

Amrit Public School, Mau

Dussehra Holiday Homework-2018

Class-XI- Science Group

English

1. You are Ali/ Alia 23, block-A Mumbai. You want a music teacher for your son who is in class 11th. Draft a suitable advertisement is not more than 50 words.
2. Suppose you are a member of blood bank society. You have been asked by the President of the society to organize a blood donation camp. Write a notice in 50 words urging the people to come in large number for this noble cause. Mention date, time and venue.
3. You are Rajat/ Rajani Walia, Head Boy/ Head Girl of your school. Request your principal in writing to arrange extra classes in maths for the students of XI and XII classes. Give detailed reasons to support your demand.
4. You are Ajay / Anita living at B-3 Saket, New Delhi. Write a letter to the editor for a news paper drawing attention of the authorities towards the in sanitary condition prevailing in your neighborhood due to the garbage thrown by weekly bazaar vendors who never care to pick up their garbage.
5. You are President, RWA Geeta Vihar. Recently you have seen a lot of poor people and beggars lying on the roads in very miserable condition. You really want to help them. Write a notice to be put up on the society notice board asking the families to voluntarily donate two chapatis each day for these underprivileged people.
6. Answer the following questions:
 - a. Why does the narrator refer to the Black Hole of Calcutta?
 - b. What happened when Ranga returned to his village?

हिन्दी

१. 'आधुनिक सुविधाओं से वंचित भारत के गाँव' विषय पर लगभग १५० शब्दों में एक फीचर आलेख लिखें।
२. वितान: 'आलो -आधारी' पाठ के आधार पर बेबी हालदार का चरित्र चित्रण कीजिए।
३. निम्नलिखित विषय पर परियोजनात्मक कार्य करें।

‘भारत रत्न - अटल बिहारी बाजपेयी’

नोट - प्रश्न न.-३ को फाइल पेज पर करें

Informatics Practices

1. Write the uses of GROUP BY and ORDER BY clauses.
2. How can you restrict user to enter duplicate values in a field?
3. Differentiate: (i) ALTER & UPDATE tables
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5. Define: COMMIT ROLLBACK SAVEPOINT
6. What is group function? Give two examples.
7. How do you make any change permanent in Database?
8. Differentiate the uses of: DROP & DELETE.
9. Write the **USE and OUTPUT of the following library functions (STRING, ARITHMETICAL, DATE):**
 - A. (i) CONCAT() (ii) INSTR() (iii) SUBSTR() (iv) LEFT() (v) RIGHT() (vi) TRIM() (vii) LTRIM() / RTRIM()
 - B. (i) ROUND() (ii) POWER() / POW() (iii) TRUNCATE() C. (i) DATE() (ii) CURDATE() (iii) NOW() (iv) YEAR() (v) DAYOFMONTH() (vi) MONTHNAME() (vii) MONTH() (viii) DAYNAME() (ix) SYSDATE()

Physical Education

1. Define Test and Measurement.
2. Define Anatomy.
3. Define Psychology.
4. List down six bones of body.
5. State Oxygen Debt.

- List down the components of positive life style.
- Mention the qualification available for profession in Physical Education.
- Explain Olympic Flag, Olympic Motto?
- How diuretics are misused by athletes?
- Explain the functions of Skeletal System, and also mention six bones from lower part of the body.
- What do you mean by blood pressure?

Physics

- Explain why it is easier to pull a lawn roller than to push it.
- A police van moving on a highway with a speed of 30km h^{-1} fires a bullet at a thief's car speeding away in the same direction with a speed of 192km hr^{-1} . If the muzzle speed of the bullet is 150ms^{-1} , with what speed does the bullet hit the car?
- The maximum range of a projectile is $2/\sqrt{3}$ times its actual range. What is the angle of projection for actual range?
- State the law of conservation of mechanical energy. Show that the total mechanical energy of a body, freely falling under gravity, is conserved.
- Define kinetic energy. Write an expression for the kinetic energy a body of mass m moving with a velocity. State and prove work energy theorem.
- What do you understand by friction? Discuss about static friction, limiting friction, kinetic friction and rolling friction. Show how the force of friction varies with the applied force.
- What is meant by banking of roads? What is the need for banking of road? Obtain an expression for maximum speed with which a vehicle can safely turn from a banked road at an angle θ . (Take μ as coefficient of friction between wheels and the road).
- What is projectile? A cricketer throws a ball to a maximum horizontal distance of 100m. How high above the ground can the cricket throw the same ball?
- Define the term instantaneous velocity. A man walks on a straight road from his home to a market 2.5km away with a speed of 5kmhr^{-1} . Finding the market closed, he instantly turns and walks back home with a speed of 7.5kmh^{-1} . What is the magnitude of average velocity over a time interval of (0-30) min.
- State and prove law of conservation of momentum for a body initially moving with a velocity u_1 , collides with another body moving with a velocity u_2 .

Chemistry

- Draw the structure of the following.
 $\text{H}_2\text{S}_2\text{O}_7$, P_4O_{10} , H_2SO_4 , NH_4Br , O_3
- For a reaction $2\text{A}_{(g)} + \text{B}_{(g)} \Rightarrow 2\text{D}_{(g)}$
 $\Delta U_{298} = -10.5\text{KJ}$ $\Delta S = -44.1\text{J/K}$
Calculate ΔU_{298} for the reaction and predict whether the reaction is spontaneous or not.
- (i) Would you expect the second electron gain enthalpy of Oxygen as +ve, more negative or less negative than the 1st? Justify your answer.
(ii) Why M.P. & B.P. of Ionic compound are very high?
(iii) F^- , O^- , Mg^{++} , Al^{+++} what is common in them?
- (i) Define surface tension.
(ii) Write the formula associated with coefficient of viscosity.
(iii) Critical temperature.
(iv) Define Hybridisation.
(v) Give the formula of formal charge
- Define Hiesenberg uncertainty principal & give its mathematical ferm.
- In a hydrogen atom, an electron jumps from third orbit to the first orbit. Find out the frequency of the spectral line.
- If 10 volume of dihydrogen react with five volume of dioxygen gas how many volumes of water will be produced also give the reaction.
- Draw the structure of PCl_5 . Why are the axial bond larger as compared to equatorial bonds.

9. Give the name of three species which have following geometry->square planar, Bent T shaped, square pyramidal.
10. (i) Why H_2O is liquid while H_2S is gas ?
(ii) Modern Periodic law
11. Calculate the temperature of 4 moles of a gas occupying 5 dm^3 at 3.32 bar ($R=0.083$)
12. (i) What do you mean by entropy?
(ii) Define the term extensive.

Biology

1. Make a flow chart of classification of plant tissue.
2. Both gymnosperm and angiosperm bear seeds then why are they classified separately?
3. What is the difference between direct and indirect development?
4. Draw a well leveled figure showing disloblastic organization.
5. What is the difference between false fruit and true fruit.
6. All vertebrates are chordates but all chordates are not vertebrates justify it.
7. Why are bryophytes called the amphibians of the plant kingdom?
8. Define the nature of schizolysigenous cavity and how is it formed.
9. What do hard wood and soft wood stand for.
10. How is five kingdom classification advantageous over the two kingdom classification?
11. Fungi are cosmopolitan write the role of fungi in your daily life.
12. What would happen if we didn't have biodiversity?
13. Brinjal and potato belong to same genus solanum, but to two different species. What defines them as separate species.

Mathematics

1. In a survey of 600 students in a school, 150 students were found to be taking tea and 225 taking coffee, 100 were taking both tea and coffee. Find how many students were taking neither tea nor coffee?
2. $f = \{ (1,1) (2,3) (0,-1) (-1,-3) \}$ be a function from Z to Z defined by $f(x) = ax+b$ for some integer a, b . Determine a, b .
3. Prove that $\frac{\sin 5x - 2\sin 3x + \sin x}{\cos 5x - \cos x} = \tan x$
4. Prove that $2^n > n$ for all the positive integer n .
5. Express the following expression in the form of $(a+ib)$

$$\frac{(3 + i\sqrt{5})(3 - i\sqrt{5})}{(\sqrt{3} + \sqrt{2}i) - (\sqrt{3} - i\sqrt{2})}$$
6. The longest side of a triangle is 3 times the shortest side and the third side is 2 cm shorter than the longest side. If the perimeter of the triangle is at least 61 cm. Find the minimum length of the shortest side.
7. Solve the following system of inequalities graphically.
 $3x+4y \leq 60, x+3y \leq 30, x \geq 0, y \geq 0.$
8. A committee of 7 has to be formed from 9 boys and 4 girls. In how many ways can this be done when the committee consists of at most 3 girls.
9. Find the real θ such that $\frac{3+2i\sin\theta}{1-2i\sin\theta}$ is purely real
10. Find the general solution of $\sec^2 2x = 1 - \tan 2x$

11. If $1, \alpha$ and β are the roots of $x^3 - 1 = 0$ then show that :

i) $1 + \alpha + \beta = 0$ and

ii) $\alpha \beta = 1$

12. Fill in the blanks

$A \cup A' = \underline{\hspace{2cm}}$

$\emptyset' \cap A = \underline{\hspace{2cm}}$

$A \cap A' = \underline{\hspace{2cm}}$

$U' \cap A = \underline{\hspace{2cm}}$

13. A college awarded 38 medals in football, 15 in basketball and 20 in cricket. If these medals went to a total of 58 men and only three men got medals in all the three sports, how many received medals in exactly two of the three sports?

14. If R be a relation from Q to Q defined by $R = \{(a, b) : a, b \in Q \text{ and } a - b \in Z\}$ show that

i) $(a, a) \in R$ for all a to Q

ii) $(a, b) \in R$ implies that $(b, a) \in R$

iii) $(a, b) \in R$ and $(b, c) \in R$ implies that $(a, c) \in R$

15. Let $f : R \rightarrow R$ be a function defined as $f(x) = \frac{x^2 + 1}{x^2 - 1}$. Find the range of f .

16. If $\sin x = \frac{3}{5}$, $\cos y = \frac{-12}{13}$, where x and y both lie in third quadrant, find the value of $\sin(x+y)$

17. Prove that $10^{2x-1} + 1$ is divisible by 11 by mathematical induction.

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Informatics Practices

1. Write the uses of GROUP BY and ORDER BY clauses.
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Physical Education

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Economics

1. Define statistics with the help of suitable example
2. What do you understand by census method of collecting data?
3. What is the major difference between inclusive series and exclusive series?"
4. Write the formula for the calculation of Arithmetic mean?
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7. Statistical methods are dangerous weapons in the hands of an unqualified person" Explain?
8. What are important types of data as published in 'Census of India' and 'Reports and publication of NSSO'?
9. What is meant by stratified or mixed sampling?
10. Average mean of a student in all the five subjects is 35 if he gets 25 in statistics, 30 in English 25 in Hindi, 40 in physical education; calculate the value of economics?
11. Average income of 50 families is Rs 3000. Of these average income of 12 families is 1800. Find out the average income of remaining families?
12. A housewife used 10 kg of wheat 20 kg of fuel, 5kg of sugar, and 2 kg of oil. Prices (per kg) of these items are Rs 1.50, 50paise, Rs 2.80 and Rs.10 respectively? Taking quantities used as weights find out the weighted arithmetic average of the prices
13. Find out median value of the following distribution

Wage rate	0-10	10-20	20-30	30-40	40-50
No of worker	22	38	48	35	20

14. Determine median value of the following series using graphic method

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No of students	4	6	10	10	25	22	18	05

15. What is the relationship between mean median & mode? Explain as a student of economics which one is the best average and why?
16. The size of land holding of 380 families in a village is given below. Find mean by (step-deviation method) and mode by (grouping method)

Size of land in acres	Less than 100	100-200	200-300	300-400	400-500
No of families	40	80	20	60	50

17. Find the missing frequency in the following distribution if $N=100$ and $M=30$

marks	0-10	10-20	20-30	30-40	40-50	50-60
No of student	10	?	25	30	?	10

18. What do you understand by percentile? From the following observation calculate the value of Q , Q_3 , D_8 and p_{56}

Wages	0-10	10-20	20-30	30-40	40-50
No. of worker	22	38	46	35	19

Business

1. Write main features of Government Company.
2. Explain the differences between Equity shares, Preference shares and Debenture from investor's point of view.
3. Risk in business is not by choice but a compulsion. Comment.
4. Discuss different types of partnership firm.
5. Draw comparison between Business, Profession & Employment.
6. List the documents required for the incorporation of a company.
7. Write the features of Statutory Corporation.
8. What is retained earning? Write the merits of retained earnings.
9. Explain any six features of Joint Stock Company.
10. Discuss the stages of company formation.
11. "It is better to use our own funds because that costs us nothing" Do you agree.
12. Discuss the demerits of Borrowed fund.
13. Differentiate between private & public sector enterprises.
14. State and explain any six reasons of inefficiency in operation of Govt. Enterprises.
15. Differentiate between Public & Private Company.
16. What are the factors you will consider before choosing the form of Business organization?
17. What is demonetization? Write down the impact of demonetization on business organizations in India?

Accounting

1. Name any two users of accountancy information.
2. Give an example of intangible fixed asset.
3. What is meant by accounting?
4. Give any two objectives of Accounting .
5. Give any three difference between cash basis of and accrual basis of accounting.
6. Give any three distinction between accounting and accountancy.
7. Write a short note on any of two.
 - a) Accounting entity assumption.
 - b) Money measurement Principle.
 - c) Matching Principle
8. How many types of Accounting principles?
9. Write short notes on the following terms.
 - a) Capital Expenditure
 - b) Drawings
 - c) Revenue
10. Prepare accounting equation and balance Sheet also on the following information

- a) Ram started business with cash Rs 4,00,000 and goods Rs 200,000.
- b) Purchased goods for cash Rs 100,000.
- c) Purchased goods from Mohan Rs 50,000
- d) Sold goods costing Rs 40,000 for Rs 60,000
- e) Sold goods to Sohan costing Rs 40,000 for Rs 45000.
- f) Rent paid Rs 10,000 and Rent outstanding Rs 5000
- g) Paid salary Rs 20,000 and pre paid salary Rs 10,000

11. Pass journal entry on the following information.

- a) Purchased goods from Ravi costing Rs 2,00,000 at 10% Trade Discount and 5% cash discount.
- b) Purchased goods from Ravi for Rs 3,00,000 10% T.D.
- c) Return goods to Ravi for Rs 30,000.
- d) Paid cash to Ravi after deducting 5% cash discount
- e) Purchased furniture for Rs 70,000 paid carriage Rs 2000.
- f) Sold goods for Rs 60,000 to Mohan.
- g) Mohan return goods of 10%.
- h) Paid wages Rs 5000 and outstanding wages 4000
- i) Received commission of Rs 10,000 out of which 2000 as advance.
- j) Interest on capital is Rs.20,000

12. On 1st April 2010 a Machine is purchased for Rs 5,00,000. On 1st January 2011 second Machine is Purchased for Rs 300,000. On 30, June 2012 Machine Purchased on 1st April 2010 is sold for Rs 2,20,000 and same date new machine was Purchased for Rs4,00,000.

Prepare machinery A/C and provision for depreciation A/C from 1 april 2010 to 31 march 2013. If depreciation is charged 10% P.A on original cost method.

13. Describe four limitation of accounting.

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Class-XI- Humanities

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11. What do you mean by blood pressure?

Humanities

Write three essays, choosing one topic from each of the following Section-A, Section-B, Section-C in about 500 to 600 words each.

Section-A

1. Alternative technology for a climate change resilient India.
जलवायु परिवर्तन के प्रति सुनम्य भारत हेतु वैकल्पिक तकनीकें

2. Poverty anywhere is a threat to prosperity everywhere.

कहीं पर भी गरीबी , हर जगह की समृद्धि के लिए खतरा है ।

Section-B

1. Customary morality cannot be a guide to modern life.

रूढ़िगत नैतिकता आधुनिक जीवन का मार्गदर्शक नहीं हो सकती है ।

2. The past is permanent dimension of Human Consciousness and values.

‘अतीत’ मानवीय चेतना तथा मूल्यों का एक स्थयी आयाम है ।

Section-C

1. Management of Indian border dispute complex task.

भारत के सीमा विवादों का प्रबंधन एक जटिल कार्य

2. Reality does not conform to the ideal , but confirms it.

यथार्थ आदर्श के अनुरूप नहीं होता है , बल्कि उसकी पुष्टि करता है ।

Economics

1. Define statistics with the help of suitable example
2. What do you understand by census method of collecting data?
3. What is the major difference between inclusive series and exclusive series”?
4. Write the formula for the calculation of Arithmetic mean?
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7. Statistical methods are dangerous weapons in the hands of an unqualified person” Explain?
8. What are important types of data as published in ‘Census of India’ and ‘Reports and publication of NSSO?
9. What is meant by stratified or mixed sampling?
10. Average mean of a student in all the five subjects is 35 if he gets 25 in statistics, 30 in English 25 in Hindi , 40 in physical education; calculate the value of economics?
11. Average income of 50 families is Rs 3000. Of these average income of 12 families is 1800. Find out the average income of remaining families?
12. A housewife used 10 kg of wheat 20 kg of fuel, 5kg of sugar, and 2 kg of oil. Prices (per kg) of these items are Rs 1.50 , 50paise, Rs 2.80 and Rs.10 respectively? Taking quantities used as weights find out the weighted arithmetic average of the prices
13. Find out median value of the following distribution

Wage rate	0-10	10-20	20-30	30-40	40-50
No of worker	22	38	48	35	20

14. Determine median value of the following series using graphic method

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No of students	4	6	10	10	25	22	18	05

15. What is the relationship between mean median & mode? Explain as a student of economics which one is the best average and why?

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