DELHI PUBLIC SCHOOL, JAMMU

HOLIDAY HOMEWORK (2017 – 2018)

CLASS : XII

POL. Sc.

B ST

PHE

HISTORY / CIVICS

ENGLISH
HINDI
MATHS
PHYSICS
CHEMISTRY
BIO
COMPUTER

ECONOMICS
ACCOUNTANCY

GEOGRAPHY

ENJOY YOUR HOLIDAYS .....!

*Dear Children (*IX-XII*)*

Nothing pleases us more than your joyous looks as the final bell of the last period rings, signaling beginning of your much awaited vacations! Happy anticipation of the times ahead, fun-filled moments, cheerful laughter, abounding joy… there is so much to look forward to in vacations! At the same time you need to think well and wisely as to how you would spend this invaluable wealth of time given to you this summer. You have exactly the same number of hours per day as given to Newton to come up with the laws of gravity, Mother Teresa, to the change the spiritual perception of the world, Mahatma Gandhi, to become the father of the nation! All you need is proper utilization of your time along with passion, zeal, conviction and commitment to put your best foot forward in whatever you do. Let games, adventure, knowledge exploration and bonding with family, cousins and society be a part of your schedule this vacation. You must complete your holiday homework and also ensure that it is a work well-done and is completed timely. Also do revise for your Periodic Tests beginning soon after vacations.

Wish you all the best and hope to see you back refreshed, enriched, physically fit and well prepared for rest of the academic session.

Principal
Delhi Public Jammu

DELHI PUBLIC SCHOOL, JAMMU
HOLIDAY HOMEWORK
SESSION (2017 – 2018)

Class : XII **Subject : English**

1 Read the Novel 'The Invisible Man' and do the following.
a) Write chapter-wise summary of first fifteen chapters.
b) Write character sketch of :
i) Mr Teddy Henfray ii) Mrs Hall iii) Mr Marvel iv) Mr Cuss

2 Do the following questions **.**
a) Write 10 questions of Notice.
b) Write 10 questions of Advertisement. (Classified)
c) Write the following letters.
i) 3 Letters of complaint
ii) 3 Letters of Placing Order
iii) 4 Letters to the Editor of newspaper
iv) Write Articles on following.
- Need for inculcating Healthy Dietary Habits
- Social Networking—A Boon or a Bane
- Role of Students in Removing Illiteracy
- Impact of Advertisement on Younger Generations
- Importance of Time Management

3 Read Newspaper Everyday and do the following.
a) Paste 10 Advertisements (Classified) and 10 Ads (Display) in the Notebook.
b) Paste 5 Articles from the Newspaper in the Notebook and write summary of each article in 120 words.

4 Revise complete syllabus of Periodic Test **I**

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Class: XII **Subject : Physics**

SECTION – A

Prepare a **Project** and **Project Report** on any one of the topics of Class XII.

SECTION - B

Q1. Charge of 2C is placed at the centre of a cube of volume 8 cm^3. What is the electric flux passing through one face?

Q2 Three charges, each equal to +2C are placed at the corners of an equilateral triangle. If the force between any two charges be F, then what will be the net force on either Charge?

Q3. An electric dipole of dipole moment 20 X 10^{-6}C.m is enclosed by a closed surface. What is the net flux coming out of the surface?

Q4Two capacitors of capacitance 6mF and 12mF are connected in series with the battery. The voltage across the 6mF capacitor is 2 volt .Compute the total battery voltage.

Q5 A parallel plate capacitor with air between the plates has a capacitance of 8 pF . The separation between the plates is now reduced by half and the space between them is filled with a medium of dielectric constant 5. Calculate the value of capacitance of parallel plate capacitor in second case.

Q6An uncharged capacitor is connected to a battery. Show that half of the energy supplied by the battery is lost as heat while charging the capacitor.

Q7. What is the angle between the electric dipole moment and electric field strength due to an electric dipole on the equitorial line?

Q8 A charge Q is distributed over the two concentric hollow spheres of radii 'r' and 'R' (R>r) such that the surface densities are equal. Find the potential at the common centre.

Q9 In the potentiometer circuit , the balance (null) point is at X. State with reason, where the balance point will be shifted when (i) Resistance R is increased, keeping all parameters unchanged. (ii) Resistance S is increased, keeping R constant. (iii) Cell is replaced by another cell whose emf is lower than that of driving cell .

Q10(a) Using the principle of wheat stone bridge describe the method to determine the specific resistance of a wire in the laboratory. Draw the circuit diagram and write the formula used ?

(b) In a wheatstone bridge experiment, a student by mistake, connects key (k) in place of galvanometer and galvanometer (G) in place of Key (K). What will be the change in the deflection of the bridge?

Q11A 10Ω thick wire is stretched so that its length becomes three times. Assuming that there is no change in its density on stretching. Calculate the resistance of new wire.

Q12You are given 8 Ω resistor. What length of wire of resistance 120 Ωm^{-1} should be joined in parallel with it to get a value of 6 Ω ?

Q13. What will be the change in the resistance of the circular wire , when its radius is halved and length is reduced by ¼ th of original length.

Q14Two 120V light bulbs , one of 25W and another of 200W are connected in series . One bulb burnt out almost instantaneously ?.Which one was burnt and why?.

Q15. If the length of the wire conductor is doubled by stretching it , keeping potential difference constant by what factor the drift speed of the electron changed.

Class: XII **Subject : Chemistry**

Q.1 Define the following: (a) Molarity(b) Molality (c) Parts per million

Q.2 Calculate the vapour pressure of aqueous solution containing 5% urea and having 750mm pressure at 373K. Also, calculate the molality of solution.

Q.3 Determine the boiloing point of 1M NaCl solution having density 1.50g/cc.

Q.4 A unit cell consists of particles at corners and two particles at each body diagonal. How amny particles are present in solid?

Q.5 (a) Sodium crystallizes in bcc lattice. How many unit cells are present in 9.2gm of it?
(b) Determine the radius ratio value for octahedral and tetrahedral voids.

Q.6 Define the following: (a) Schottky defect(b) n-type semiconductors (c) F-centres

Q.7 A solid crystallizes in bcc lattice with cell edge length of 285pm. How many atoms are present in 208gm of solid if the density of unit cell is 7.2g/cc?

Q.8 (a) Give the construction for fuel cell.
(b) What is meant by the term limiting value of molar conductance?

Q.9 (a) Write the products of electrolysis for electrolysis for AgNO3(aq) using Ag and Pt electrodes respectively?
(b) How many faradays of charge are required to obtain 5.4gm of Al_2O_3 on electrolysis?

Q.10 Give the following conversions:
(a) 1-Chlorobutane to 2-Butanol(b) 1-Chlorobutane to 1-Butanol(c) 1-Chlorobutane to 2-Butene

Q.11 (a) Why are alcohols considered weak acids than phenols?
(b) Alcohols have ehigher boiling point than their corresponding alkanes. Why?

Q.12 How will you prepare phenols from:
(a) Chlorobenzene (b) Salicyclic acid (c) Cummene

Q.13 Discuss the following: (a) Kolbe's reaction (b) Reimer Tieman reaction (c) Williamson's synthesis

Q.14 Starting from aniline, how will you prepare:(a) Chlorobenzene (b) Flourobenzene
(c) Azo dye

Q.15 (a) A bottle of chloroform contains small quantity of ethanol in it. Why?
(b) Haloarenes donot undergo S_N reactions. Why?

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Class : XII **Subject : Mathematics**

Q1. Let R be the relation in the set N given by R-{(a, b): a=b-2, b>6} choose the correct answer (a) $(2,4) \in R$
(b) $(3,8) \in R$ (c) $(6,8) \in R$ (d) $(8,7) \in R$

Q2. The simplest for m of $\tan^{-1}\left(\frac{\sqrt{1+x^2}-1}{x}\right); x \neq 0$

Q3. For the matrix $A=\begin{bmatrix}1 & 5\\ 6 & 7\end{bmatrix}$ verify (A-A') is a Skew symmetric matrix.

Q4. Find inverse by elementary transformation method $A=\begin{bmatrix}2 & -2\\ 4 & 3\end{bmatrix}$

Q5. Let F: R $\rightarrow$ R be defined as f(x)=10x+7. Find the function g:R $\rightarrow$ R such that gof=fog=IR

Q6. Show that $2\tan^{-1}\{\tan\frac{\propto}{2} . \tan\left(\frac{\pi}{4}-\frac{\beta}{2}\right)\} = \tan^{-1}\left\{\frac{sin\propto cos\beta}{Cos\alpha+sin\beta}\right\}$

Q7. Find the value of the expression $sin\left(2tan^{-1}\frac{1}{3}\right) + cos\left(tan^{-1}2\sqrt{2}\right)$

Q8. Using elementary transformation method. Find the inverse of

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

Q9. If $A = \begin{bmatrix}3 & -4\\ 1 & -1\end{bmatrix}$ than prove that $A^n = \begin{bmatrix}1+2n & -4n\\ n & 1-2n\end{bmatrix}$ where n is any positive Integer.

Q10. Prove that $\begin{vmatrix}1 & x & x^2\\ x^2 & 1 & x\\ x & x^2 & 1\end{vmatrix} = (1-x^3)^2$

Q11. Prove that $\begin{vmatrix}\propto & \propto^2 & \beta+r\\ \beta & \beta^2 & r+\propto\\ r & r^2 & \propto+\beta\end{vmatrix} = (\beta-r)(r-\propto)(\propto-\beta)(\propto+\beta+r)$

Q12. Consider f : R^+ [- 5 , ∞] given by f(x) = 9 x^2 + 6x – 5 show that f is invertible with $f^{-1}(y) = \left(\frac{\sqrt{y+6}-1}{3}\right)$

Q13. Let $A = \begin{bmatrix}0 & -tan\frac{\alpha}{2}\\ tan\frac{\alpha}{2} & 0\end{bmatrix}$ show that I + A = (I-A) $\begin{bmatrix}\cos\alpha & -\sin\alpha\\ \sin\alpha & \cos\alpha\end{bmatrix}$

Q14.. Prove that

$$\begin{vmatrix}a^2 & bc & ac+c^2\\ a^2+ab & b^2 & ac\\ ab & b^2+bc & c^2\end{vmatrix} = 4^2ab^2c^2$$

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Class: XII Subject: Biology

.**Very short answer type questions**

Q1. What are the characteristic features of pea plant that contributes to Mendel's success?

Q2. What is aneuploidy? Give examples.

Q3. What are multiple alleles?

Q4. What are autosomes and allosomes?

Q5. What is a point mutation? Give one example.

Short answer type questions

Q6. What are Barr bodies? Give its importance.

Q7. What are forward and reverse mutations?

Q8. Differentiate between prokaryotic and eukaryotic chromosomes.

Q9. Briefly mention the contribution of T.H. Morgan in genetics.

Q10. Explain the Co-dominance and Incomplete dominance with examples.

Long answer type questions

Q11. What is pedigree analysis? Suggest how such an analysis can be useful.

Q12. How is sex determined in insects?

Q13.Explain law of segregation using a monohybrid cross.

Q14.A normal visioned woman, whose father is colour blind, marries a normal visioned man. What would be the probability of her sons and daughters to be colour blind? Explain with the help of pedigree chart.

Q15. Mention any two autosomal genetic disorders with their symptoms?

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Class : XII **Subject : Computer Science**

Q1. What is DBMS? What are the components of database System ? List the various advantages and disadvantages of DBMS.

Q2. What do you mean by MYSQL ? Explain its architecture. List the various capabilities of SQL.

Q3. Draw and prove algebraically the implementation of Basic gates using NAND Gate.

- Realization of NOT Gate
- Realization of AND Gate
- Realization of OR Gate

Q4. Draw and prove algebraically the implementation of Basic gates using NOR Gate

- Realization of NOT Gate
- Realization of AND Gate
- Realization of OR Gate

Q5. Explain the different ways of sending Data across Network.

Q6. What do you mean by Communication Media ? Explain different types of Communication Media in detail.

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Class: XII **Subject :PHE**

Q1 Write about any two factors which affect motor development in child.

Q2 Explain good leader and its qualities.

Q3 How yoga helps to improve quality life ?

Q4 Why does the weight lifters diet include lots of protein ?

Q5 Describe the risk factor in taking food supplement.

Q6 Recall the adaptive affects that take place in our respiratory system after engaging in exercise for longer periods .

Q7 Participation in sport results in all around development of personality. Justify.

Q8 sports can channel a child's competitive sprit in healthy direction. Explain.

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Class: XII **Subject : History**

THEME: 01

BRICKS, BEADS AND BONES THE HARAPPAN CIVILISATION

Q1. What were the differences in the techniques adopted by Marshall and Wheeler in studying Harappan civilization?

Q2. "Burial is a better source to trace social differences prevalent in the Harappan civilization". Discuss.

Q3. Write a note on the Drainage system of the Harappans.

Q4. Discuss the functions that may have been performed by rulers in Harappan society.

Q5. How can you say that the Harappan culture was an urban one?

Q6. Write a note on the agricultural technology of Harappans.

Q7. Discuss how archaeologist reconstruct the past.

Q8. What were the various problems faced by the historians to reconstruct the ancient past of Indus valley civilization?

Q9. What were the various features of Indus valley civilization?

THEME – 2

Kings, Farmers and Towns Early states and economics (C 600 BCE – 600 CE)

Q10. Important changes in agriculture during the period between 600 BCE to 600 CE?

Q11. How do inscription help in reconstruction of history the history of Muryan Empire?

Q12. What were the main features of central Mauryan administration during their Kingdom?

THEME 3

KINSHIP, CASTE AND CLASS IN EARLY SOCIETIES (600 BC-600CE)

Essay Type Question

Q13. The rules of the Brahmanical texts were not universally followed in ancient time. Justify giving five evidence?

Q14. The Mahabharata is a good source to study the social value of ancient times Prove it? 8

THEME -4

Thinkers Belief and Buildings Culture Development (600 BCE – 600 CE)

Q15. Mention four places associated with the life of the Buddha.

Q16. What do you mean by Tri –ratna?

Q17. Into how many categories the religious sects that originated during the 6th century B.C. can be divided?

Q18. What do you mean by "Dharma Chakra Pravartana"?

Q19. Mention the various incarnations of Vishnu according to Vaishnavism.

Class: XII **Subject : Geography**

Q1. Categorize the international trade into two types.

Q2.Which area is called ‘Rust bowl’ of the USA?

Q3.Explain with examples any three features of rural settlements of the world.

Q4.How was the Rhine waterway been a boon for those countries through which it passes? Explain with examples.

Q5.Define: (a) Migration (b) Death rate (c) Birth rate

Q6.Describe kilometer distance, time distance and cost distance as measures of transport distance.

Q7.Examine the five bases of international trade which are responsible for promoting international trade.

Q8.How was the Rhine waterway been a boon for those countries through which it passes? Explain with examples.

Q9.How are quaternary activities different from tertiary activities? Explain with the help of examples.

Q10.Discuss the reason of inequality in development.

Q11.”In duly managed transport system, different means of transport are mutually dependent on each other.”Clarify the statement.

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Class : XII **Subject : Political Science**

Q1. Discuss the challenges of Nation building that India faced after Independence.

Q2. Examine the consequences of GIO Summit of 2016.

Q3. What do you understand by Federal deficit and Budget ?

Q4. Critically analyse the initiatives taken for environmental protection and Global warming.

Q5. Make a case study on issues :

a) Sarv Shiksha Abhiyan **b) Swacchh Bharat Abhiyan**

c) Railway Budget **d) India's External Relations**

Q6. Briefly analyse the role and functions of Political Parties of 2016 Elections.

Q7. What are your views on Bipolar World and US Hegemony?

Q8. How will you evaluate the emergence of two power blocs in world politics ?

Q9. Analyse the government approach on recent policies and programmes related to reservation and education of underprivileged.

Q10. Alliance Politics has influenced the Indian Political system in recent days. Elaborate and mention atleast six points to support your argument.

Class XII **Subject : Accountancy**

CHAPTER: 1 ACCOUNTING FOR PARTNERSHIP FIRMS: BASIC CONCEPTS

Q.1 State the conditions under which capital balances may change under the system of a Fixed Capital Account.

Q.2 A is partner in a firm. His capital as on Jan 01, 2007 was Rs. 60,000. He introduced additional capital of Rs. 20000 on Oct 01 2007. Calculate interest on A's capital @ 9% p.a.

Q.3 A and B are partners in a firm without a partnership deed. A is an active partner and claims a salary of Rs. 18,000 per month. State with reason whether the claim is valid or not.

Q.4 Chandar and Suman are partners in a firm without a partnership deed. Chandar's capital is Rs. 10,000 and Suman's capital is Rs. 14,000. Chander has advanced a loan of Rs. 5000 and claim interest @ 12% p.a. State whether his claim is valid or not.

Q.5 R, S, and T entered into a partnership of manufacturing and distributing educational CD's on April 01, 2006. R looked after the business development, S content development and T financed the project. At the end of the year (31-03-2007) T wanted an interest of 12% on the capital employed by him. The other partners were not inclined to this. How would you resolve this within the ambit of the Indian Partnership Act, 1932?

Q.6 A, B and C are partners in a firm. A withdrew Rs. 1000 in the beginning of each month of the year. Calculate interest on A's drawing @ 6% p.a.

Q.7 A, B and C are partners in a firm. They have omitted interest on capital @ 10 % p.a. for three years ended 31st march 2007. Their fixed capitals on which interest was to be calculated through –out were

A	Rs. 1,00,000
B	Rs. 80,000
C	Rs. 70,000

Give the necessary Journal entry with working notes.

Q.8 X, Y, and Z are partners sharing profits and losses in the ratio of 3:2:1. After the final accounts have been prepared it was discovered that interest on drawings @ 5 % had not been taken into consideration. The drawings of the partner were X Rs. 15000, Y Rs. 12,600, Z Rs. 12,000. Give the necessary adjusting Journal entry.

Q.9 A, B and C are partners sharing profits and losses in the ratio of 3:2:1. Their fixed capitals are Rs. 1,50,000, Rs. 1,00,000 and Rs. 80,000 respectively. Profit for the year after providing interest on capital was Rs. 60,000, which was wrongly transferred to partners equally. After distribution of profit it was found that interest on capital provided to them @ 10% instead of 12% . Pass necessary adjustment entry. Show your working clearly.

Q.10 Ravi and Mohan were partner in a firm sharing profits in the ratio of 7:5. Their respective fixed capitals were Ravi Rs. 10,00,000 and Mohan Rs. 7,00,000. The partnership deed provided for the following:-

(i) Interest on capital @ 12% p.a.

(ii) Ravi's salary Rs. 6000 per month and Mohan's salary Rs. 60000 per year.

The profit for the year ended 31-03-2007 was Rs. 5,04,000 which was distributed equally without providing for the above. Pass an adjustment Entry.

Q.11 A, B and C were partners in a firm having capitals of Rs. 60,000, Rs. 60,000 and Rs. 80,000 respectively. Their current account balances were A- Rs. 10,000, B- Rs. 5000 and C- Rs. 2000 (Dr.). According to the partnership deed the partners were entitled to an interest on capital @ 5% p.a. C being the working partner was also entitled to a salary of Rs. 6,000 p. a. The profits were to be divided as follows:

(i) The first Rs. 20,000 in proportion to their capitals.

(ii) Next Rs. 30,000 in the ratio of 5:3:2.

(iii) Remaining profits to be shared equally.

During the year the firm made a profit of Rs. 1,56,000 before charging any of the above items.

Prepare the profit and loss appropriate on A/C.

Q.12. A and B are partners sharing profits in proportion of 3:2 with capitals of Rs. 40,000 and Rs. 30,000 respectively. Interest on capital is agreed at 5 % p.a. B is to be allowed an annual salary of Rs. 3000 which has not been withdrawn. During 2001 the profits for the year prior to calculation of interest on capital but after charging B's salary amounted to Rs. 12,000. A provision of 5% of this amount is to be made in respect of commission to the manager. Prepare profit and loss appropriation account showing the allocation of profits.

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Class XII **Subject : Business Studies**

Chapter : 1 Nature & Significance of Management

Q1. Explain the meaning and features of Management.

Q2. Explain various levels of Management.

Q3. Discuss the meaning and importance of Coordination.

Q4. Is Management an art, a Science or a Profession ? Discuss.

Q5. Toys Ltd. Is a manufacturing concern which produces Baby toys. During the first two years of its operation, it set its aim to earn that revenue which could at least recover its cost but afterwards sufficient profits should be earned. On analyzing its working at the end of fifth year, Toys Ltd. Found that it failed to recover its cost till now. Thus, company decided:

a. To reduce its cost of production by shifting the manufacturing unit to a backward area where labour is available in abundance but employment opportunities are lacking.
b. To diversify its production, this will not only help in covering the risk, but also help in meeting its objective.
    1. Identify the objective of Toys Ltd. Discussed above.
    2. State the category of objectives identified.
    3. State any two values which the company wanted to communicate to the society.

Chapter : 2 (Principles of Management)

Q6. Explain Henry Fayol's Principle of Management.

Q7. Discuss various techniques of scientific Management.

Q8. Give Fayol versus Taylor – A comparison.

Q9. Differentiate between Unity of Command & Unity of Direction.

Q10. ABC Ltd. Is engaged in producing electricity from domestic garbage. There is almost equal division of work & responsibility between workers & management. The management ever takes workers into confidence before taking important decisions. All the workers are satisfied as the behavior of the management is very good.

a. State the principle of management described in the above para.
b. Identify any two values which the company wants to communicate to the society.

Chapter : 3 (Business Environment)

Q11. Discuss the concept and importance of Business Environment.

Q12. Explain various dimensions of Business Environment.

Q13. Explain impact of Government Policy changes on Business and Industry.

Q14. Indian Govt. is planning to introduce GST fro 1st April, 2017, which will replace the different types of taxes of the different states and thus the uniformity Indirect Tax system may be ensured through out the country.

a. Which dimension of the business environment is involved in the implementation of GST Act.

Class XII **Subject : Economics**

1. When MRS is constant, the slope of indifference curve is:
   (a) Constant
   (b) Increasing
   (c) Decreasing
   (d) None of these

2.Define elasticity of demand**.**

3.Why does an economic problem arise? Explain.

4.Why is Production Possibility Curve Concave? Explain.

5.Explain the law of diminishing marginal utility with the help of total utility Schedule.

6.State and Explain the law of demand.

7.When price of a good is Rs 11 per unit, the consumer buys 12 units of that good. When price rises to Rs 15 per unit, the consumer continues to buy 12 units. Calculate price elasticity of demand.

8.Explain the concept of consumer Equilibrium with the help of Indifference Curve analysis.

9. What is Cross price effect?

10.Explain the properties of Indifference Curve.