

Holiday Home Work (2017-2018)

Class-XI

Subject:- English

Q.1 Read the Novel "The Canterville Ghost" and design a book cover.

Q.2 Write the summary of the Novel "The Canterville Ghost" and character analysis of any three major characters.

Q.3 Attempt 1-3 Reading comprehension passages in BBC Assignment book.

Q.4 Design a poster on any social issue. (A-4 Size page)

Subject:- Chemistry

1.Prepare project file on the allotted topic.

2.Learn tests for salt analysis(acid and basic radicals) from the chapter Qualitative analysis given in the lab practical manual.

3.Do the worksheets given.

SUBJECT – PHYSICS

1. Convert one Newton into dyne using dimensional analysis. **[Ans. 10^5 dyne]**
2. A tractor is moving with a velocity of 500 cm/s. Calculate its value in km/h. **[Ans. 18 km/h]**
3. Find the value of 10 joule in a system when mass is 1 kg, length 10 cm and time 5 min. **[Ans. 9×10^7]**
4. Find the value of 20 joule in a system which has 10 cm, 1 kg and $\frac{1}{2}$ minute as fundamental units of length, mass and time. **[Ans. 1.8×10^6]**
5. If the velocity be 20 cm/s, the unit of acceleration be 40 cm/s^2 and the unit of force be 30 dyne, what are the units of mass, length and time? **[Ans. $\frac{3}{4}$ g, 10 cm, 0.5 s]**
6. Check the accuracy of the relation

$$V = \frac{\pi Pr^4}{8\eta l}$$

where, V is the volume per unit time, P is the pressure, r is the radius, σ is the coefficient of viscosity and u is the length.

[Ans. Correct]

7. Check whether the following equation is dimensionally correct or not.

$$h = \frac{2\sigma \cos \theta}{rdg}$$

where h is the height of liquid, σ is the surface tension of liquid, r is the radius of tube, d is the density of liquid and g is the acceleration due to gravity.

[Ans. Correct]

8. The frequency ν of a vibrating string of length l under tension F is given by

$$\nu = \frac{1}{2l} \sqrt{\frac{F}{m}}$$

where m is the mass per unit length. Check whether this relation is correct or not.

[Ans. Correct]

9. Check the correctness of the relation

$$t = 2\pi \sqrt{\frac{l}{g}}$$

where, t is the time period, l is the length of simple pendulum, g is the acceleration due to gravity.

[Ans. Correct]

10. A body of mass m moves in a circular path of radius r with velocity v . Find the expression for the centripetal force F acting on the particle using the method of dimensions.

$$\text{[Ans. } F = k \frac{mv^2}{r} \text{]}$$

11. The energy E of a particle oscillating in S.H.M. depends on the mass m of the particle frequency n and amplitude a of oscillation. Show dimensionally that $E \propto mn^2a^2$.
12. The velocity of transverse waves along a string may depend upon the length l of the string tension F in the string and mass per unit length m of the string. Derive a possible formula for the velocity dimensionally.

$$\text{[Ans. } v = k \sqrt{\frac{F}{m}} \text{]}$$

13. The frequency n of a tuning fork depends upon the length l of the prong, the density ρ and the Young's modulus Y of its material. From dimensional considerations, find a possible formula for the frequency of tuning fork.

$$\text{[Ans. } n = \frac{k}{l} \sqrt{\frac{Y}{\rho}} \text{]}$$

14. The frequency n of an oscillating liquid drop may depend upon the radius r of the drop, density ρ and surface tension S of the liquid. Obtain a formula for the frequency by the method of dimensions.

$$\text{[Ans. } n = k \sqrt{\frac{S}{\rho r^3}} \text{]}$$

15. The refractive index μ of a transparent medium varies with wavelength λ of light as

$$\mu = A + \frac{B}{\lambda^2}$$

Where A and B are constants. Find the dimensional formulae and SI units of them.

[Ans. A dimensionless and unitless, [B] = [L²] , unit m²]

16. Find the dimensions of the constants a, b, c and d in the relation $v = a + bt + \frac{c}{d + t}$, where v is velocity and t is time.

[Ans. [a] = [LT⁻¹], [b] = [LT⁻²], [c] = [L], [d] = [T]]

17. Find the dimensions of the constant a × b in the relation $E = (b - x^2)/a t$, where E is energy x is distance and t is time.

[Ans. [M⁻¹ L²T]]

18. Find the dimensions of a/b in the relation $v = a + bt$, where v is velocity, t is time and a and b are constants.

[Ans. [T]]

19. Assuming force (F), length (L) and time (T) to be the fundamental units, find out the dimensions of mass. If energy (E) is considered in place of (F), then what will be the dimensions of mass? **[Ans. [FL⁻¹T²], [EL⁻²T²]]**

20. If velocity, Force and time are taken to be fundamental quantities, then find the fundamental formula for mass.

[Ans. [Fv⁻¹T]]

21. If velocity, force and time are taken to be fundamental quantities, then find the dimensional formula for energy.

[Ans. [FvT]]

22. The number of particles crossing per unit area perpendicular to x-axis in unit time N is given by

$$N = -D \left(\frac{n_2 - n_1}{x_2 - x_1} \right)$$

where n₁ and n₂ are the number of particles per unit volume at x₁ and x₂ respectively. Deduce the dimensional formula for D.

[Ans. [L²T⁻¹]]

23. A large fluid star oscillates in space under the influence of its own gravitational field. Using dimensional analysis find the expression for its period (T) of oscillation in terms of radius of star (R) mean density of fluid (ρ) and universal gravitational constant (G).

$$\text{[Ans. } T = k \sqrt{\frac{G}{\rho}} \text{]}$$

Subject:- Biotech

1. Prepare project file on the allotted topic.

2. Do the worksheets given.

Subject:- I.Pr.

Do the following questions in the practical file-

Ch 9(NCERT)Lab exc—Q 1 ,2

Ch 10(NCERT)Lab exc—Q 1 ,2

Subject: Business Studies

During the summer vacation students will prepare models, charts and project reports related to the following topics :

1. Field Visit
2. Case Study .
3. Aids To Trade .
4. Export-Import procedure.
5. Visit to State Emporium.
6. Commercial Bank.
7. International Business.

8. Advertising.

9. ATM.

10. Communication.

11. Multiple Shops.

12. Cottage Industry.

13. Departmental Store.

14. Insurance Company.

15. E-Commerce.

16. Carrer option in commerce.

17. Mode of Transportation.

18. Handicraft Industry.

19. Stock Exchange.

20. Social responsibility of business.

21. Hotel.

22. Manufacturing process of different products.
23. Mutual Fund Company
24. Post office.
25. Event Management Company.
26. Saving habits of people.
27. Shopping mall.
28. Special economic zone.
29. World trade park.
30. Hockers and Paddlers.
31. Airport.
32. Auxilliaries to trade.
33. Forms of business organization.
34. Public Ltd. Company.
35. Fast moving consumer goods.

Subject: Accountancy

1. Students will collect the source documents of their own transactions. They will prepare vouchers for their transactions and record them into the journal.
2. Students will learn all those topics which have been covered in the class before summer vacation.

Subject: Mathematics

Revise the Chapter 1,2 and 3. Do the practice questions from P.K.Garg or other reference book.

Subject: Psychology

- Work on the Project Idea given in the Psychology NCERT books of respective chapter allotted to students. Listed topics are:
 1. Interview of Psychologist who fits in specific field of Psychology
 2. Conduction of Survey.
 3. Case study of a person with brain damage and comparing it with a healthy brain.
 4. Write an experience when you were 2-3 year old child and state how you use to solve a problem? Take help of your mother.
 5. Collect 10 advertisement and list how particular advertisement is made attractive.
 6. How your parent reinforce you. Select 5 instances and compare them with the reinforcement by teachers.
 7. Recall and write down two instances of your life that you remember clearly and compare it with two recalled versions and look for discrepancies and similarities it them.
 8. Observe a child of 1,2 and 3 year and note how is he learning the words and statements.
 9. Using Maslow's hierarchy of needs analyze kind of motivational forces with five more people(known) including you, in terms of need satisfaction.

Subject:- Eco

1. Prepare a questionnaire on any of the topic given below and conduct a survey. Present the collected data in the form of tables, graphs and

diagrams. After analysis, prepare a survey report with a conclusion.

The Topics are - Different mobile phones, pens, newspapers, Crime, dairy products, detergent powder, L.G. products, cosmetics companies, T.V Serials, soft drinks, footwear, lakme products, Saras products, health drinks, cold drinks, Ice creams, Chocolates, Cartoon Characters, Perfumes, Watches, tooth-pastes, soaps, women magazines, T. V Channels, different products of Hindustan Liver, Junk food & Health, products of Ayurvedic companies, Products of Tupperware, different Co. of electronic items, Bikes, readymade Garments.

2. Prepare a Project on any topic given below:

1. Changing consumer awareness amongst households.
2. Demographic structure of our neighborhood.
3. Study of cooperative institution: Milk cooperatives, marketing cooperatives etc.
4. Case studies on public private partnership.
5. Outsourcing.
6. Foreign direct investment.
7. Global warming.
8. Designing eco-friendly projects such as paper and water recycle.
9. Skill India.
10. Make in India.
11. Digital India.
12. World Bank, International Labour Organisation and NABARD.
13. Micro and small scale industries.
14. Food supply channel in India.

15. Contemporary employment situation in India.
16. Disinvestment Policy.
17. Health Expenditure.
18. Goods and Services Tax Act.
19. Inclusive growth strategy.
20. Human Development Index.
21. Self-help groups.
22. Indian grading and standardization system.
23. Agricultural diversification.
24. Minimum support price.
25. Demonetization.
26. Central Bank and its function.
27. Any other topic.

3. Revise the chapters covered till date.

Subject:- HISTORY

Prepare a historical atlas on the basis of map list based on the Theme 1-11 of your course book
Learn Theme 1&2.

Subject :- GEOGRAPHY

Students have to prepare a model in a group of 5 each on any of the suggested topics.

1. Structure of the earth
- 2 India-physiography 3D model
3. Erosional/ Depositional features formed by rivers.
4. Erosional features formed by sea waves

5.Volcano

6.weather instruments-wind wane

7.Volcanic landforms

8. Ocean floor configuration

9.Plate Boundaries/ sea floor spreading

10.Karst features in limestone region

11.Erosional /Depositional features formed by glaciers

12.Erosional /Depositional features by the action of wind

13.Green house effect