KENDRIYA VIDYALAYA NAD KARANJA

HOLIDAY HOMEWORK(SUMMER VACATION) 2020-2021
CLASS XII- SCI/COMM/HUM
According to subject(s) opted.

SUB:ENGLISH

1. Complete the question answers of " The Last Lesson", " My Mother at Sixty Six", " The Third Level" and " Lost Spring".
2. Draft a Situation Vacant advertisement for the post of Sports Coach .Invent necessary details.
3. You are Akash, an M Com graduate. Draft a Situation Wanted advertisement.
4. Covid has suddenly changed the world from what it was a few months ago.You can witness a sea change around you in different aspects. Write an article on " Life in the time of Covid".
5. Select any two suitable newspaper articles/ reports and write note making based on it. Paste the newspaper articles/ reports in your notebook.

विषय – हिंदी

हिन्दी साहित्य में महिला रचनाकारों (कवियत्रियों तथा लेखिकाओं) का योगदान	भारतीय इतिहास में विदुषियों का योगदान--- इतिहास के क्रमानुसार कुछ महिला रचनाकारों का नाम एवं परिचय-----वर्तमान समय की महिला रचनाकारों का नाम एवं उनकी रचनाएँ ------- उपसंहार
जल संकट से जुड़ीं खबरों का संकलन कर इस समस्या की यथार्थ स्थिति एवं समाधान	विविध पत्र-पत्रिकाओं तथा इलेक्ट्रॉनिक मीडिया से प्राप्त सूचना तथा आसपास के क्षेत्र के छवि चित्र (photograghs)
प्रिंट माध्यम के लिए फीचर लेखन (चार विषयों पर)	जानकारी ----सृजनात्मकता ----भावाभिव्यक्ति---- विषय का विस्तार ---- मौलिकता
भारत की आज़ादी के आन्दोलन के समय के समाचार पत्रों की सूची तथा आज़ादी के आन्दोलन में इन अखबारों की भूमिका	भूमिका – आज़ादी का संघर्ष--- संघर्ष के समय के प्रमुख अखबार--- अखबार जिन्हें झेलना पड़ा अंग्रेज़ सरकार का अत्याचार -------- बालमुकुंद गुप्त जी का स्तम्भ – शिवशंभु के चिट्ठे ---- निष्कर्ष
किन्हीं **दो विषयों** पर **कहानी लेखन** कीजिए 1) महामारी के दौर में आत्मबल 2) एकांतवास में बिताए 14 दिन 3) और फिर मुंबई शहर रुक गया 4) और उस दिन मैं लेखक बन गया 5) जीवन अमूल्य निधि है	कहानी कल्पना करके लिखनी है। कहानी बहुत लम्बी नहीं होनी चाहिए। आप किसी सामाजिक माध्यम अथवा इन्टरनेट की सहायता से कहानी नहीं लिखेंगे।

SUB: PHYSICS

Q 1-what do you mean by electric flux?

Q 2- State and proof gauss's theorem and its all applications ?

Q 3- Define conductor and insulator ? Give five examples.

Q 4- Explain :-

i. Free charges and bond charges inside the conductor.

ii. Dielectrics and electric polarisation.

iii. Capacitors and capacitance

Q 5- Derive combination of capacitors in series and parallel?

Q 6- Derive capacitance of a parallel plane capacitor with dielectric medium between the plates?

Q 7- State and proof energy stored in a capacitor?

Q 8- what is the work done in moving test charge 'q' through a distance of 1cm along the equatorial axis of an electric dipole? [hint: on equatorial line V=0] (1)

Q 9- why an electric dipole places in a uniform electric field does not undergoes acceleration? (1)

Q 10- what is meant by electrostatic shielding? (1)

Q 11- A thin straight infinitely long conducting wire having charge density lamda is enclosed by acylindrical surface of radius r and length l,its axis coinciding with the length of the wire. Find the expression for electric flux through the surface of the cylinder. (2)

Q 12- Explain the role of earthing in house hold wiring. (2)

Q 13- Calculate the force between two alpha particles kept at a distance of 0.02mm in air. (2)

Q 14-A sensitive instrument is to be shielded from a strong electric field in its environment.

Suggest a possible way. (2)

Q 15- Name the physical quantities whose SI units are Vm, V/m. Which of these are vectors? (2)

Q 16- 27 small drops of mercury having the same radius collage to form the big drop. Find the ratio of the capacitance of the big drop to small drop. (2)

Q 17- Write the dimensional formula of 'E0' the permittivity of free space. (1)

Q 18- an electric dipole is placed in an electric field due to a point charge. Will there be a force and torque on the dipole ? (1)

Q 19-Explain why the electric field inside a conductor placed in an external electric field is always zero? (1)

Q 20- Draw a graph to show the variation of potential applied and charge stored in a capacitor.Derive the expression for energy stored In a parallel plate capacitor from the capacitor. (3)

Q 21-Deduce coulomb's law from Gauss's law (3)

Q 22- Three charges –q, Q and –q are placed at equal distances on a straight line. If the potential energy of system of these charges is zero, then what is the ratio of Q:q? (3)

Q 23- A parallel plate capacitor is charged to a potential difference V by dc . source and then disconnected. The distance between the plates is then halved. Explain with reason for the change in electric field,capacitance and energy of the capacitor. (3)

Q 24- State Gauss's law and use this law to derive the electric field at a point from an infinitely long straight uniformly charged wire. (3)

Q 25-Derive an expression for torque acting on an electric dipole in a uniform electric field. (3)

SUB: CHEMISTRY

UNIT	Assigned work
1.SOLID STATE	1.Questions in the level of High Ordered Thinking skills given. 2.Completion of class work 3.Completion fair record of practical works, SCAN copy will follow soon

	4.Monthly test to be conduct in June re-opening week. 5. Selection and preparation of the soft copy of Investigatory Project.Topic Allotment will follow soon.

SUB: ACCOUNTANCY

- Complete questions of chapter- 1 (Accounting of Partnership Firm-Fundamentals) and Chapter - 2 (Valuation of Goodwill)
- Learn Balance Sheet of a Company and it's heads and sub heads from chapter 1 of Part III (Analysis of Financial Statements)
- Learn formulae from the Chapter - 4 (Ratio Analysis) of Part III.

SUB: BUSINESS STUDIES

- Complete notes and question - answers of chapter- 1 (Nature and significance of management) and Chapter - 2 (Principles of management)
- Select a company or industry and analysis it's variation in profits, sales and marketing strategies etc. During the period of lockdown in country and its effects on the economy of the country. Prepare a report in soft copy either in the form of PPTs, word document or else to be stored in pendrive or CDs.
  The following points may be considered while preparing the report:
  1) Quarterly financial statements for considering the profit/ losses, value of turnover (sales).
  2) Effect of lockdown on the company or industry.
  3) Effect on the common people using the facility provided by such company.
  4) Effect on the value of shares of such company.
  5) Marketing strategies followed by such company or industry for uplifting the position in market.
  6) Conclusion to be drawn.
  Note: industries which may be considered - Banking, pharmaceutical, medical equipments, feshion industry, entertainment industry, communication etc.

SUB: ECONOMICS

❖ Revise the chapters which have been taught.
❖ Prepare project as per CBSE guideline from any one topic given below:

1. Price Determination
2. Demand and its determinants along with case studies
3. Elasticity of demand along with case studies
4. Supply and its determinants along with case studies
5. Monopoly - Indian railway
6. Oligopoly-cement industry, cellular networks industry with emphasis on the price wars started by reliance jio
7. Monopolistic Competition - toothpaste market in India
8. Central Bank and its functions
9. Role of banks in the Indian economy
10. Government Budget & its Components
11. Exchange Rate Systems
12. Foreign Exchange Markets
13. Balance of payments
14. GST
15. Demonetisation
16. 'Brexit'
17. Venezuelan crisis
18. Make in India
19. Poverty/unemployment in India
20. Fiscal deficit and economic development
21. Determinants of import in India
22. Assessment of the impact of government expenditure on GDP
23. Foreign investment in India and its impact from 2004 to 2016
24. Human capital development and economic growth in India
25. An assessment of globalisation and economic development in India
26. Oil price instability and balance of payment situation 2004–2016
27. The control of inflation using RBI and government 2000–2016
28. Contribution of banking sector to agricultural productivity in India 1969–2014
29. Impact of digital India in India's economic growth
30. Impact of population growth on unemployment in India
31. The impact of cashless policy on the development of banking sector of India
32. The impact of monetary policy on foreign trade in India
33. The impact of cashless policy on the economic growth of India
34. The role of commercial banks in the economic development of India
35. Impact of rising interest rate on the manufacturing sector of the Indian economy

36. A study into the determination of production of cocoa in India
37. The economic implications of increasing external debt liability in India
38. A study into the determinants of balance of trade in India
39. Taxes and economic growth of India
40. Determinants of coffee and tea production in India
41. Measurement of countries income and growth
42. Elasticity of Demand of fresh vegetables
43. Public debt and economic growth
44. Current account balance and economic growth
45. Special economic zones
46. 'Start up' India and its impact
47. You can choose any other topic as per your choice.

SUB: MATHEMATICS

Inverse trigonometric functions

Q1:- find the principal values of the following

1) $\cos^{-1}(\frac{1}{2}) + 2\sin^{-1}(\frac{1}{2})$

2) $\cos^{-1}(\frac{1}{2}) - 2\sin^{-1}(\frac{1}{2})$

3) $\sin^{-1}(-\frac{1}{2}) + 2\cos^{-1}(-\frac{\sqrt{3}}{2})$

4) $\sin^{-1}(-\frac{\sqrt{3}}{2}) + \cos^{-1}(\frac{\sqrt{3}}{2})$

Q2:- **a)** $\cos^{-1}(\cos(\frac{4\pi}{3})$ **b)** $\cos^{-1}(\cos(-\frac{13\pi}{6})$ **c)** $\cos^{-1}(\cos(\frac{5\pi}{6})$ **d)** $\cos^{-1}(\cos(\frac{9\pi}{4})$ **e)** $\cos^{-1}(\cos(\frac{13\pi}{4})$ **f)** $\cos^{-1}(\cos(-690^0)$

g) $\tan^{-1}(\tan\frac{6\pi}{7})$ **h)** $\tan^{-1}(\tan\frac{5\pi}{6})$ **i)** $\tan^{-1}(\tan\frac{7\pi}{6})$

Q3:- simplify the following:

1) $\sin^{-1}(\frac{x}{\sqrt{x^2+a^2}})$ 2) $\cos^{-1}(\frac{x}{\sqrt{x^2+a^2}})$ 3) $\tan^{-1}(\frac{x}{\sqrt{a^2-x^2}})$ 4) $\cot^{-1}(\frac{1}{\sqrt{x^2-1}})$

Q4:- simplify the following

1) $\tan^{-1}(\sqrt{\frac{1-\cos x}{1+\cos x}}$ 2) $\tan^{-1}(\frac{\cos x}{1+\sin x})$ 3) $\tan^{-1}(\frac{\cos x}{1-\sin x})$ 4) $\tan^{-1}(\frac{\cos x+\sin x}{\cos x-\sin x})$

:- solve all questions of miscellaneous exercise on chapter 2

Topic :- continuity

Q1:-discuss the continuity of the following functions at the indicated points

1) $F(x) = \begin{cases} \dfrac{e^x-1}{\log(1+2x)} & , \text{if } x \neq 0 \\ 7 & , \text{if } x = 0 \end{cases}$

2) $F(x) = \begin{cases} \dfrac{\sin 3x}{\tan 2x} & \text{if } x < 0 \\ \dfrac{3}{2} & , \text{if } x = 0 \\ \dfrac{\log(1+3x)}{e^{2x}-1} & , \text{if } x > 0 \end{cases}$

3) $F(x) = \begin{cases} x^2 \sin\frac{1}{x} & , x \neq 0 \\ 0 & , x = 0 \end{cases}$

5) $F(x) = \begin{cases} \dfrac{1-\cos x}{x^2} & , x \neq 0 \\ 1 & , x = 0 \end{cases}$

Find value of unknown if it is given that function is continuous at indicated points:-

Q1:- determine the value of k so that the function

$F(x) = \begin{cases} \dfrac{\sin 2x}{5x} & , \text{if } x \neq 0 \\ K & , \text{if } x = 0 \end{cases}$

Q 2:- determine the value of 'a' for which the fuction f defined by

$F(x) = \begin{cases} a \sin\frac{\pi}{2}(x+1), & x \leq 0 \\ \dfrac{\tan x - \sin x}{x^3}, & x > 0 \end{cases}$ is continuous at x=0

Q3:- determine the value of 'k' for which the function defined by

$F(x) = \begin{cases} \dfrac{1-\cos kx}{x\sin x} & , x \neq 0 \end{cases}$ is continuous at x = 0

$$\frac{1}{2} \quad , x = 0$$

Q4:- find the values of 'a' and 'b' so that the function f given by

$$F(x) = \begin{cases} 1 & , \text{if } x \leq 3 \\ ax + b & , \text{if } 3 < x < 5 \\ 7 & , \text{if } x \geq 5 \end{cases} \quad \text{is continuous at } x = 3 \text{ and } x = 5.$$

DIFFERENTIATION

Solve all exercise of chapter number 4

SUB:GEOGRAPHY

Textbook I: Fundamentals of Human Geography

Map Items for identification only on outline political map of the World.

Unit-1 Ch.-1 Nil

Unit-2 Ch. 2 to 4 1 The largest country in each continent in terms of area

Unit-3 Ch. 5 to 7

Primary Activities

1 Areas of subsistence gathering

2 Major areas of nomadic herding of the world

3 Major areas of commercial livestock rearing

4 Major areas of extensive commercial grain faming

5 Major areas of mixed farming of the World

Secondary Activities

1 Ruhr region, Silicon Valley, Appalachian region, Great lakes region

Unit - 4 Ch. 8 to 9

1. Transcontinental Railways: Terminal Stations of transcontinental railways–
Trans Siberian, Trans Canadian, Trans-Australian Railways

2. Major Sea Ports :

Europe: North Cape, London, Hamburg

North America: Vancouver, San Francisco, New Orleans

South America: Rio De Janeiro, Colon, Valparaiso

Africa: Suez and Cape Town

Asia: Yokohama, Shanghai, Hong Kong, Aden,
Karachi, Kolkata

Australia: Perth, Sydney, Melbourne

3. Inland Waterways: Suez canal, Panama canal, Rhine waterway and St. Lawrence Seaway

4. Major Airports:

Asia: Tokyo, Beijing, Mumbai, Jeddah, Aden

Africa: Johannesburg & Nairobi

Europe: Moscow, London, Paris, Berlin and Rome

North America: Chicago, New Orleans, Mexico City

South America: Buenos Aires, Santiago

Australia: Darwin and Wellington

Unit - 5 Ch. 10

Mega cities of the world – Tokyo, Delhi, Shanghai, Mumbai, Sao Paulo

Textbook II: India: People & Economy

Map Items for locating and labeling only on the outline political map of India

Units - 6 & 7

Ch. 1 to 4 • State with highest level of urbanization and lowest level of urbanization

• One state with highest level of HDI & One lowest level of HDI

• State with higher level of population density & one state with lowest level of population density (2011)

• Any city with more than 10 million population – Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru

Unit - 8 Ch. 5 to 9 Leading producing states of the following crops:

(a) Rice (b) Wheat (c) Cotton (d) Jute (e) Sugarcane (f) Tea and (g) Coffee

Mines:

•Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary

•Manganese mines: Balaghat, Shimoga

•Copper mines: Hazaribagh, Singhbhum, Khetari

•Bauxite mines: Katni, Bilaspur and Koraput

•Coal mines: Jharia, Bokaro, Raniganj, Neyveli

•Oil Refineries: Mathura, Jamnager, Barauni

Iron and Steel Plants:Bhadravati, Bhilai, Bokaro, Durgapur, Rourkela and Jameshedpur

Cotton Textile: Surat, Varanasi, Murshidabad, Solapur and Coimbatore

Software Technology Parks: Gandhinagar, Shrinagar, Mohali, Noida, Indore, Hyderabad, Bengaluru and Major Industrial Regions

Unit - 9 Ch. 10 - 11 Transport:

(i) Important nodes on north south corridor, East west corridor & golden quadrilateral

(ii) Major Sea Ports: Kandla, Mumbai, Marmagao, Kochi, Mangalore, Tuticorin, Chennai, Vishakhapatnam, Paradwip,Haldia

(iii) International Air ports: Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram & Hyderabad

SUB:HISTORY

Q. 1 Make the important notes of chapter 1 to 4 of History textbook part -1

Q.2 Write any 5 very short answer questions, 5 short answer questions,and 5 long answer questions from each chapter of history textbook part -1

Q.3 Download any two sample papers from CBSE website and solved it's in your notebook.

Q.4 Identified and locate places in the map of India (map work attached).

Book 1		IST OF MAPS	
1	Page 2	Mature Harappan sites	
		• Harappa, Banawali, Kalibangan, Balakot, Rakhigarhi, Dholavira, Nageshwar, Lothal, Mohenjodaro, Chanhudaro, KotDiji	
2	Page 30	Mahajanapadas and cities	
		• Vajji, Magadha, Kosala, Kuru, Panchala, Gandhara, Avanti, Rajgir, Ujjain, Taxila, Varanasi.	
3	Page 33	Distribution of Ashokan inscriptions	
		• Kushanas, Shakas, Satavahanas, Vakatakas,Guptas	
		• Cities/towns Mathura, Kannauj, Braghuxachchha	
		• Pillar inscriptions -Sanchi, Topra, Meerut Pillar and Kaushambi	
		• Kingdom of Cholas, Cheras and Pandyas	
4	Page 43	Important kingdoms and towns	
		• Kushanas, Shakas, Satavahanas, Vakatakas,Guptas	
		• Cities/towns Mathura, Kanauj, Puhar, Rajgir, Vaishali, Varanasi,Vidisha	
5	Page 95	Major Buddhist Sites:Nagarjunakonda, Sanchi, Amaravati, Lumbini, Nasik, Bharhut, BodhGaya, Ajanta.	
Book 2			
1	Page 174	Bidar, Golconda, Bijapur, Vijayanagar, Chandragiri, Kanchipuram, Mysore, Thanjavur, Kolar	
2	Page 214	Territories under Babur, Akbar and Aurangzeb	
		• Delhi, Agra, Panipat, Amber, Ajmer, Lahore, Goa	
Book 3			
1	Page 297	Territories/cities under British Control in1857.	
		• Punjab, Sindh, Bombay, Madras Fort St. David, Masulipatam, Berar, Bengal, Bihar, Orissa, Avadh, Surat, Calcutta, Dacca, Chittagong, Patna, Benaras, Allahabad and Lucknow.	
2	Page 305	Main centres of the Revolt of 1857.	
		• Delhi, Meerut, Jhansi, Lucknow, Kanpur, Azamgarh, Calcutt, Benaras, Gwalior, Jabalpur, Agra Avadh.	
		Important centres of the National Movement:	
		• Champaran, Kheda, Ahmedabad, Benaras, Amritsar, Chauri Chaura, Lahore, Bardoli, Dandi, Bombay (Quit India Resolution), Karachi	

SUB:INFORMATICS PRACTICES

Q1. What is the difference between tuples and dictionary in Python?

Q2. What are the key features of Python?

Q3. Why python is known as umbrella?

Q4. How is Python an interpreted/compiler language?

Q5. What is token? Explain in brief.

Q6. How is memory managed in Python?

Q7. What is canopy,spyder,anaconda.

Q8. What is PYTHON PATH?

Q9. What are python modules?

Q10. What are local variables and global variables in Python?

Q11.Define function ? Explain its importance.

Q12. Write a program using Python to display whether entered number is prime or not. Make use of function.

Q13. Define and explain recursion with suitable example.

Q14. Write a program in Python to calculate sum of n number. Make use of recursion.

Q15. Develop investigatory project using Python to automate any organization like school, shop, hotel, business, transportation, hospital etc.

Q16. Write program using Python to display whether entered number is palindrome or not.

Q17.Create directory to display name of patient according Patient_Id.

Q18. Write note on function overloading with example.

Q19. Write program to generate table of any number using function.

Q20. Write program using python to perform selected operations between two numbers. Make use of function.

SUB:BIOLOGY

class- XII → Investigatory project -

1. Select at least 02 topics and prepare its synopsis (working strategy)
Topics may be of your choice. but should have Lab works / data analysis / conclusion etc. Must be supported with data / charts / pictures / photos / photos taken by you / Newspaper / Magazine cuttings with date.

2. Go through THe unit —Ecology and Environment, study it and write its complete notes with diagram in your Home work note book. This will be assesed after opening of the school.
(you will share images on whatsapp starting from 7th May 2020 and completed within a week).

SUB: COMPUTER SCI

Q1. What is the difference between list and tuples in Python?
Q2. What are the key features of Python?
Q3. What type of language is python?
Q4. How is Python an interpreted language?
Q5. What is token?
Q6. How is memory managed in Python?
Q7. What is name space in Python?
Q8. What is PYTHON PATH?
Q9. What are python modules?
Q10. What are local variables and global variables in Python?
Q11.Define function ? Explain its importance.
Q12. Write a program using Python to display whether entered number is prime or not.Make use of function.
Q13. Define and explain recursion with suitable example.
Q14. Write a program in Python to calculate sum of n number. Make use of recursion.
Q15. Develop investigatory project using Python to automate any organization like school, shop, hotel, business, transportation, hospital etc.

"Submit completed copy of homework on very first day after reopening of the Vidyalaya"
"Stay home, stay safe" "wish you very happy vacations"