule ?

(iv)   What is Semi-Feudal economy ?

04Q. Answer the following Question :-

(i)   The main objective of economic planning is to ensure 'growth with justice ' Discuss its value ?

(ii)   How to create economic equality ? Is economic equality valuable or not in the society ?

(iii)   What to do uplift the weaker section of the society ? In this regard discuss the value of non-govt. organisation ?

(iv)   How can the objectives of self-reliance be achieved ? What will you like to do as a student ?

| **Activity** | **30 Marks** |

| A Comparison with Neighbours |
| India and Pakistan |
| India and China |

Q1. Concept :- Introduction and compare the following aspects .

01. Poverty ratio
02. Population
03. Agriculture , Industry and Territory sector .
04. Gross domestic product

Collect the information through internet and then show it by drawing groups suitable picture .

Q2. Data Analysis

Q3. Findings

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Subject : Psychology

General Instructions

1. All questions are compulsory and answer should be brief and to the point.
2. Marks for each questions are indicated against it.
3. Question Nos. 1-2 in Part A are Very short answer questions carrying two Marks each. Answer to each question should not exceed 30 words.
4. Question Nos. 3-4 in Part B are short answer Type I questions carrying four Marks each. Answer to each question should not exceed 60 words.
5. Question Nos. 5-6 in Part C are short answer Type I questions carrying five Marks each. Answer to each question should not exceed 80 words.
6. Question Nos. 7-8 in Part D are long answer Type questions carrying Six Marks each. Answer to each question should not exceed 200 words.

Section A

A. Very short answer questions
1. How do psychologists characterise and define intelligence?
2. What is psychometric approach?
B. Short answer type I
1. How does the triarchic theory help us to understand intelligence?
2. Are the cultural differences in the conceptualisation of intelligence?
C. Short Answer Type II
1. How is creativity related to intelligence?
2. What is IQ?
D. Long Answer Question
1. "Any intellectual activity involves the independent functioning of three neurological systems". Explain with reference to PASS model?
2. Explain briefly the multiple intelligence identified by Gardner?

SECTION – B

Project work
1. Observe and interview 5 persons in your neighbours in order to see how they differ from each other in terms of certain psychological attributes. Cover all the five domains . Prepare a psychological profile of each person and compare?
2. Prepare a PPT on any one theory of intelligence.

Section C

Test will be conducted as per given schedule once in a week based on Section A through google form

Prepared by : Manjinder Kaur

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Subject : Geography

Dear Students,
The holidays work consists of three tasks.
1 Written Work (Note Book) 40 Marks
2 Project / Activities 30 Marks
3 Weekly Tests 30 Marks
Part A – Attempt the answer to the following questions in your fair note book.

Chapter 1 Population
Answer the following questions in about 30 words.
(i) Very hot and dry and very cold and wet regions of India have low density of population. In this light, explain the role of climate on the distribution of population.
(ii) Which states have large rural population in India? Give one reason for such large rural population.
(iii) Why do some states of India have higher rates of work participation than others?
(iv) 'The agricultural sector has the largest share of Indian workers.' – Explain.
Answer the following questions in about 150 words.
(i) Discuss the spatial pattern of density of population in India.
(ii) Give an account of the occupational structure of India's population.

Chapter 2 Migration
Answer the following questions in about 30 words.
(i) Differentiate between life-time migrant and migrant by last residence.
(ii) Identify the main reason for male/female selective migration.
(iii) What is the impact of rural-urban migration on the age and sex structure of the place of origin and destination?
Answer the following questions in about 150 words.
(i) Discuss the consequences of international migration in India.
(ii) What are the socio demographic consequences of migration?

Chapter 3 Human Development
Answer the following questions in about 30 words.
(i) Define Human Development.
(ii) Give two reasons for low levels of Human Development in most of the Northern States of India.
(iii) Give two reasons for declining child sex ratio in India.
Answer the following questions in about 150 words.
(i) Discuss the spatial patterns of female literacy in India in 2011 and bring out the reasons responsible for it.
(ii) Which factors have caused spatial variations in the levels of Human Development among the states in India?

Chapter 4 Human Settlements
Answer the following questions in about 30 words.
(i) What are garrisson towns? What is their function?
(ii) How can one identify an urban agglomeration?
(iii) What are the main factors for the location of villages in desert regions?
(iv) What are metropolitan cities? How are they different from urban agglomerations?
Answer the following questions in about 150 words.
(i) Discuss the features of different types of rural settlements. What are the factors responsible for the settlement patterns in different physical environments?
(ii) Can one imagine the presence of only one-function town? Why do the cities become multi-functional?

Project / Activities Part 1 (10 Marks)

Do any one of the following four activities either on your note books or in the shape of PPT/Word File etc

Read the data provided on the page numbers provided below and answer the questions that follows.

Page No 13 (Book – India People and Economy)

Prepare composite bar graphs, one for India and the other for your respective states showing the proportion of male and female workers in agriculture, household industries and other sectors, and compare.

Page No 17 (Book – India People and Economy)

Examine Fig. 2.1 a and 2.1 b showing intra-state and inter-state migration in India according to the Census 2001 and find out:

(i) Why are the numbers of females migrating from rural to rural areas in both the diagrams higher?

(ii) Why is the male migration higher from rural to urban?

Page No 19 (Book – India People and Economy)

The four stories describe different situations of migrants.

Enumerate the push and pull factors for Aarif?

What are the pull factors for Mohan Singh?

Study the story of Subbalakshmi and Manish Gawarkar. Compare their cases on the basis of types of migration, causes of migration and their living conditions.

Page 20 (Book – India People and Economy)

Which one of the states in India has the highest proportion of population below poverty line?

Arrange the states on the basis of their percentage of population below poverty line in ascending order.

Select 10 states which have the high proportion of population below poverty line and represent the data by bar diagram.

Project Part II - Compulsory (20 Marks)

You are being provided a map of world (Map attached in the end) here, showing COVID 19 effect on various countries. Analyze the data on the following basis and present it in any type of software module.

Step 1 – Find out 5 countries from each group of the countries showing people effected per million.

Step 2 – Find out the longitudinal and latitudinal extent of these countries, total population and population density, weather conditions prevalent at present consisting of average temperature and humidity levels for the months of March and April and the economic level of the country like developed, under developed or developing.

Step 3 – Compare the contrast all the cases to discuss if location, weather and economic status of a country can be a factor or determiner for the fast or slow spread of COVID 19.

Step 4 – Write down your findings in your software file in a simple and self explanatory way.
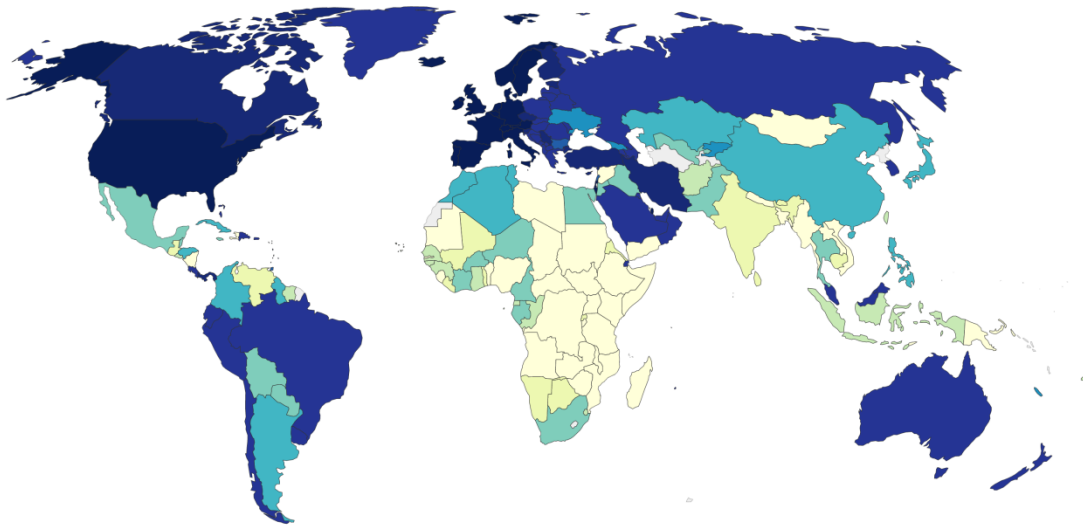
Weekly Test (Via Google Form)

Test 1 – Chapter 1 and 2 - 15 Marks

Test 2 – Chapter 3 and 4 – 15 Marks

Dates of conducting tests will be shared via whats app group along with the schedule of other subjects by the concerned coordinators.

Confirmed COVID-19 cases per million people, Apr 13, 2020

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

| No data | 0 | 5 | 10 | 20 | 40 | 60 | 80 | 100 | 500 | 1,000 | >5,000 |

Source: European CDC – Situation Update Worldwide – Last updated 13th April, 11:30 (London time)   OurWorldInData.org/coronavirus • CC BY

Subject : History

- Do the following questions on your notebook in the form of points.
- Chapter 1 Bricks, Beads and Bones.
- Chapter 2 Kings, Farmers and Towns
- Chapter 3 Kinship, Caste and Class
- The homework is divided into three sections
  Section A – Assignment (35 Marks)
  Section B – Project Work (35 Marks)
  Section C – Test (15+15=30 Marks)

Assignment   Marks 35

1. What is meant by Janapada?

   जनपद से क्या अभिप्राय है?

2. Who wrote book indica and who was the king at that time?

   पुस्तक इंडिका किसने लिखी और उस समय राजा कौन था?

3. Who re-wrote Mahabharata and how and how much times it taken?

   महाभारत को किसने और कैसे और कितने समय तक फिर से लिखा था।

4. Explain the meaning of Patrilliny.

   पितरवंश (पैट्रिलिनी) का अर्थ स्पष्ट करें।

5. What was the process of Burials in the Harappan Civilization?

हड़प्पा सभ्यता में दफन की प्रक्रिया क्या थी?

6. Write the name of three means of transport of the harappan civilization?

हरप्पन सभ्यता के परिवहन के तीन साधनों के नाम लिखिए?

7. Mention one Feature of Harappan.

हड़प्पा की एक विशेषता का उल्लेख करें।

8. Discuss the main characteristics of the planned urban centres of the Harappan civilization.

हड़प्पा सभ्यता के नियोजित शहरी केंद्रों की मुख्य विशेषताओं पर चर्चा करें।

9. Write reasons for the decline of Harappan civilization.

हड़प्पा सभ्यता के पतन के कारणों को लिखिए।

10. What was the 2nd name of Magadha and why it was so powerful, write in three points?

मगध का दूसरा नाम क्या था और यह इतना शक्तिशाली क्यों था, तीन बिंदुओं में लिखें?

11. Write about the Gotra System, and write the rule of Gotra system.

गोत्र प्रणाली के बारे में लिखें, और गोत्र प्रणाली के नियम को लिखें।

12. What was the 2nd name of Magadha and why it was so powerful?

मगध का दूसरा नाम क्या था और यह इतना शक्तिशाली क्यों था?

13. Describe the evidences that suggest that Brahmanical prescription about kinship and marriage were not universally followed during the Mahabharata Era.
उन प्रमाणों का वर्णन करें जो बताते हैं कि महाभारत काल में रिश्तेदारी और विवाह के बारे में ब्राह्मणवादी नुस्खे का सार्वभौमिक रूप से पालन नहीं किया गया था।

Or

What was divine theory and why kings adopted that theory?

दिव्य सिद्धांत क्या था और राजाओं ने उस सिद्धांत को क्यों अपनाया?

Or

What are the problems of archaeological interpretation in reconstruction of the past?

अतीत के पुनर्निर्माण में पुरातात्विक व्याख्या की समस्याएं क्या हैं?

Project   Marks 35

1. Map work   15

1.   Bricks, Beads and Bones. (The Harappan civilization)

        Map:- Harappan sites: Harappa, Banawali, Kalibangan, Balakot, Rakhigarhi, Dholavira,

        Nageshwar, Lothal, Mohenjodaro, Chanhudaro, Kot Diji.

2.   Kings, Farmers and Towns (Political and Economic History: How Inscriptions tell a   story)

Map:- Mahajanapada and cities :Vajji, Magadha, Kosala, Kuru, Panchala, Gandhara,   Avanti, Rajgir, Ujjain, Taxila, Varanasi.

3.   Kinship, Caste and Class(: Using the Mahabharata)

Map: - Kushanas, Shakas, Satavahanas, Vakatakas, Guptas

Cities/towns: Mathura, Kannauj, Puhar, Braghukachchha, Pillar inscriptions - Sanchi,

Topra, Meerut Pillar and Kaushambi, Kingdom of Cholas, Cheras and Pandyas.

2. Prepare presentation (slide show) on these topics. You can make video on this topic but   without go outside   20

इन विषयों पर प्रस्तुति (स्लाइड शो) तैयार करें। आप इस विषय पर वीडियो बना सकते हैं लेकिन   बिना बाहर जाए

1. Compare the life of Harappan civilization and your life.
    हाप्पन सभ्यता के जीवन और अपने जीवन की तुलना करें।

                            Or

Change in the lifestyle of peasants in comparison of old time.

पुराने समय की तुलना में किसानों की जीवन शैली में बदलाव।

Parameters of assessment in project

1. Relevancy of content   5
2. Accuracy   5
3. Creativity   5
4. Timely submission   5

Weekly Test   Marks 30

Two tests will be from above mentioned chapters

1. Bricks, Beads and Bones.   15 marks

2. Kings, Farmers and Towns   15 marks

 Test will be through Google form**.**

Jasbir Singh

9814265365

Subject : Biology

The whole work is divided into following parts:-

1. **Written work(Assignments or worksheet)**   **40 Marks**
2. **Project Work**   **30 Marks**
3. **Objective type test**   **30 Marks**

Project should be completed by staying at home, no need to go outside anywhere. You should use only those things and equipment's that are usually found at your homes.

(For example if you don't have colors then you can use only your pen or pencil, no need to go outside, stay at your home, stay safe)

1. Students have to write the answers of following question in their note books.   (40 Marks)

Chapter-1 Reproduction in Organisms (Each question carry four marks)

1. Enumerate the differences between asexual and sexual reproduction.Describe the types of asexual reproduction exhibited by unicellular organisms.
2. Do all the gametes formed from a parent organism have the same genetic composition (identical DNA copies of the parental genome)? Analyse the situation with the background of gametogenesis and provide or give suitable explanation.
3. Although sexual reproduction is a long drawn, energy-intensive complex form of reproduction, many groups of organisms in Kingdom Animal and Plantae prefer this mode of reproduction. Give atleast three reasons for this.
4. Differentiate between (a) oestrus and menstrual cycles; (b) ovipary and vivipary. Cite an example for each type.
5. Rose plants produce large, attractive bisexual flowers but they seldom produce fruits. On the other hand a tomato plant produces plenty of fruits though they have small flowers. Analyse the reasons for failure of fruit formation in rose.Both these plants – rose and tomato – both selected by human beings for different characteristics, the rose for its flower and tomato for its fruit. Roses, being vegetatively propagated do not need to produce seeds.

Chapter-2 Sexual Reproduction in Flowering Plants(Each question carry four marks)

1. Starting with the zygote, draw the diagrams of the different stages of embryo development in a dicot.
2. What are the possible types of pollinations in chasmogamousflowers? Give reasons.
3. With a neat, labelled diagram, describe the parts of a mature angiosperm embryo sac. Mention the role of synergids.
4. Draw the diagram of a microsporangium and label its wall layers. Write briefly on the role of the endothecium.
5. Embryo sacs of some apomictic species appear normal but contain diploid cells. Suggest a suitable explanation for the condition.

2. Project Work   (30 Marks)

Nowadays our world is fighting with COVID-19. So as a biology student you must know about this virus.I am assigning you a project work based on it. Try to find out following questions and prepare a file(If sheets are not available you can submit soft copy).

Questions	Your Research
1. What do you know about corona virus?	
2. From where and how this virus came into exist?	
3. What happens if anyone get corona virus disease?	
4. What is the recovery time for corona virus disease?	
5. Who is the most at risk for this and why?	
6. What is the official name of corona virus?	
7. Is it a pandemic? How can you prove it?	
8. Corona virus is the name of virus or disease?	
9. Why corona virus named so?	
10. What is the COVID-19 Solidary Response Fund?	
11. What should you as a student should do during these lockdown conditions?	
12. What are the symptoms of having corona disease?	
13. How can you prevent from it?	
14. Why it spread so quickly?	
15. Is it mutant or not? Give reasons.	

3. Objective type test   (30 Marks)

Test will be from above mentioned 2 chapters. And test will be given you later in your whatsapp groups or Google docs.

For any quarry you can contact:-MsPreetiBishnoi(7508244624)

Subject : Chemistry

THE WHOLE WORK IS DIVIDED INTO FOLLOWING PARTS:-

1. Written work   35 Marks

2. Activities   35 Marks

3. Weekly test on every Saturday   30 Marks

1.

(i) **complete your notes of the following chapter**

   Chapter 2 - Solution

(ii) Write down the answers of the following questions on the notebook.

1.A sample of drinking water was found to be severely contaminated with chloroform ($CHCl3$) supposed to be a carcinogen. The level of contamination was 15 ppm (by mass):

(i) express this in percent by mass

(ii) determine the molality of chloroform in the water sample.

2. What role does the molecular interaction play in a solution of alcohol and water?

3. Why do gases always tend to be less soluble in liquids as the temperature is raised?

4. State Henry's law and mention some important applications.

5. The partial pressure of ethane over a solution containing 6.56×10^{-3} g of ethane is 1 bar. If the solution contains $5.00 \times 10–2$ g of ethane, then what shall be the partial pressure of the gas?

6. What is meant by positive and negative deviations from Raoult's law and how is the sign of mixing enthalpy related to positive and negative deviations from Raoult's law?

7. An aqueous solution of 2% non-volatile solute exerts a pressure of 1.004 bar at the normal boiling point of the solvent. What is the molar mass of the solute?

8. Heptane and octane form an ideal solution. At 373 K, the vapour pressures of the two liquid components are 105.2 kPa and 46.8 kPa respectively. What will be the vapour pressure of a mixture of 26.0 g of heptane and 35 g of octane?

9. The vapour pressure of water is 12.3 kPa at 300 K. Calculate vapour pressure of 1 molal solution of a non-volatile solute in it.

10. A 5% solution (by mass) of cane sugar in water has freezing point of $271K$. Calculate the freezing point of 5% glucose in water if freezing point of pure water is 273.15 K.

11. Based on solute-solvent interactions, arrange the following in order of increasing solubility in n-octane and explain. Cyclohexane, KCl, CH_3OH, CH_3CN.

12. The depression in freezing point of water observed for the same amount of acetic acid, trichloroacetic acid and trifluoroacetic acid increases in the order given above. Explain briefly.

13. Vapour pressure of water at 293 K is 17.535 mm Hg. Calculate the vapour pressure of water at 293 K when 25 g of glucose is dissolved in 450 g of water.

14. Benzene and toluene form ideal solution over the entire range of composition. The vapour pressure of pure benzene and toluene at 300 K are 50.71 mm Hg and 32.06 mm Hg respectively. Calculate the mole fraction of benzene in vapour phase if 80 g of benzene is mixed with 100 g of toluene.

15. The air is a mixture of a number of gases. The major components are oxygen and nitrogen with approximate proportion of 20% is to 79% by volume at 298K. The water is in equilibrium with air at a pressure of 10 atm. At 298 K if the Henry's law constants for oxygen and nitrogen at 298 K are 3.30×10^7 mm and 6.51×10^7 mm respectively, calculate the composition of these gases in water.

16. Determine the amount of $CaCl_2$ ($i = 2.47$) dissolved in 2.5 litre of water such that its osmotic pressure is 0.75 atm at 27° C.

17. Determine the osmotic pressure of a solution prepared by dissolving 25 mg of K_2SO_4 in 2 litre of water at 25° C, assuming that it is completely dissociated.

18. Vapour pressure of pure water at 298 K is 23.8 mm Hg. 50 g of urea (NH_2CONH_2) is dissolved in 850 g of water. Calculate the vapour pressure of water for this solution and its relative lowering.

19. Boiling point of water at 750 mm Hg is 99.63°C. How much sucrose is to be added to 500 g of water such that it boils at 100°C.

20. The vapour pressure of pure benzene at a certain temperature is 0.850 bar. A non-volatile, non-electrolyte solid weighing 0.5 g when added to 39.0 g of benzene (molar mass 78 g mol-1). Vapour pressure of the solution, then, is 0.845 bar. What is the molar mass of the solid substance?

2. Do activities mentioned below and note down on your note books.

Activity 1. Learn atomic number from 1 to 40. Also write their Electronic configuration .

Activity 2. Write some tricks to learn periodic table (Groups and Period) and make video related to tricks.(make your own tricks)

3. Test

Test will be from above mentioned chapter. Test will be taken in 2 parts , once in a week. And test will be given you later in your whatsapp groups or in google docs form.

For any query you can contact at my number

Mrs.Suruchi

(8725802420)

Subject : Mathematics

1. If a matrix has 28 elements, what are the possible orders it can have? What if it has 13 elements?

2. In the matrix $A = \begin{bmatrix} a & 1 & x \\ 2 & \sqrt{3} & x^2 - y \\ 0 & 5 & \frac{-2}{5} \end{bmatrix}$, write :

    (i)   The order of the matrix A
    (ii) The number of elements
    (iii) Write elements a_{23}, a_{31}, a_{12}

3. Construct $a_{2 \times 2}$ matrix where

    (i) $a_{ij} = \dfrac{(i - 2j)^2}{2}$

    (ii) $a_{ij} = |-2i + 3j|$

4. Construct a 3×2 matrix whose elements are given by $a_{ij} = e^{ix} \sin jx$

5. Find values of a and b if $A = B$, where

    $A = \begin{bmatrix} a+4 & 3b \\ 8 & -6 \end{bmatrix}$, $B = \begin{bmatrix} 2a+2 & b^2+2 \\ 8 & b^2-5b \end{bmatrix}$

6. If possible, find the sum of the matrices A and B, where $A = \begin{bmatrix} \sqrt{3} & 1 \\ 2 & 3 \end{bmatrix}$,

    and $B = \begin{bmatrix} x & y & z \\ a & b & 6 \end{bmatrix}$

7. If $X = \begin{bmatrix} 3 & 1 & -1 \\ 5 & -2 & -3 \end{bmatrix}$ and $Y = \begin{bmatrix} 2 & 1 & -1 \\ 7 & 2 & 4 \end{bmatrix}$, find

    (i)   X + Y   (ii)   2X − 3Y
    (iii) A matrix Z such that X + Y + Z is a zero matrix.

8. Find non-zero values of x satisfying the matrix equation:

    $$x \begin{bmatrix} 2x & 2 \\ 3 & x \end{bmatrix} + 2 \begin{bmatrix} 8 & 5x \\ 4 & 4x \end{bmatrix} = 2 \begin{bmatrix} (x^2+8) & 24 \\ (10) & 6x \end{bmatrix}.$$

9. If $A = \begin{bmatrix} 0 & 1 \\ 1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$, show that $(A + B)(A - B) \neq A^2 - B^2$

10. Find the value of x if

$$\begin{bmatrix} 1 & x & 1 \end{bmatrix} \begin{bmatrix} 1 & 3 & 2 \\ 2 & 5 & 1 \\ 15 & 3 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ x \end{bmatrix} = O.$$

11. Show that $A = \begin{bmatrix} 5 & 3 \\ -1 & -2 \end{bmatrix}$ satisfies the equation $A^2 - 3A - 7I = O$ and hence find A^{-1}.

12. Find the matrix A satisfying the matrix equation:

$$\begin{bmatrix} 2 & 1 \\ 3 & 2 \end{bmatrix} A \begin{bmatrix} -3 & 2 \\ 5 & -3 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

13. Find A, if $\begin{bmatrix} 4 \\ 1 \\ 3 \end{bmatrix} A = \begin{bmatrix} -4 & 8 & 4 \\ -1 & 2 & 1 \\ -3 & 6 & 3 \end{bmatrix}$

14. If $A = \begin{bmatrix} 3 & -4 \\ 1 & 1 \\ 2 & 0 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 1 & 2 \\ 1 & 2 & 4 \end{bmatrix}$, then verify $(BA)^2 \neq B^2A^2$

15. If possible, find BA and AB, where

$$A = \begin{bmatrix} 2 & 1 & 2 \\ 1 & 2 & 4 \end{bmatrix}, B = \begin{bmatrix} 4 & 1 \\ 2 & 3 \\ 1 & 2 \end{bmatrix}.$$

16. Show by an example that for $A \neq O, B \neq O, AB = O$.

17. Given $A = \begin{bmatrix} 2 & 4 & 0 \\ 3 & 9 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 4 \\ 2 & 8 \\ 1 & 3 \end{bmatrix}$. Is $(AB)' = B'A'$?

18. Solve for x and y:

$$x \begin{bmatrix} 2 \\ 1 \end{bmatrix} + y \begin{bmatrix} 3 \\ 5 \end{bmatrix} + \begin{bmatrix} -8 \\ -11 \end{bmatrix} = O.$$

19. If X and Y are 2×2 matrices, then solve the following matrix equations for X and Y

$$2X + 3Y = \begin{bmatrix} 2 & 3 \\ 4 & 0 \end{bmatrix}, 3X + 2Y = \begin{bmatrix} -2 & 2 \\ 1 & -5 \end{bmatrix}.$$

20. If $A = \begin{bmatrix} 3 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 7 & 3 \end{bmatrix}$, then find a non-zero matrix C such that $AC = BC$.

21. Give an example of matrices A, B and C such that $AB = AC$, where A is non-zero matrix, but $B \neq C$.

22. If $A = \begin{bmatrix} 1 & 2 \\ -2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 3 \\ 3 & -4 \end{bmatrix}$ and $C = \begin{bmatrix} 1 & 0 \\ -1 & 0 \end{bmatrix}$, verify :

   (i) $(AB) C = A (BC)$ (ii) $A (B + C) = AB + AC$.

23. If $P = \begin{bmatrix} x & 0 & 0 \\ 0 & y & 0 \\ 0 & 0 & z \end{bmatrix}$ and $Q = \begin{bmatrix} a & 0 & 0 \\ 0 & b & 0 \\ 0 & 0 & c \end{bmatrix}$, prove that

$$PQ = \begin{bmatrix} xa & 0 & 0 \\ 0 & yb & 0 \\ 0 & 0 & zc \end{bmatrix} = QP.$$

24. If : $\begin{bmatrix} 2 & 1 & 3 \end{bmatrix} \begin{bmatrix} -1 & 0 & -1 \\ -1 & 1 & 0 \\ 0 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 \\ 0 \\ -1 \end{bmatrix} = A$, find A.

25. If $A = \begin{bmatrix} 2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 5 & 3 & 4 \\ 8 & 7 & 6 \end{bmatrix}$ and $C = \begin{bmatrix} -1 & 2 & 1 \\ 1 & 0 & 2 \end{bmatrix}$, verify that $A (B + C) = (AB + AC)$.

26. If $A = \begin{bmatrix} 1 & 0 & -1 \\ 2 & 1 & 3 \\ 0 & 1 & 1 \end{bmatrix}$, then verify that $A^2 + A = A(A + I)$, where I is 3×3 unit matrix.

27. If $A = \begin{bmatrix} 0 & -1 & 2 \\ 4 & 3 & -4 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 0 \\ 1 & 3 \\ 2 & 6 \end{bmatrix}$, then verify that :

   (i) $(A')' = A$

   (ii) $(AB)' = B'A'$

   (iii) $(kA)' = (kA')$.

28. If $A = \begin{bmatrix} 1 & 2 \\ 4 & 1 \\ 5 & 6 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 \\ 6 & 4 \\ 7 & 3 \end{bmatrix}$, then verify that :

   (i) $(2A + B)' = 2A' + B'$

   (ii) $(A - B)' = A' - B'$.

29. Show that $A'A$ and AA' are both symmetric matrices for any matrix A.

30. Let A and B be square matrices of the order 3×3. Is $(AB)^2 = A^2 B^2$? Give reasons.

31. Show that if A and B are square matrices such that $AB = BA$, then

    $$(A + B)^2 = A^2 + 2AB + B^2.$$

32. Let $A = \begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix}$, $B = \begin{bmatrix} 4 & 0 \\ 1 & 5 \end{bmatrix}$, $C = \begin{bmatrix} 2 & 0 \\ 1 & -2 \end{bmatrix}$ and $a = 4, b = -2$.

   Show that:

   (a) $A + (B + C) = (A + B) + C$

   (b) $A(BC) = (AB)C$

(c) $(a + b)B = aB + bB$

(d) $a(C-A) = aC - aA$

(e) $(A^T)^T = A$

(f) $(bA)^T = b\,A^T$

(g) $(AB)^T = B^T\,A^T$

(h) $(A - B)C = AC - BC$

(i) $(A - B)^T = A^T - B^T$

33. If $A = \begin{bmatrix} \cos & \sin \\ -\sin & \cos \end{bmatrix}$, then show that $A^2 = \begin{bmatrix} \cos2 & \sin2 \\ -\sin2 & \cos2 \end{bmatrix}$.

34. If $A = \begin{bmatrix} 0 & -x \\ x & 0 \end{bmatrix}$, $B = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ and $x^2 = -1$, then show that $(A + B)^2 = A^2 + B^2$.

35. Verify that $A^2 = I$ when $A = \begin{bmatrix} 0 & 1 & -1 \\ 4 & -3 & 4 \\ 3 & -3 & 4 \end{bmatrix}$.

36. Prove by Mathematical Induction that $(A')^n = (A^n)'$, where $n \in \mathbf{N}$ for any square matrix A.

37. Find inverse, by elementary row operations (if possible), of the following matrices

   (i) $\begin{bmatrix} 1 & 3 \\ -5 & 7 \end{bmatrix}$ (ii) $\begin{bmatrix} 1 & -3 \\ -2 & 6 \end{bmatrix}$.

38. If $\begin{bmatrix} xy & 4 \\ z+6 & x+y \end{bmatrix} = \begin{bmatrix} 8 & w \\ 0 & 6 \end{bmatrix}$, then find values of x, y, z and w.

39. If $A = \begin{bmatrix} 1 & 5 \\ 7 & 12 \end{bmatrix}$ and $B = \begin{bmatrix} 9 & 1 \\ 7 & 8 \end{bmatrix}$, find a matrix C such that $3A + 5B + 2C$ is a null matrix.

40. If $A = \begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$, then find $A^2 - 5A - 14I$. Hence, obtain A^3.

41. Find the values of a, b, c and d, if

$$3\begin{bmatrix} a & b \\ c & d \end{bmatrix} = \begin{bmatrix} a & 6 \\ -1 & 2d \end{bmatrix} + \begin{bmatrix} 4 & a+b \\ c+d & 3 \end{bmatrix}.$$

42. Find the matrix A such that

$$\begin{bmatrix} 2 & -1 \\ 1 & 0 \\ -3 & 4 \end{bmatrix} A = \begin{bmatrix} -1 & -8 & -10 \\ 1 & -2 & -5 \\ 9 & 22 & 15 \end{bmatrix}.$$

43. If $A = \begin{bmatrix} 1 & 2 \\ 4 & 1 \end{bmatrix}$, find $A^2 + 2A + 7I$.

44. If $A = \begin{bmatrix} \cos & \sin \\ -\sin & \cos \end{bmatrix}$, and $A^{-1} = A'$, find value of α.

45. If the matrix $\begin{bmatrix} 0 & a & 3 \\ 2 & b & -1 \\ c & 1 & 0 \end{bmatrix}$ is a skew symmetric matrix, find the values of a, b and c.

46. If $P(x) = \begin{bmatrix} \cos x & \sin x \\ -\sin x & \cos x \end{bmatrix}$, then show that

$P(x) . P(y) = P(x + y) = P(y) . P(x)$.

47. If A is square matrix such that $A^2 = A$, show that $(I + A)^3 = 7A + I$.

48. If A, B are square matrices of same order and B is a skew-symmetric matrix, show that A'BA is skew symmetric.

Long Answer (L.A.)

49. If AB = BA for any two sqaure matrices, prove by mathematical induction that $(AB)^n = A^n B^n$.

50. Find x, y, z if $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfies $A' = A^{-1}$.

51. If possible, using elementary row transformations, find the inverse of the following matrices

(i) $\begin{bmatrix} 2 & -1 & 3 \\ -5 & 3 & 1 \\ -3 & 2 & 3 \end{bmatrix}$ (ii) $\begin{bmatrix} 2 & 3 & -3 \\ -1 & -2 & 2 \\ 1 & 1 & -1 \end{bmatrix}$ (iii) $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$

52. Express the matrix $\begin{bmatrix} 2 & 3 & 1 \\ 1 & -1 & 2 \\ 4 & 1 & 2 \end{bmatrix}$ as the sum of a symmetric and a skew symmetric matrix.

Using the properties of determinants in Exercises 1 to 6, evaluate:

1. $\begin{vmatrix} x^2 - x + 1 & x - 1 \\ x + 1 & x + 1 \end{vmatrix}$

2. $\begin{vmatrix} a + x & y & z \\ x & a + y & z \\ x & y & a + z \end{vmatrix}$

3. $\begin{vmatrix} 0 & xy^2 & xz^2 \\ x^2 y & 0 & yz^2 \\ x^2 z & zy^2 & 0 \end{vmatrix}$

4. $\begin{vmatrix} 3x & -x + y & -x + z \\ x - y & 3y & z - y \\ x - z & y - z & 3z \end{vmatrix}$

5. $\begin{vmatrix} x + 4 & x & x \\ x & x + 4 & x \\ x & x & x + 4 \end{vmatrix}$

6. $\begin{vmatrix} a - b - c & 2a & 2a \\ 2b & b - c - a & 2b \\ 2c & 2c & c - a - b \end{vmatrix}$

Using the proprties of determinants in Exercises 7 to 9, prove that:

7. $\begin{vmatrix} y^2 z^2 & yz & y + z \\ z^2 x^2 & zx & z + x \\ x^2 y^2 & xy & x + y \end{vmatrix} = 0$

8. $\begin{vmatrix} y + z & z & y \\ z & z + x & x \\ y & x & x + y \end{vmatrix} = 4xyz$

9. $\begin{vmatrix} a^2 + 2a & 2a + 1 & 1 \\ 2a + 1 & a + 2 & 1 \\ 3 & 3 & 1 \end{vmatrix} = (a - 1)^3$

10. If A + B + C = 0, then prove that $\begin{vmatrix} 1 & \cos C & \cos B \\ \cos C & 1 & \cos A \\ \cos B & \cos A & 1 \end{vmatrix} = 0$

11. If the co-ordinates of the vertices of an equilateral triangle with sides of length 'a' are (x_1, y_1), (x_2, y_2), (x_3, y_3), then $\begin{vmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \\ x_3 & y_3 & 1 \end{vmatrix}^2 = \dfrac{3a^4}{4}$.

12. Find the value of θ satisfying $\begin{bmatrix} 1 & 1 & \sin 3\theta \\ -4 & 3 & \cos 2\theta \\ 7 & -7 & -2 \end{bmatrix} = 0$.

13. If $\begin{bmatrix} 4 - x & 4 + x & 4 + x \\ 4 + x & 4 - x & 4 + x \\ 4 + x & 4 + x & 4 - x \end{bmatrix} = 0$, then find values of x.

14. If $a_1, a_2, a_3, \ldots, a_r$ are in G.P., then prove that the determinant $\begin{vmatrix} a_{r+1} & a_{r+5} & a_{r+9} \\ a_{r+7} & a_{r+11} & a_{r+15} \\ a_{r+11} & a_{r+17} & a_{r+21} \end{vmatrix}$ is independent of r.

15. Show that the points $(a + 5, a - 4)$, $(a - 2, a + 3)$ and (a, a) do not lie on a straight line for any value of a.

16. Show that the $\triangle ABC$ is an isosceles triangle if the determinant

$$\Delta = \begin{bmatrix} 1 & 1 & 1 \\ 1+\cos A & 1+\cos B & 1+\cos C \\ \cos^2 A + \cos A & \cos^2 B + \cos B & \cos^2 C + \cos C \end{bmatrix} = 0.$$

17. Find A^{-1} if $A = \begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ and show that $A^{-1} = \dfrac{A^2 - 3I}{2}$.

Long Answer (L.A.)

18. If $A = \begin{bmatrix} 1 & 2 & 0 \\ -2 & -1 & -2 \\ 0 & -1 & 1 \end{bmatrix}$, find A^{-1}.

Using A^{-1}, solve the system of linear equations $x - 2y = 10$, $2x - y - z = 8$, $-2y + z = 7$.

19. Using matrix method, solve the system of equations $3x + 2y - 2z = 3$, $x + 2y + 3z = 6$, $2x - y + z = 2$.

20. Given $A = \begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$, find BA and use this to solve the system of equations $y + 2z = 7$, $x - y = 3$, $2x + 3y + 4z = 17$.

21. If $a + b + c \neq 0$ and $\begin{vmatrix} a & b & c \\ b & c & a \\ c & a & b \end{vmatrix} = 0$, then prove that $a = b = c$.

22. Prove that $\begin{vmatrix} bc - a^2 & ca - b^2 & ab - c^2 \\ ca - b^2 & ab - c^2 & bc - a^2 \\ ab - c^2 & bc - a^2 & ca - b^2 \end{vmatrix}$ is divisible by $a + b + c$ and find the quotient.

Project: Do any 5 activities from **Maths NCERT Laboratory Manual for CBSE Class 12** (30 Marks)

Test-1 : Matrices: 15 Marks

Test-2: Determinants: 15 Marks

Subject : Physics

THE WHOLE WORK IS DIVIDED INTO FOLLOWING PARTS:-

1. Written work(Assignments or worksheets)   35 Marks
2. Project work   35 marks
3. Weekly test   30 marks

NOTE:-

1. Activity and project should be completed by staying at home, no need to go outside any where. You should use only those things and equipment's that are usually found at your homes.

(For example if you don't have colors then you can use only your pen or pencil, no need to go outside, stay at your home, stay safe)

1. **written work (Complete the following worksheet)**

   Chapter= 1. Electrostatics

Q1. What is the force between two small charged spheres having charges of 2×10–7C and 3×10–7C placed 30 cm apart in air?

Q2. The electrostatic force on a small sphere of charge 0.4 µC due to another small sphere of charge –0.8 µC in air is 0.2 N. (a) What is the distance between the two spheres? (b) What is the force on the second sphere due to the first?

Q3. Check that the ratio ke2 /G memp is dimensionless. Look up a Table of Physical Constants and determine the value of this ratio. What does the ratio signify?

Q4 (a) Explain the meaning of the statement 'electric charge of a body is quantised'. (b) Why can one ignore quantisation of electric charge when dealing with macroscopic i.e., large scale charges?

Q.5 When a glass rod is rubbed with a silk cloth, charges appear on both. A similar phenomenon is observed with many other pairs of bodies. Explain how this observation is consistent with the law of conservation of charge.

Q6 Four point charges q_A = 2 µC, q_B = –5 µC, q_C = 2 µC, and q_D = –5 µC are located at the corners of a square ABCD of side 10 cm. What is the force on a charge of 1 µC placed at the centre of the square?

Q7 (a) An electrostatic field line is a continuous curve. That is, a field line cannot have sudden breaks. Why not? (b) Explain why two field lines never cross each other at any point?

Q8 Two point charges q_A = 3 µC and q_B = –3 µC are located 20 cm apart in vacuum. (a) What is the electric field at the midpoint O of the line AB joining the two charges? (b) If a negative test charge of magnitude 1.5×10–9 C is placed at this point, what is the force experienced by the test charge?

Q9 A system has two charges q_A = 2.5×10–7 C and q_B = $–2.5 \times 10$–7 C located at points A: (0, 0, –15 cm) and B: (0,0, +15 cm), respectively. What are the total charge and electric dipole moment of the system?

Q10 An electric dipole with dipole moment $4 \times 10{-9}$ C m is aligned at 30° with the direction of a uniform electric field of magnitude 5×104 NC-1. Calculate the magnitude of the torque acting on the dipole.

Q.11 A polythene piece rubbed with wool is found to have a negative charge of $3 \times 10{-7}$ C. (a) Estimate the number of electrons transferred (from which to which?) (b) Is there a transfer of mass from wool to polythene?

2. complete your projects and note down on your note books.

Project 1. As you know that we all are fighting with covid 19 virus. In this time there is a huge need of PPE(personal protective equipment's). Make a list of those some equipment's and how they help us to protect from covid 19.

Project 2. As you know our country is under lockdown. Therefore we noticed huge change in environment as air and water both are in there purest form. What is the reason behind this change. Give your ideas how we can maintain the quality if air and water after lockdown.

Project 3. Here 3 focus area are given below, you have to choose atleast 2 areas of your interest and submit your ideas.

    (a).Easy tracking of infected peoples   (b).3D printed medical solutions

    (c). Low cost medical devices

Parameters of assessment in project

1	Relevancy of content	10 Marks
2	Accuracy	10 Marks
3	Creativity	10 Marks
4	Timely submission	5 Marks

4.Weekly test

Test will be from above mentioned chapters(Electrostatics). And test will be given you later in your whatsapp groups or google docs.

Subject : Agriculture

1. The holiday's home work is divided into following parts:

a) Written work (worksheets)   **40 marks**

b) Three activities   **30 marks**

c) Three tests   **30 marks**

NOTE:-Activities and projects should be completed in homes only, in no case you will go outside. You have to utilize the sources available at home only (like you can use pencil or pen to colour anything if you do not have colours with you.

1) **Answer the Following questions in detail:**

Q1: What is the concept of organic farming? Write the importance of organic farming.
Q2: Write about post harvest management of flowers.
Q3: Give detailed information about various government schemes in agriculture sector.
Q4: What is the current status of food processing in India? Name the different products which are processed in this industry.
Q5: What are the different principals of food preservation? Why preservation is considered beneficial?
Q6: Write about the important processed products of flowers.
Q7: Explain various government schemes started to promote organic farming in our country.
Q8: What is the concept of kitchen gardening? How it beneficial for people?

2) **Prepare the following Assignments**

1: Collect the wrappers of the processed things you use in your daily life that are made from crops, crop residues and paste them in a scrap book or any notebook which is available with you.
2: Make a list of different irrigation methods popular in your area and find out which is the most popular and why?
3: Try to set up a kitchen garden at your home and maintain it. Note down the details of operations you perform in the garden daily. Click the photographs for future records.

3) **Tests will be conducted through whatsapp groups and google docs. You will be informed in advance about the tests.**

Teacher Incharge:
Karampal Singh
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Holidays Home Work   ਕੁੱਲ ਅੰਕ :- 100

Class :- +2 (ਬਾਰ੍ਹਵੀਂ)   ਵਿਸ਼ਾ :-ਪੰਜਾਬੀ

1) ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ ਤੇ ਪ੍ਰੋਜੈਕਟ ਤਿਆਰ ਕਰੋ ।   (35)

     ਇਹ ਪ੍ਰੋਜੈਕਟ ਵੀ ਤਸਵੀਰਾਂ ਸਾਹਿਤ ਲਿਖਤੀ ਰੂਪ ਵਿੱਚ   (10-

 15) ਪੰਨਿਆਂ ਦਾ ਹੋਵੇ ।

     1. ਸਮਾਜਿਕ ਕੁਰੀਤੀਆਂ (ਦਾਜ, ਭਰੂਣ ਹੱਤਿਆ, ਨਸ਼ੇ)

     2. ਪੇਂਡੂ ਅਤੇ ਸ਼ਹਿਰੀ ਜੀਵਨ ।

2) ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ ਲਿਖੋ (ਕੋਈ ਪੰਜ)   (35)

3) ਸਮਾਜਿਕ ਅਤੇ ਸੱਭਿਆਚਾਰ ਵਿਸ਼ੇ ਨਾਲ ਸਬੰਧਿਤ ਚਾਰ ਲੇਖ   ਲਿਖੋ ।

4) ਮੁਹਾਵਰੇ ਟ ਤੋਂ ਮ ਨਾਲ ਸ਼ੁਰੂ ਹੋਣ ਵਾਲੇ ਲਿਖੋ ਅਤੇ ਯਾਦ   ਕਰੋ

।

Test   (10+10+10=30)

Name: Parminder kaur

Phone no. 7340815401

Subject : Hindi

1. निबंध लिखें: प्राकृतिक आपदाएं,ऑनलाइन शॉपिंग का बढ़ता चलन, राष्ट्र हित में सबका हित,शिष्टाचार सफलता की सीढ़ी है।   10 अंक

2. कोई दो पत्र लिखें।   10 अंक

3. फीचर लिखो:गुम होती चिड़िया , बेचारा रिक्शावाला   5 अंक

4. आलेख लिखो :दिनों दिन बढ़ता अंधविश्वास, किसान जीवन, नैतिक शिक्षा।

    5 अंक

5. पढ़े हुए पाठ के अर्थ ग्रहण संबंधी प्रश्न उत्तर करें।   10 अंक

6. .पत्रकारिता से संबंधित सारे प्रश्न जो आप कर चुके हैं वह लिखने और याद करने हैं।   10 अंक

7. आशु भाषण की वीडियो या ऑडियो बनाकर अपने अध्यापक को भेजें।

    10 अंक

8. अपने मम्मी पापा माता पिता से वार्तालाप करके उनका साक्षात्कार प्रश्नों के माध्यम से ले और उसकी ऑडियो वीडियो बनाएं।   10 अंक

9. **प्रोजेक्ट कार्य** 5 न्यूज़ रीडिंग का ऑडियो बनाकर अपने अध्यापक को भेजें आपको अपने उचित उच्चारण के आधार पर अंक दिए जाएंगे।   10 अंक

10. समस्त कार्य को अच्छी तरह से लिखे और याद करे इसी में से आपका मौखिक और लिखित परीक्षण दिया जाएगा जो कि 20 अंक का होगा।

Subject : Commercial Arts

1. Identify the main colours used in Rajasthani Miniature Painting and draw two A4 sheet of any rajasthani painting with the help of following image.

M.M.= 35 Marks

2. What do you know about miniature type of painting? Make a power point presentation project about the main characteristics/features of Rajasthani school of Art and its famous paintings.

M.M.= 35 Marks

3. Syllabus of test full lesson of Rajasthani School of Art.

M.M.= 30 Marks

Subject : Political Science

General Instructions

Weightage: 100 Marks - The Home Work is divided into three Sections

(35 of written work, 35 of activities or project work, 30 Marks of weekly test)

Parameters of Assessment

- Communication
- Originality
- Use of IT(information technology)
- Collaboration
- Punctuality and Regularity

Your Project or activities will be assessed on the base of above mentioned parameters.

- In Project work you can make ppts of any one chapter from these three chapters but you have to explain it in your own voice and while making your ppts, you are required to download original pictures from the E-newspapers.

OR

- Based on these three chapters, you can also arrange a group discussion with your classmates by the means of Internet but recording is compulsory. Record it and send it to me.

OR

- You can make a Project on contemporary topics such as
  - ➢ Law and Order
  - ➢ Human Rights violation
  - ➢ Problem of Migrant Labourers

NOTE: you need to do any one of the Project mentioned above.

- You also have to write and learn the questions given in the pdfs, on your notebook.

Note: These activities carry weightage in form of marks. So, take it seriously.

SUMAN LATA   **MOB. 9417495085**