

ASN Senior Secondary School

HOLIDAY HOMEWORK(2018-19)

CLASS – XI

SCIENCE STREAM

ENGLISH

I. Collect newspaper cuttings related to given topics and paste it in your language copy)

A. Classified advertisements (Minimum 5 in each category)

- *Sale/Purchase of property and household items
- *To-let and Wanted on Rent
- *Sale/Purchase of Vehicles - Two wheelers/Four wheelers
- *Situation Vacant and Wanted (job required)
- *Matrimonials
- *Missing Person/Thing/Pet

B. Commercial/Display advertisement (Minimum 2 in each category)

- a) Launching of a product
- b) Off Season Sale
- c) Opening of Coaching centres/Boutique/Showroom

C. Formal Invitations (marriage/birthday /house warming ceremony etc and school function) – (one in each category)

D. Posters (Social issues) – (Minimum 1 in each category)

Road Safety, Terrorism, Self Defence, Woman Empowerment, Environment, Consumer Awareness, Awareness about Diseases

II. Report Writing

Select reports on the following topics from the newspaper and paste it in your language copy :

- a) School report highlighting any event(workshop, farewell ,investiture, orientation program, annual function etc.
- b) Reports related to rally, accidents, burglary, protest etc.
- c) Mention the differences in the drafting of the two.

PHYSICS

(Make a working model related to the concept of Physics in a group of three (03) students on a topic based on your choice so as to reflect your creativity, understanding of topic, innovation and can be of a possible use to the society)

- 1) Express meters in terms of (i) Light year (ii) Parsec
- 2) What is the difference between nm, Nm and mN.
- 3) Give three examples of (i) A Physical quantity which has unit but no dimensions (ii) A Dimensional constant (iii) A Dimensionless constant
- 4) Name the physical quantity which can be expressed by given dimensional formula (i) $[M^1L^2T^{-1}]$ (ii) $[M^1L^2T^{-2}]$ (iii) $[M^0L^0T^0]$ (iv) $[M^0L^0T^1]$
- 5) If force, length and time would have been fundamental quantities, what would have been dimensional formula for mass?
- 6) Evaluate $(25.2 \times 1374) / 33.3$ upto correct significant figures.
- 7) Calculate the number of electrons in 1 kg when mass of an electron is 9.1×10^{-31} kg.
- 8) Assuming that mass 'm' of the largest stone that can be moved by a flowing river depends upon velocity 'v', density 'ρ' and acceleration due to gravity 'g'. Show that $m \propto v^6$.
- 9) Which of these measurements of length is more accurate and why? 500.0 cm, 0.0005 cm, 6.00 cm.

- 10) What is the difference between \AA (angstrom) and AU?
- 11) Find the dimension of (a/b) in the equation $P = (a - t^2) / bx$, where 'P' is pressure, 't' is time and 'x' is distance.
- 12) If energy $(E) = G^p h^q c^r$, where G is universal gravitational constant, h is plank constant and c is velocity of light, what are the values of p, h and r.
- 13) An artificial satellite is revolving in a circular orbit of radius 'r' around a planet of mass 'M' and radius 'R' ($r > R$). A formula for time period of satellite is given as $T = 2\pi (\sqrt{r^3/g})/R$. Check by method of dimensions, the correctness of the formula.
- 14) If Force(F), velocity(V) and time (T) are taken as fundamental units then what will be the dimension for mass?

CHEMISTRY

1. Prepare a booklet of approximately ten pages on Indian Chemistry through Ages. (Designer A-4 sheets should be used to make the Booklet. Decorate the cover of the booklet based on your creativity)

OR

Prepare a chart in A-3 size of two scientist and also make their portrait in A-3 size related to Indian Chemistry.

2. Prepare a list of 10 chemicals and their uses in our daily life from Vedic Era.

OR

Write five shlokas related to Rasayan Shashtras in A-3 size chart paper.

3. Prepare any one working model on following topics.

1. Climate change
2. Environment and chemical change
3. Role of chemistry and medicines
4. Food and chemistry- their interrelation ship.

Note: All material to be used in model should be eco-friendly.

Group of two to three students can make one model.

MATHS

ASSIGNMENT - CHAPTER 6 LINEAR INEQUALITIES

QUES1. Draw the graphical solution:

- a) $6x + 5y \leq 150, x + 4y \leq 80, x \leq 15, x \geq 0, y \geq 0.$
- b) $2x + y \geq 2, x - y \leq 1, x + 2y \leq 8, x \geq 0, y \geq 0.$
- c) $X \geq 2, x \leq 8, y \leq x + 3, 2x + y \leq 10, y \geq 4.$
- d) $2x + y \leq 24, x + y \leq 1, 2x + 5y \leq 40, x \geq 0, y \geq 0.$
- e)

QUES2. I.Q. of a person is given by formula $I.Q. = \frac{M.A.}{C.A.} \times 100$, where M.A. stands for mental age and C.A. stands for chronological age. If $75 \leq I.Q. \leq 135$ for a group of 9 year children. Find the range of their mental age.

QUES3. Find all the pairs of even positive integer, both of which are greater than 10 and their sum are less than 50.

QUES4. Find all the pair of consecutive odd natural number both of which are greater than 10, such that their sum is less than 40.

QUES5. In an experiment, a solution of HCL is to be kept between 30° and 35° C. What is the range of temperature in degree F if conversion formula is given by $C = \frac{5}{9}(F-32)$ where C and F represent temperature in degree Celsius and Fahrenheit respectively?

QUES6. Solve the following system of inequalities graphically :

- a) $5x + 4y \leq 20, x \geq 1, y \geq 2.$
- b) $3x + 4y \leq 60, x + 3y \leq 30, x \geq 0, y \geq 0.$
- c) $X - 2y \leq 3, 3x + 4 \geq 12, x \geq 0, y \geq 1.$

QUES7. Solve the inequality, $3x - 5 < x + 7$, when

- a) X is a natural number.
- b) X is a whole number.
- c) X is an integer.
- d) X is a real number.

QUES8. The water acidity in a pool is considered normal when the average pH reading is of three daily measurements in between 8.2 and 8.5. if the first two pH reading are 8.48 and 8.35, find the range of pH value for the third reading that will result in the acidity level being normal.

QUES9. A milk man of 80% concentration is diluted at home by the seller by adding some water to it so that milk concentration is reduced between 65% to 70%. If 640 litres of milk of 80% concentration is available, how much water has been added? Which value system the seller is lacking?

BIOLOGY

1. Complete your Practical files
2. Make a project on Indian Scientist of Vedic Era related to Natural Science and Medicine
3. Prepare model on any one of the topic
 - a. Climate change
 - b. Agriculture and its importance
 - c. Role of Biology in upliftment of mankind

ECONOMICS

Answer the following questions:

1. Define scarcity.
2. State the central problems of an economy.
3. Define microeconomics and macroeconomics.
4. State the causes of economics problems.
5. What is meant by an economy?
6. What is positive and normative economics?
7. Define the problem of choice.
8. What is the economic value of unemployment?
9. What do you mean by economizing resources?
10. What is an economic problem?
11. Define production possibility curve.
12. State any two assumptions of production possibility curve.
13. Define Opportunity Cost, Marginal Opportunity Cost and Marginal Rate of Transformation.
14. State the two characteristics of the production possibility curve.
15. When can a PPC be a straight line?
16. Give any two reasons for:
 - a) Rightward shift of PPC;
 - b) Leftward shift of PPC.
17. If the economy is operating inside the PPC, is it possible to increase the production of good 1 without any decrease in the production of good 2?
18. Why does the PPC slope downwards?
19. Why MOC tends to increase?
20. Does the production take place only on the PPC? Why?
21. What does an increasing MOC along the PPC mean?
22. Give reasons for the following:
 - a) PPC-Concave to the origin;
 - b) PPC is a straight line;
 - c) Increasing MRT;
 - d) PPC is convex to the origin.
23. Differentiate between micro and macroeconomics.
24. Different between positive and normative economics.
25. Explain the central problems of the economy.
26. Explain the process of economic problem.
27. Why is the PPC downward sloping?
28. Is economics positive or normative? Explain?
29. Why is PPC concave to the origin?
30. An economy always produces on but not inside the PPC. Defend or refute with reasons.
31. Apply the concept of PPC to explain the problem of scarcity.

32. Explain the concepts of OC and MRT using a PPC schedule based on the assumption that no resource is equally efficient in the production of all goods.

33. Giving reasons, comment on the shape of the PPC based on the following schedule:

GOOD X	0	1	2	3	4
GOOD Y	30	27	21	12	0

34. Production in an economy is below its potential due to unemployment. Government starts employment generation schemes. Explain its effect using PPC.

35. What happens to the PPC in the following situations? Explain with the diagram?

- Full employment of resources.
- Underutilization of resources.
- Increase in technology for one good
- Increase in resources.

36. Explain PPC with an appropriate schedule and diagram.

37. Using diagram, explain what happens to the PPC of Bihar if river Kosi causes widespread flood.

38. What will be the impact of the Swachh Bharat Mission on the PPC of the economy and why?

39. What will be the impact of large outflow of foreign capital of the economy on the PPC?

40. What is the impact of make in India appeal to the foreign investors by the Prime Minister of India on the PPC of India?

41. What is the slope of PPC? What does it indicate?

42. What is the effect of demonetization on the PPC of India? Give your reason with the diagram.

COMPUTER SCIENCE/ INFORMATICS PRACTICES

Make a Film/ Documentary on science, technology, environment and health

- Format: .MP4/ .AVI
- Language Hindi/ English or Bilingual
- Format SD/ HD
- The movie/ Documentary should not violate the copyright/intellectual property law.

PHYSICAL EDUCATION

Make a Project(Biography) file of A4 Size on any Sports Personality of your choice.

PSYCHOLOGY

One of the most interesting for modern *psychology* is perhaps the *Indian* approach to *developmental psychology*. In this field, the contributions from the *Indian* and the modern *Western* tradition are clearly complementary.

The students have to make a project on the topic “A journey back to the roots: Psychology in India.”