

## WINTER BREAK HOLIDAY HOMEWORK

### कक्षा -6

### विषय - हिन्दी

1. पाठ्य पुस्तक वसंत भाग - 1 से झांसी की रानी पाठ से लोकगीत पाठ तक सभी प्रश्नों के उत्तर कंटस्थ करने हैं ।
2. वसंत पुस्तक से भाषा की बात के सभी व्याकरण सम्बन्धी प्रश्नों के उत्तर लिखकर अभ्यास करना है ।
3. सहायक पाठ्य पुस्तक बाल रामकथा से सीता की खोज से लेकर लंका विजय तक प्रश्नोत्तर तैयार करना है ।
4. (i) विद्यालय प्राचार्य को अवकाश के लिए कारण बताकर प्रार्थना पत्र लिखो ।  
(ii) अपने मित्र को उसके जन्म - दिन की बधाई देते हुए प्रार्थना पत्र लिखो ।
5. निम्नलिखित विषयों पर निबंध लिखो-  
(क) गणतंत्र दिवस (26 जनवरी)  
(ख) क्रिसमस डे
6. (क) 40 विलोम शब्द लिखो ।  
(ग) 25 मुहावरे लिखकर वाक्य प्रयोग करो ।

विषय – संस्कृत

- 1 पाठ- 9, 10,11, 12 के अभ्यास कार्य याद करो ।
- 2 धातुरूप लिखो, ' पठ धातु (पढ़ना) लटलकार, लृटलकार
- 3 कोई पाँच श्लोक लिखो और याद करो ।

### SUBJECT – SOCIAL SCIENCE

1. पीरीयाडिक परीक्षण तृतीय के पाठ्यक्रम के सभी पाठों को पढ़कर उसके सभी प्रश्नों के उत्तरों को याद करके अपनी कॉपी में लिखिए ?  
Read and learn by heart in all lesson in . in Periodic Test III, Write in note books
2. फ़ाइल में तैयार कीजिये  
Preparatory file.  
Give NCERT Book Class VI-  
Page No. (Geography)  
1) सौरमंडल

**Solar System (Page No. 3)**

- 2) ताप कटिबंध Page 11
- 3) पृथ्वी का परिक्रमण एवं ऋतुएं Revolution and seasons(Page 20)
- 4) प्रतीक चिह्न Symbol Mark( Page No. 27)
- 5) विश्व के महाद्वीप, महासागर तथा पर्वत Continents oceans and mountains in the world(age No. 32)
- 6) पर्वतों के प्रकार Types of mountains (Page No. 43 and 44)
- 7) भारत का राजनैतिक तथा भौतिक मानचित्र Physical and Political map of India Page No 43 and 44)
- 8) वनों का उपयोग Uses of Forest Page No 63
- 9) (History) NCERT Books-
  - (a) कुछ महत्वपूर्ण पुरास्थल Important Archological Centre Page 14
  - (b) महाजनपद और नगर (Maha Janpad and Urban Centre) Page 57
  - (c) मौर्य साम्राज्य के नगर City of Maurya dianesity Page No 76
  - (d) गुप्त वंश के राज्य Guptqa Dianesity ( Page No 113)

कक्षा – 7 वीं

विषय – संस्कृत

- 1 विद्या धनम पाठ के श्लोक याद करो ।
- 2 धातुरूप लिखो पच , धातु (पकाना) लट्लकार लृट्लकार लोट
- 3 पाठ- 9,10, 11, 12 के अभ्यास कार्य याद करो ।

**SUBJECT – ENGLISH**

1. Learn all the question answer from all the lessons which are in the syllabus for upcoming test .
2. Write paragraph on the following –
  - 1.My father
  - 2.Importance of tree
  - 3.Any festival .

3. Write a letter to your elder brother thanking him for the gift he sent to you on your birthday.

4. Write an application to your principal requesting him to grant you 2 days medical leave.

कक्षा – 8 वीं  
विषय – संस्कृत

- 1 हिमालय पाठ के श्लोक लिखो व याद करो।
- 2 धातुरूप लिखो- 'खाद' धातु (खाना) लटलकार लृटलकार लोट
- 3 पाठ- 9, 10, 11, 12 के अभ्यास कार्य याद करो।

#### Subject –MATHS

- Learn all the lessons covered for PT-2
- 3 Questions ( 3 marks or 5 marks) to be answered from History (02 lessons), Geography( Industries) & Social & Political Life ( 03) lessons)
- Collect 05 educational news during break use paper cutting also.

#### Subject –MATHS

Ex.9.1- Q.-3, Q.-4

Ex.9.2- Q.-1, Q.-5

Ex.9.3- Q.-3, Q.-4, Q.-5

Ex.9.4- Q.-1, Q.-2 Q.-3

Ex.9.5- Q.-1, Q.-3, Q.-4, Q.-5, Q.-6, Q.-7, Q.-8

Ex.10.3- Q.-7

Ex.11.1- Q.-1, Q.-4

Ex.11.2- Q.-3, Q.-5, Q.-6, Q.-8

Ex.11.3- Q.-1, Q.-7

Ex.11.4- Q.-3, Q.-6

Ex.12.1 - Q.-1, Q.-2, Q.-3, Q.-5, Q.-6, Q.-7

Ex.12.2-- Q.-1, Q.-2

Ex.-13.1- Q.-4, Q.-5, Q.-6, Q.-9

Ex.-13.2- Q.-3, Q.-2, Q.-11, Q.-8

## SCIENCE

Do the following questions:

1. Which force is being applied by a vendor when he is pushing a cart?
2. Which force always opposes motion?
3. Why the passengers in an aeroplane are asked to remove ink from their fountain pen?
4. What are contact and non-contact forces? Give examples.
5. Why do kabaddi players rub their hands with soil?
6. What is drag?
7. Write about some harms of friction.
8. On which property, loudness of sound depends?
9. An object is vibrating at 50 Hz. What is its time-period?
10. In which unit, loudness of sound is measured?
11. What is 'Ultrasound'? Give its two uses.
12. What is the advantage of using LED over bulb in testing the electrical conductivity of liquids?
13. Which effect of electric current is utilised for detecting the flow of electric current through a solution:  
(a) when a torch bulb is used.  
(b) when a compass needle is used.
14. How does a lightning conductor protect building?
15. What are 'Fault zones'? Name the fault zones in India and locate them on the outline map of India.

## कक्षा - 9

### विषय - हिन्दी

1. निम्नलिखित बिन्दुओं पर 200 शब्दों में निबंध लिखिए  
क. समाज पर संचार माध्यमों का प्रभाव  
ख. विद्यार्थी और अनुशासन

2. निम्न विषयों पर पत्र लिखिए ।

क. राशन कार्ड बनवाने हेतु अपने परिवार के सदस्यों का विवरण देते हुए जिला खाद्य एवं आपूर्ति अधिकारी को पत्र लिखिए

ख. खराब विद्युत् आपूर्ति का विवरण देते हुए जिला अधिकारी को पत्र लिखिए ।

3. अलंकारों की परिभाषा और उदहारण लिखिए ।

4. अर्थ के आधार पर वाक्य भेद बताते हुए प्रत्येक के दो- दो उदहारण लिखिए ।

5. विद्यालय में खेलकूद दिवस मनाया गया इस विषय पर एक प्रतिवेदन लिखिए ।

CLASS-IX  
SUB- MATHS

Do all questions in separate copy

Q1 Factorise  $x^3 + 13x^2 + 32x + 20$

Q2 Simplify:  $\frac{\sqrt{6}}{\sqrt{2}+\sqrt{3}} + \frac{3\sqrt{2}}{\sqrt{6}+\sqrt{3}} - \frac{4\sqrt{3}}{\sqrt{6}+\sqrt{2}}$

Q3. State and prove midpoint theorem.

Q4.prove that equal chords of a circle subtend equal angles at the centre.

Q5. Construct a triangle ABC in which  $BC = 7$  cm and  $\angle B=60^\circ$  and  $AB + CA = 12$  cm..

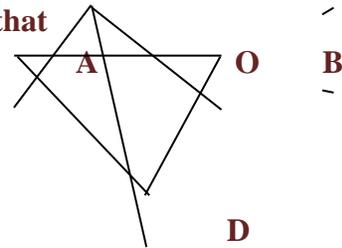
Q6.The taxi fare in a city is as follows: for the first kilometer, the fare is Rs8 and for the subsequent distance it is Rs 5 per Km. Taking the distance as x Km and total fare as Rs y, write a linear equation for this information and draw its graph.

Q7.If the non- parallel sides of a trapezium are equal,Prove that it is cyclic.

Q8. In Figure,ABC and ABD are two triangles on the same base AB. C

If line-segment CD is bisected by AB at O, show that

ar (ABC)= ar (ABD)



Q9 The diameter of a roller is 84 cm and its length is 120 cm it takes 500 complete revolution to move once over to level a playground.find the area of play ground in  $m^2$ .

Q10.prove that the sum of either pair of opposite angles of a cyclic quadrilateral is  $180^\circ$ .

CLASS-IX  
SUB- SCIENCE

1-Define melting point, boiling point, evaporation, sublimation, latent heat of fusion

**2-What is matter? State characteristics of particles of matter .**

**3-What is the state of water at  $-23^{\circ}\text{C}$  and at  $40^{\circ}\text{C}$ .**

**4-Write applications of –**

**Chromatography, centrifugation, distillation .**

**5-Q-NO. 4,5,6,7 and 10 on page no.29.**

**6 Define Atomic mass unit .**

**7-Write symbols of –sodium, calcium, magnesium, silver, gold ,mercury, copper.**

**8-Q-NO-1,2,3 and 4 on page no.39**

**9-Q. NO. -7,8 on page no.44**

**10-Define Isotopes, Isobars giving one example of each.**

**11-Q.NO. -3,7,12, 13 on page no. 54 and 55.**

**12-Q.NO. 1, 2 on page no. 50.**

**13-Derive graphically first and second eqn. Of motion.**

**14-What is acceleration? Differentiate between uniform and non –uniform acceleration.**

**15-Practice numericals of L-8,9,10,11.**

**16 –Draw plant cell and label its different parts.**

**17-Name the two cell organelles that have their own DNA and ribosomes.**

**18-Differentiate between parenchyma, collenchyma and sclerenchyma.**

**19-Q.NO-3 and 4 on page no.74 .Q.no.3,4 on page -78.**

**20-Write difference between**

**1- monocot and dicot plants.**

**2-cryptogamae and phanerogamae**

**21-Write scientific names of –woman, peacock, rose, lotus, lion.**

**22-Differentiate between-**

**1-acute and chronic diseases**

**2-communicable and non-communicable diseases.**

## 23-What is buoyant force .On what factors does the magnitude of buoyant force depends?

CLASS- X

SUBJECT- SOCIAL SCIENCE

1. NCERT की सभी पुस्तकों के पाठों को पढ़कर उसके सभी प्रश्नों के उत्तरों को यादकर अपनी कॉपी में लिखिए  
Read and write the all question and answer in Note Book.
2. वर्ष 2015-16 तथा वर्ष 2016- 17 CBSE Board में आये सभी प्रश्नों के उत्तर अपनी कॉपी में लिखिए |

solve (paper CBSE session 2015-16, 2016-17) all question and answer write in note book.

3. फ़ाइल तथा चार्ट पेपर पर तैयार कीजिए  
Prepare the file and Chart Paper in Project Work.  
(Geography –NCERT Books)
  1. मृदा के प्रकार  
Types of soil Page- 9
  2. भारत की मुख्य बाँध एवं नदियाँ  
Major Rivers and Dams Page- 30
  3. भारत में चावल तथा गेहूँ का वितरण  
Distribution of Rice and Wheat Page No 39 and 41
  4. महत्वपूर्ण खनिजों का वितरण  
Distribution of Minerals page – 57
  5. परम्परागत उर्जा स्रोत  
Traditional Power Resources. Page No 62 & 64
  6. वस्त्र उद्योग (Textile Industries) Page 73
  7. भारत के प्रमुख लौह -इस्पात उद्योग  
Iron and steel Industries Page No -76
  8. साफ्टवेयर टेक्नोलोजी पार्क  
Software Technology Park Page – 81
  9. राष्ट्रीय राजमार्ग तथा समुद्री पत्तन भारत  
National highway and Seaport in India. Page No 95
  10. भारत का राष्ट्रवाद (इतिहास) 1916 से 1946 तक भारतीय राष्ट्रीय कांग्रेस के हुए वार्षिक सम्मेलन को भारत के मानचित्र में दर्शाइये  
Nationalism of India held by 1916 to 1946 congress

## SUBJECT – SCIENCE

1. Give an example of each thermal, photo and electrolytic decomposition.
2. What are the various pathways by which glucose is oxidized?
3. How alveoli are designed to maximize exchange of gases?
4. List advantages and disadvantages of nuclear energy as fuel?
5. Differentiate calcination and roasting? Explain electrolytic refining of copper with reactions at anode and cathode.
6. What is Reflex Arc? Explain with example.
7. What are various Contraceptive methods? Write basic principle involved in each.
8. Draw ray diagram for image formation by convex mirror and concave lens. Write nature, position and size of image.
9. What is dispersion of light? Explain Rainbow formation with the help of diagram.
10. Give Reason
  - a. Stars appear twinkling.
  - b. The sky appears blue during day.
11. Write preparation and use of following compounds.
  - a. POP
  - b. Baking Soda
  - c. Bleaching powder.
12. What is solenoid? Draw magnetic field lines through a solenoid when current passes through it. Give its Use.
13. What are isomers? Draw and write names of structural isomers of pentane.
14. Differentiate myopia and Hypermetropia.
15. What is Biological Magnification.

### Class XI

#### SUBJECT- PHYSICS

1. Who proposed heliocentric model of planetary system? What was the proposition?
2. State and prove Kepler's law of planetary motion?
3. What is the force of attraction due to hollow spherical shell of uniform density on a point mass
  1. when it is situated outside the shell?
  2. when it is situated inside the shell?
4. Define acceleration due to gravity. Derive an expression to find the same.

5. Define escape velocity of the body. Derive an expression to find the same.
6. Define time period of a satellite. Find an expression for the same.
7. Draw the graph b/w stress and strain for stretched wire under increasing load and Explain its behaviour.
8. Derive an expression for the excess pressure inside liquid drop.
9. Find an expression for relation b/w escape velocity and orbital velocity.
10. Derive an expression for the ascent formula for rise of liquid in a capillary tube.

#### **SUB- ECONOMICS**

1. Learn the given course for 2<sup>nd</sup> Unit Test
2. Learn all the formulas of chapter – Measure of dispersion
3. Solve two sums of each formula in each series.
4. Prepare project for annual exam (20 marks)

#### **SUBJECT-English**

1. The sports field is said to be a minefield of life. Whatever we experience or learn here serves as an invaluable experience to use for life. Write an article on ‘More Lessons are Learnt on the Sports Field than in the Classroom’ in 150-200 words. You are Sarika/Sandeep.
2. Write a letter to the Editor of a national daily expressing your concern on the deteriorating standard of living in your city. Give suggestions for improvement. You are Pratap/Preeti of Kirti Nagar, Ghaziabad. (In about 120-150 words).
3. Read the lesson ‘Mother’s Day’ and complete the exercises.
4. Write the character sketch of the Mother- Mrs. Pearson in the lesson ‘‘Mother’s Day’’.
5. Read the Novel and write the character sketch of Canterville Ghost Sir Simon, Mr. Otis, Virginia, Twins, Mrs. Umney and Washington the son of Mr. Otis.
6. How did Sir Simon achieve Peace and salvation

#### **SUB- MULTIMEDIA AND WED TECHNOLOGY**

1. Design a web page given in fig.7.6 (formatted hyperlink and other html tags) Page no. 2.115.
2. Design a web page given at Page no. 2.120 titled as “BEST TASTE RESTAURENT”.
3. Design a web page given at Page no. 2.142, Question no. 3
4. Design a web page given at Page no.2.144, Question no. 6
5. What is form, frame and frameset?
6. What do you mean by form tag and input tag? Write syntax & example of each.
7. Write difference between Static and Dynamic Web page.

8. Discuss the following terms in context of form:-  
(a) Text box (b) Check box (c) Radio (d) Password (e) Input
9. Do solved examples from Q1 to Q20 from chapter Introduction to java script.

## Class XII

### PHYSICS

- Q.1** With the help of suitable ray diagram, derive the mirror formula of concave mirror for the case (I) when object is placed b/w infinity and focus, and (II) when object is placed b/w focus and pole. What is corresponding formula for a thin lens?

With the help of suitable ray diagram derive the mirror formula of convex mirror.

- Q.2** Explain Huygen's postulates for wave nature of light. How is wavefront defined?

Using Huygen's construction, draw a figure showing the propagation of a plane wave reflecting at the interface of the two media. Show that angle of incidence is equal to angle of reflection.

Distinguish b/w a plane wavefront and a spherical wavefront .

Using Huygen's construction, draw a figure showing the propagation of plane wave refracting at a plane surface separating two media. Hence verify Snell's law of refraction.

- Q.3** When monochromatic light travels from rare to denser medium, explain following giving reasons:

- (i) Is the frequency of reflected and refracted light same as the frequency of incident light?
- (ii) Does decrease in speed imply a reduction in the energy carried by light wave?

- Q.4** In Young's double slit experiment, deduce the conditions for (i) constructive, and (ii) destructive interference at a point on the screen. Draw a graph showing the variation of the resultant intensity in the interference pattern against position 'X' on the screen.

Compare and contrast the pattern which is seen with two coherently illuminated narrow slits in Young's experiment with seen for a coherently illuminated single slit producing diffraction.

- Q.5** What are coherent sources of light? State conditions for two light sources to be coherent.

Derive a mathematical expression for the width of interference fringes obtained in a Young's double slit experiment with the help of suitable diagram.

If  $s$  is size of the source  $b$  its distance from the plane of the two slits, what should be the criterion for the interference fringe to be seen?

The ratio of intensities at minima to maxima in the Young's double slit experiment is 9:25. Find the ratio of the widths of the two slits.

**Q.6** What is interference of light? Write essential conditions for sustained interference pattern to produced on the screen.

Draw a graph showing the variation of intensity versus the position on the screen in Young's experiment when (a) both the slits are opened and (b) one of the slits is closed.

What is the effect on interference pattern in Young's double experiment when:

- (i) Screen is moved closer to plane of slits?
- (ii) Separation b/w the two slits is increased?
- (iii) Wavelength of light is increased?

Explain your answer in each case.

**Q.7** What is linearly polarized light? Describe briefly using a diagram how sunlight is polarized?

Unpolarised light is incident on a Polaroid. How would the intensity of transmitted light change when Polaroid is rotated?

**Q.8** Which two main consideration are kept in mind while designing the 'objective' of an astronomical telescope ? Obtain an expression for the angular magnifying power and write formula for the length of the tube of an astronomical telescope in its 'normal adjustment' position.

**Q.9** Why reflecting telescope is preferred than a reflecting telescope?

Draw the suitable ray diagram for the formation of image by reflecting telescope.

**Q.10(i)** Draw the labeled ray diagram form the formation of image by a compound microscope. Derive an expression for its total magnification(or magnifying power), when final image is formed at near point.

Why both objective and eyepiece of a compound microscope must have short focal length?

(ii) Draw a ray diagram showing the image formation by a compound microscope when the image is formed at infinity.

**Q.11** Use Huygen's geometrical construction to show the behaviour of a plane wavefront .

- (i) passing through a biconvex lens.
- (ii) passing through a biconcave lens.
- (iii) reflecting by concave mirror.
- (iv) reflecting by convex mirror.

**Q.12** Derive Einstein's photoelectric equation  $\frac{1}{2} mv^2 = h\nu - h\nu_0$ .

Explain the laws of photoelectric emission (or photoelectric effect)

**Q.13** Define the term (i) 'cut-of voltage' (ii) 'threshold frequency' in relation to phenomenon of photoelectric effect.

Using Einstein's photoelectric equation show the cut-of voltage and threshold frequency for a given photosensitive material can be determined with the help of suitable plot/graph.

**Q.14** Write characteristics features observed in photoelectric effect which support the photon picture of electromagnetic radiation.

Draw a graph b/w the frequency of incident radiation  $\nu$  and the maximum kinetic energy of the electrons emitted from the surface of a photosensitive material. State clearly how this graph can be used to determine (i) Plank constant and (ii) work function of the material.

**Q.15** What is induced emf ? Write Faradays laws of electromagnetic induction. Express it mathematically.

A conducting rod of length 'l', with one end pivoted , is rotated with uniform angular speed ' $\omega$ ' in a vertical plane ,normal to uniform uniform magnetic field 'B'. Deduce an expression for emf induced in this rod.

If resistance of this rod is R, what is the current induced in it and energy consumed.

**Q.16** Derive an expression for (i) induced emf, (ii) induced current when a conductor of length l is moved with a uniform velocity v , normal to uniform magnetic field B. Assume to resistance of conductor to be R.

**Q.17** Derive expression for self inductance of long air cored solenoid of length  $l$  cross-sectional area  $A$  and having no of turns  $N$ .

What will happen to self inductance of solenoid when a rod of rod relative permeability  $\mu_r$  is inserted in solenoid.

**Q.18** What do you meant by mutual inductance of two nearby coils ? Find an expression for mutual inductance of co-axial solenoids.

**Q.19** A coil of no. of turns  $N$ , area  $A$  is rotated at a constant angular speed  $\omega$  in a uniform magnetic field  $B$  and connected to resistor  $R$ . Deduce expression for

(i) Maximum emf induced in the coil.

(ii) Power dissipation in the coil.

**Q20** Explain the term inductive reactance. Show graphically the variation of inductive reactance with frequency of applied alternating voltage.

An ac voltage  $V = V_0 \sin \omega t$  is applied across a pure inductor  $L$ . Find an expression for current  $I$ , flowing in the circuit and show mathematically that the current flowing through lags behind the applied voltage by a phase angle of  $\pi/2$ . Also draw (i) phasor diagram (ii) graph  $V$  and  $I$  versus  $\omega t$  for a circuit.

**Q21** Define the term capacitive reactance. Show graphically the variation of capacitive reactance with frequency of applied alternating voltage.

An ac voltage  $V = V_0 \sin \omega t$  is applied across a pure capacitor of capacitance  $C$ . Find an expression for current flowing through it. Show mathematically the current flowing through it leads the applied voltage by angle  $\pi/2$ .

**Q22** (a)The bluish colour predominates in clear sky.

(b)Violet colour is seen at the bottom of the spectrum when white light is dispersed by a prism.

State reasons to explain these observations.

**Q23** Plot a graph showing the variation of stopping potential with the frequency of incident radiation for the two different photosensitive materials having work function  $W_1$  and  $W_2$  ( $W_1 > W_2$ ). On what factors does the (i)slope (ii)intercept of the lines depends?

**Q24** A parallel plate capacitor charged by a battery. After some time the battery is disconnected and dielectric slab with its thickness equal to the plate separation is inserted b/w the plates. How will (i) capacitance of the capacitor ,(ii)p.d. b/w the plates and (iii) energy stored in the capacitor be affected.

**Justify your answer.**

- Q25** Write the principle working of potentiometer. Describe briefly, with help of circuit diagram, how a potentiometer is used to determine the internal resistance of a given cell.
- Q26** State the underlying principle of working of a moving coil galvanometer. Write two reasons why a galvanometer cannot be used as such to measure current in a given circuit. Name factors on which the current sensitivity and voltage sensitivity depends.
- Q.27** What is space wave propagation? Give two examples of communication system which use space wave mode.

**SUB: CHEMISTRY**

**Solve last five years board question paper in copy.**

**SUBJECT- ENGLISH**

- 1. Solve the Question papers of I Pre Board and II Pre Board Exam.**