

J.S.S. PUBLIC SCHOOL  
WINTER HOLIDAY HOMEWORK – 2018  
CLASS - IX

English:

1. Your friend Jim is going to Delhi for an interview. Your uncle Mr. Smith is meeting him at the station. Describe your uncle to him in about 80 words so that he may easily identify him at the station.

2. Explain the following proverbs within 50 words-

1. A rolling stone gathers no moss.
2. All things are yellow to the jaundice eye.
3. Necessity is the mother of invention
4. Never put off till tomorrow what you can do today

3. Practice your grammar skills throughout the holidays. Use some or all of the following websites:

- <http://www.bbc.co.uk/bitesize/ks2/english/>
- [http://www.englisch-hilfen.de/en/exercises\\_list/alle\\_grammar.htm](http://www.englisch-hilfen.de/en/exercises_list/alle_grammar.htm)
- <http://www.learnenglish.britishcouncil.org/en/english-grammar/>

Social Science:

**MARK THE FOLLOWING ON THE POLITICAL MAP OF INDIA**

**GEOGRAPHY**

**CH-4 : CLIMATE**

- 1. Cities to locate : Tiruvananthapuram, Chennai, Jodhpur, Bangalore, Mumbai, Kolkata, Leh, Shillong, Delhi, Nagpur. (Location and Labelling)
- 2. Areas receiving rainfall less than 20 cm and over 400 cm (Identification only)

**CH-5 : NATURAL VEGETATION AND WILD LIFE**

- Vegetation Type: Tropical Evergreen Forest, Tropical Deciduous Forest, Thorn Forest, Montane Forests and Mangrove For identification only
- National Parks: Corbett, Kaziranga, Ranthambor, Shivpuri, Kanha, Simlipal & Manas
- Bird Sanctuaries: Bharatpur and Ranganthitto
- Wild life Sanctuaries: Sariska, Mudumalai, Rajaji, Dachigam (Location and Labelling)

**CH-6 : POPULATION (location and labelling)**

- The state having highest and lowest density of population
- The state having highest and lowest sex ratio
- Largest and smallest state according to area

## HISTORY

CH: 5 PASTORALIST IN THE MORDERN WORLD

MARK THE TRIBES ON THE POLITICAL MAP OF INDIA

## Maths

Do all the activities based on chapters Area of Parallelograms & Triangles and Circles using coloured sheets and graph papers given in Lab manual.

## Science

1. Define polyatomic ion. Give one example.
2. What is formula unit of mass? How is it different from molecular mass?
3. What is Law of conservation of mass and Law of constant proportions?
4. What is an ion? Explain the types of ion with examples.
5. Find the molecular mass of H<sub>2</sub>O.
6. Define the term valency. What is the valency for magnesium and copper?
7. What is the difference between cation and anion?
8. What is atomicity? What is the atomicity of phosphorus and nitrogen?
9. Find the number of atoms in 0.5 mole of C atom.
10. Find the mass of 1.5 mole of CO<sub>2</sub> molecule.
11. Calculate the formula unit mass of NaCl and CaCl<sub>2</sub>.
12. What is the difference between molecules 2O and O<sub>2</sub>?
13. An atom has atomic number 12, what is its valency and name the element?
14. Name two elements with same number of protons and neutrons?
15. Name the isotope used for treatment of cancer.
16.  $\frac{A}{Z}X$  What does this symbol represent?
17. Draw the atomic structure of (i) an atom with same number of sub-atomic particles, (ii) an atom with same number of electrons in L and M shell.
18. What is an octate? Why would atoms want to complete their octate?
19. Find the valency of  ${}^{17}_{7}\text{N}$  and  ${}^{35}_{17}\text{Cl}$ .
20. What are nucleons? What is the name given to those atoms which have same number of nucleons in it?
21. Give the difference between three sub-atomic particles.
22. Give the names of three atomic species of hydrogen.
23. Derive the formula for potential energy.
24. Explain the Law of conservation of energy with pendulum.
25. If energy is neither created nor destroyed then from where do we get energy?
26. State and explain one example where kinetic energy is present in a body and is used.
27. Define power and give its unit.
28. What is potential energy? Explain different types of potential energy.
29. How is work and energy related to each other?
30. Give one example where work done on an object is negative.
31. A man does 60 J of work in 6 seconds. Calculate the power.
32. Give one example where work done on an object is zero.
33. Define work.
34. What is the unit of work done?
35. Name 2 types of potential energy.
36. Name the energy stored when a rubber band is stretched?
37. What is gravitational potential energy?
38. Differentiate between potential energy and kinetic energy.
39. How is work and energy related to each other?
40. What is potential energy? Explain different types of potential energy.

41. Explain the following:
  - (a) An object increases its energy when raised through a height.
  - (b) Energy is neither created nor destroyed then from where do we get energy.
  - (c) When we push the wall, the wall does not move and no work is done.
42. State and explain one example where (i) Kinetic energy is present in a body and is used; and (ii) Potential energy is present in a body is used.
43. Explain the molecular mass of  $C_2H_5OH$ .
44. Explain the law of constant proportion.
45. Explain the difference of  $O_2$  and  $2O$ .
46. Find the number of moles in 7g of Na.
47. What is the atomicity of  $Ca(OH)_2$ ?
48. Write the formula for Aluminium Chloride.
49. State the difference between sodium atom and sodium ion.
50. What is formula unit mass? How is it different from molecular mass?
51. Define valency and give valency of copper and iron.
52. Calculate the mass of one molecule of chlorine.
53. Give difference between isotopes and isobars.
54. Number of protons and electrons are same in an atom. Then why is it wrong to say that atomic number of an atom is equal to its number of electrons.
55. An atom is electrically neutral, on loss or gain of electrons why does it become charged?
56. What is valency? Explain different types of valencies.
57. According to you, among the structure of atom studies which model is correct and why?
58. Give an activity to understand the implications of Rutherford's  $\alpha$  scattering experiment by a gold foil.
59. Explain Rutherford's  $\alpha$ -particle scattering experiment and give its observation and conclusion drawn.
60. Establish the relationship between atomic number, mass number, isotopes, isobars and valency of an atoms.

Biology H.W. to be done in lab manual Draw figure of Cockroach, Fish, Birds and Earthworm.  
Write 5 comments of each.

### Hindi:

१. मुंशी प्रेमचंद द्वारा लिखित कोई कहानी पढ़िए और उसके मुख्य पात्र की विशेषताएँ अपने शब्दों में लिखिए।  
( A 4 शीट में )
२. अपने पिता को एक पत्र लिख कर बताइए कि आप उनको अपने जीवन का आदर्श क्यों मानते हैं ।  
( A 4 शीट में )