

DHANBAD PUBLIC SCHOOL
HOLIDAY ASSIGNMENT (2018-2019)

STD:- X

DATE:-

ENGLISH

Q. 1. Prepare a book review of the novel - 'The Story of My Life'.

Details:-

- a) Introduction of the author
- b) Summary of the text
- c) Characterization
- d) Your opinion or view points about the novel.

SUB :- HINDI

- प्र0 01 'राम-लक्ष्मण-परशुराम संवाद' के आधार पर राम, लक्ष्मण और परशुराम की चारित्रिक विशेषताओं पर प्रकाश डालिए।
- प्र0 02 पद परिचय दीजिए-
- (I) महँगाई से सभी लोग कष्ट उठा रहे हैं। (II) कक्षा में छात्र ध्यानपूर्वक शिक्षक की बात सुन रहे हैं।
- प्र0 03 बाल गोबिन भगत के चरित्र की विशेषताओं का वर्णन कीजिए।
- प्र0 04 'नेताजी का चश्मा' पाठ के भाषा अध्ययन अभ्यास प्रश्न की संख्या 13 और 14 (वाच्य संबंधी) उत्तर लिखें।
- प्र0 05 चौराहों पर प्रसिद्ध व्यक्तियों की मूर्ति लगाने का क्या उद्देश्य हो सकता है? आपको अगर मौका मिले तो आप किसकी मूर्ति लगाना पसंद करेंगे और क्यों?
- प्र0 06 निम्नलिखित वाक्यों को संयुक्त तथा मिश्रित वाक्यों में परिवर्तित कीजिए-
- (I) प्रशांत को प्रेमचंद की कहानी 'कफन' पढ़कर प्रसन्नता हुई?
- (II) शिक्षक ने कक्षा में आकर पढ़ाना शुरू किया।
- (III) मोहन गाँव जाकर बीमार पड़ गया।
- (IV) मेरा गीत समाप्त होते ही ज़ोर-ज़ोर से तालियाँ बज उठीं।

SUB :- SANSKRIT

- प्र0 01 अङ्कानाम स्थाने शब्देषु समयलेखनम् लिख।
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|-----------|-----------|------------|----------|-----------|
| (1) 12:45 | (2) 1:30 | (3) 3:00 | (4) 4:15 | (5) 5:45 |
| (6) 2:30 | (7) 4:00 | (8) 5:15 | (9) 6:30 | (10) 7:45 |
| (11) 8:15 | (12) 9:00 | (13) 10:15 | | |
- प्र0 02 निम्नलिखितविषयेषु एकम् अनुच्छेदं लिखत।
- (क) संस्कृत भाषायाः महत्त्वम् (ख) परोपकारः (ग) विद्या (घ) दीपोत्सवः
- प्र0 03 निम्नलिखितान् प्रत्ययान् प्रयुज्य देश शब्दाः लिख। (त्रिषु पिङ्गेषु)
- (क) तव्यत् (ख) अनीयर् (ग) शतृ (घ) शानच् (ङ) मतुप्
- प्र0 04 समासाः तत्पुरुषः विभक्ति तत्पुरुषः समासं कृत्वा समस्तपदं लिखत-
- | | | | |
|----------------------|----------------------|-------------------|---------------|
| (1) साधूनाम् वृत्तिः | (2) गृहस्य अभ्यन्तरे | (3) काकस्य ध्वनिः | (4) वाचि पटुः |
| (5) पक्षिराजः | (6) विद्यापराङ्मुखः | (7) अनृतम् | (8) अखण्डम् |
| (9) जगत्प्रसिद्धम् | (10) नीतिनिपुणः | | |
- प्र0 05 शब्दानां अर्थाणाम् सह मेलनं कुरु-
- | | | | | |
|---------------|------------------|-----------------|--------------|----------------|
| (1) वदनम् | (2) शुश्रूषा | (3) यूथपः | (4) आशु | (5) घोटकाः |
| (6) हेयम् | (7) अनर्घम् | (8) प्रच्छन्नम् | (9) विषण्णाः | (10) उक्तम् |
| (11) कपयः | (12) परिवर्जयेत् | (13) वाञ्छन् | (14) संक्षयः | (15) अमात्यः |
| (16) अनवद्यम् | (17) जन्तुः | (18) तरलम् | (19) कामये | (20) आर्तानाम् |
- मञ्जूषा-**
- | | | | | |
|------------------|--------------|--------------|-----------------|---------------|
| (1) श्रोतुमिच्छा | (2) शीघ्रम् | (3) त्यजेत् | (4) अनिन्दनीयम् | (5) त्याज्यम् |
| (6) प्राणी | (7) चञ्चलम् | (8) दुःखिताः | (9) कथितम् | (10) यूथपतिः |
| (11) वानराः | (12) इच्छन् | (13) विनाशः | (14) बहुमूल्यम् | (15) गुप्तम् |
| (16) घोटकाः | (17) मन्त्री | (18) इच्छामि | (19) पीडितानाम् | (20) मुखम् |
- परियोजना कार्यम्- संस्कृत के प्रसिद्ध 10 कवियों तथा उनकी कृतियों के नाम सचित्र दर्शाएँ।

DHANBAD PUBLIC SCHOOL
HOLIDAY ASSIGNMENT (2018-2019)

STD:- X

DATE:-

SUB :- MATHEMATICS

1. State Euclid's division lemma.
2. State Fundamental theorem of arithmetic.
3. Under what condition the rational number $\frac{p}{q}$ will have a terminating decimal?
4. Explain why $7 \times 11 \times 13 + 13$ is a composite number?
5. If $x = a^2b^5$; $y = a^2bc^3$, find LCM(x,y) and HCF(x,y).
6. Prove that $5 - 2\sqrt{3}$ is an irrational number.
7. Prove that one of every three consecutive positive integers is divisible by 3.
8. If p is a prime number, then prove that \sqrt{p} is irrational.
9. Find the HCF of 81 and 237 and express it as a linear combination of 81 and 237.
10. Using Euclid's division lemma, prove that $n^3 - n$ is divisible by 6.
11. In a seminar, the number of participants in science, social science and mathematics are 60, 84 and 108 respectively. Find the minimum number of rooms required, if in each room, the same number of participants are to be seated and all of them being in the same subject.
12. If the HCF of 85 and 153 is expressible in the form of $85m - 153$, then find the value of m.
13. Prove that the square of any positive integer is of the form $3m$ or $3m+1$.
14. Write $\overline{23.426}$ in the form $\frac{p}{q}$.
15. Prove that $\sqrt{3}$ is not a rational number.
16. Check, if $\frac{39}{1875}$ has terminating decimal or not?
17. Use Euclid's division algorithm, find the largest number that divides 1251, 9377 and 15628 leaving remainders 1, 2 and 3 respectively.
18. If x and y are two odd positive integers, prove that $x^2 + y^2$ is even but not divisible by 4.
19. Use Euclid's division lemma to show that the cube of any positive integer is of the form $9m$, $9m + 1$ or $9m + 8$.
20. Prove that, if a,b,c and d are positive rationals such that, $a + \sqrt{b} = c + \sqrt{d}$, then either $a=c$ and $b=d$ or b and d are squares of rationals.
21. Show that one and only one out of three consecutive positive integer is divisible by 3, where n is any positive integer.
22. Find the least number of square tiles required to pave the ceiling of a room 15 m 17 cm long and 9 m 2 cm broad.
23. Draw the graph of $y=p(x)$, for some polynomial $p(x)$ if it has no real zeroes.
24. If a pair of linear equations is inconsistent what will be the nature of graph lines ?
25. One says, " Give me a hundred rupee, friend! I shall then become twice as rich as you". The other replies, " If you give me ten rupee. I shall be six times as rich as you". Frame a pair of linear equation to represent the above situation.
26. For what value of k, will the following system of equations have infinite solutions :
 $2x - 3y = 7$; $(k + 2)x - (2k + 1)y = 3(2k - 1)$
27. If p and q are the zeroes of $x^2 + 7x + 12$, then find the value of $\frac{1}{p} + \frac{1}{q} - 2pq$.
28. If the zeroes of the polynomial $x^2 + px + q$ are double the zeroes of $2x^2 - 5x - 3$, respectively. Find the values of p and q.
29. The areas of three fields are 165 m^2 , 195 m^2 and 285 m^2 respectively. From these, flower beds of equal size are to be made. If the breadth of each bed be 3 metres, what will be the maximum length of each bed?
30. When $x^3 + 2x^2 + 4x + b$ is divided by $x+1$, the quotient is $x^2 + ax + 3$ and the remainder is $-3 + 2b$. What are the values of a and b, respectively?
31. Solve : $\frac{2}{x} + \frac{3}{y} = 2$ and $\frac{4}{x} - \frac{9}{y} = -1$
32. The cost of 2 kg of apples and 1 kg of grapes on a day was found to be Rs. 160. After a month, the cost of 4 kg of apples and 2 kg of grapes is Rs. 300. Represent the situations geometrically
33. If the zeroes of the polynomial $x^2 - 5x + k$ are the reciprocal of each other, then find the value of k.

34. Divide (i) $2x^3 - 7x^2 + 7x - 2$ by $x^2 - 3x + 2$ (ii) $x^4 - 5x + 6$ by $2 - x^2$ and verify division algorithm.
35. Find all the zeroes of the polynomial $x^4 + x^3 - 34x^2 - 4x + 120$, if two of its zeroes are 2 and -2.
36. On dividing $x^3 - 3x^2 + x - 2$ by a polynomial $g(x)$, the quotient and the remainder were $x-2$ and $-2x+4$, respectively. Find $g(x)$.
37. On a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?
38. Write whether the square of any integer can be of the form $3m + 2$, where m is a natural number. Justify your answer.
39. The areas of three fields are 165 m^2 , 195 m^2 and 285 m^2 respectively. From these, flower beds of equal size are to be made. If the breadth of each bed be 3 metres, what will be the maximum length of each bed?
40. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients : (i) $4u^2 + 8u$ (ii) $t^2 - 15$ (iii) $3x^2 - x - 4$
41. If α, β are the zeroes of the quadratic polynomial $x^2 + 3x + 6$, find the values of (i) $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$ (ii) $\alpha^2 + \beta^2$
42. If p and q are the zeroes of the polynomial $2x^2 - 5x + 7 = 0$, then find a polynomial whose zeroes are $2p + 3q, 3p + 2q$.
43. If the zeroes of the polynomial $x^2 - px + q$ are double in value to the zeroes of $2x^2 - 5x - 3$, find the value of p and q .
44. Some villages of a city jointly established a trust for women and child welfare. In a school of the same area, 25 boys and 20 girls of class IX donate Rs. 7000 where as 30 boys and 15 girls of class X donated Rs. 7500. Find the money donated by each boy and each girl.
45. Solve for x and y :
- (i) $\frac{15}{x-y} + \frac{22}{x+y} = 5$; $\frac{40}{x-y} + \frac{55}{x+y} = 13$; $x \neq y, x \neq -y$
- (ii) $4x + 3y = 18xy$ and $2x - 5y + 4xy = 0$; $x \neq 0, y \neq 0$.
- (iii) $7(y+3) - 2(x+2) = 14$ and $4(y-2) + 3(x-3) = 2$
46. Solve the following system of equations using cross multiplication :
- (i) $ax + by - (a-b) = 0$ and $bx - ay - (a + b) = 0$
- (ii) $a(x + y) + b(x - y) - (a^2 - ab + b^2) = 0$ and $a(x + y) - b(x - y) - (a^2 + ab + b^2) = 0$
47. Solve the following system of equations graphically :
- (i) $x - y + 1 = 0$ and $3x + 2y - 12 = 0$ (ii) $\frac{x}{2} - 1 = \frac{y}{6}$ and $\frac{x}{4} + \frac{y}{6} = 2$
48. 2 women and 5 men can together finish an embroidery work in 4 days, while 3 women and 6 men can finish it in 3 days. Find the time taken by one woman alone to finish the work, and also that taken by one man alone.
49. For what value of k the following system of equation is inconsistent ?
 $\frac{3}{2}x - ky = 6$ and $6x - 5y = 20$.
50. Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds, they meet in 5 hours. If they travel towards each other, they meet in 1 hour. What are the speeds of the two cars?
51. A boat goes 30 km upstream and 44 km downstream in 10 hours. In 13 hours, it can go 40 km upstream and 55 km downstream. Determine speed of the stream and that of the boat in still water.

SUB :- SCIENCE

PHYSICS

- Q.1 Why does resistance of a metallic conductor increase with increase in temperature?
- Q.2 Why does an electric bulb become dim when an electric heater in parallel circuit is switched on? Why does dimness decrease after sometime?
- Q.3 A wire of length L and resistance R is stretched so that its length is doubled and area of cross section is halved. How will its resistance and resistivity change? Justify your answer.
- Q.4 What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series?
- Q.5 Why does the connecting cord of an electric heater not glow while the heating element does?

- Q.6 The potential difference between two points in an electric circuit is 1 Volt? What does it mean? Name a device that helps to measure the potentials difference across a conductor.
- Q.7 Why is tungsten used almost exclusively for filament of an electric bulb?
- Q.8 Why is copper and aluminium wires usually employed for electric energy transmission?
- Q.9 How much energy is given to each Coulomb charge passing through a 6 V battery?
- Q.10 A hot plate of an electric oven is connected to a 220 V line has two resistance coils A and B, each of 24 Ohm resistance, which may be used separately, in series or in parallel. What are the currents in the three cases?
- Q.11 A 4 Ohm resistance wire is doubled on it. Calculate the new resistance of the wire.
- Q.12 How is an ammeter connected in an electric circuit? Support your answer with reason.
- Q.13 What is electrical resistivity? Give its S.I unit.
- Q.14 On what factors resistance of a conductor depends upon?
- Q.15 Will current flow more easily through a thick wire or thin wire of the same material, when connected to the same source? Why?
- Q.16 Why are coils of electric toasters and electric iron made up of alloy rather than pure metal?
- Q.17 Why is series arrangement of appliances not used for domestic circuits?
- Q.18 Two resistance when connected in parallel give resultant value of 2 Ohm, when connected in series the value becomes 9 Ohm. Calculate the value of each resistance.
- Q.19 How can three resistors of 2 Ohm, 3 Ohm and 6 Ohm be connected to give a total resistance of (i) 4 Ohm (ii) 1 Ohm ?
- Q.20 Compute the heat generated in Joules while transferring 96,000 Coulombs of charge in one hour through potential; difference of 50 V.
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CHEMISTRY

- Q.1 Why should a magnesium ribbon be cleaned before burning in air?
- Q.2 Why is photo synthesis considered an endothermic reaction?
- Q.3 Why do we apply paint on iron articles?
- Q.4 Oil and fat containing food items are flushed with nitrogen. Why?
- Q.5 What happens when quick lime is added to water?
- Q.6 How will you test for the gas which is liberated when hydrochloric acid reacts with an active metal?
- Q.7 What happens when dilute hydrochloric acid is added to iron filings?
- Q.8 Why is the colour of heated copper powder become black when air is passed over it?
- Q.9 Give one example of a reaction which is a double displacement as well as a precipitation reaction.
- Q.10 Why is hydrogen peroxide kept in coloured bottles?
- Q.11 Give one example of a combination reaction which is also exothermic.
- Q.12 What is a balanced chemical equation? Why should the chemical equations be balanced?
- Q.13 How do we come to know that a chemical reaction has taken place?
- Q.14 Why is respiration considered an exothermic reaction? Explain.
- Q.15 What do you mean by precipitation reactions? Explain with examples.
- Q.16 What is an oxidation reaction? Give an example of oxidation reaction.
- Q.17 What is observed when a solution of potassium iodide is added to a solution of lead nitrate taken in a test tube? Write a balanced chemical equation to represent the above reaction.
- Q.18 What happens when silver chloride is exposed to sunlight? Write a chemical equation for this reaction. Also give one use of such a reaction.
- Q.19 During electrolysis of water a few drops of sulphuric acid is added to water. Why?
- Q.20 A white salt on heating decomposes to give brown fumes and a yellow residue is left behind. Name the salt and write the reaction involved.

BIOLOGY

- Q1. Mention how organisms like bread moulds and mushrooms obtain their food .
- Q2. Give one reason why multicellular organisms require special organs for exchange of gases between their body and their environment .
- Q3. Name the intermediate and the end products of glucose breakdown in aerobic respiration .
- Q4. Name the two ways in which glucose is oxidised to provide energy in various organisms .
- Q5. Why are lungs divided into very small sac-like structures called alveoli ?

- Q6. (a) Write the balanced chemical equation for the process of photosynthesis .
(b) When do the desert plant take-up carbon dioxide and perform photosynthesis /
- Q7. Distinguish between saprozoic and holozoic nutrition .
- Q8. How is carbon dioxide obtained by (a) aquatic plants ,(b) terrestrial plants .
- Q9. What is saliva ? State its role in the digestion of food .
- Q10. How would digestion of food be affected if the bile duct is completely blocked ?
- Q11. Explain the process of breakdown of glucose in a cell
(a) in the presence of oxygen (b) in the absence of oxygen .
- Q12. State three common features of respiratory organs of animals .
- Q13. Distinguish between aerobic respiration and anaerobic respiration .
- Q14. What are stomata and lenticels ? What is their role in respiration ?
- Q15. How does gaseous exchange take place in amoeba ? Explain .

SUB :- S.Sc

I. Answer the following questions:-

- Q1. What is the importance of soil? Explain any three features of black soil.
- Q2. What steps can be taken to control soil erosion in the hilly areas?
- Q3. What is resource planning? What is the need for planning of resources?
- Q4. Distinguish between renewable and non renewable resources by giving 3 points of distinction.
- Q5. What do you mean by fallow land?
- Q6. Describe any four factors responsible for soil formation.
- Q7. "There is enough for everybody's need and not for anybody's greed. Whom did Gandhiji make responsible for the depletion of resources at the global level?
- Q8. Describe any 3 demands of the Sri Lankan Tamils. How did they struggle for their demands?
- Q9. Explain how power is shared among different organs of government.
- Q10. Define horizontal distribution of power.
- Q11. How powers are shared in different social groups and why?
- Q12. Write a short note on the ethnic composition of Belgium.
- Q13. What kind of government is there in Brussels?
- Q14. "Power sharing is the very spirit of democracy. Justify the statement with four suitable points.
- Q15. Which country has adopted Buddhism as its official religion?
- Q16. Define net attendance ratio.
- Q17. What do you mean by human development ratio?
- Q18. What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion, if any?
- Q19. Why is the issue of sustainability important for development?
- Q20. What is national income?
- Q21. " Money in your pocket cannot buy all the goods and services that you may need to live well. Is it true or not? Elucidate.
- Q22. What do you mean by absolute monarchy?
- Q23. What changes were introduced after the French Revolution in France?
- Q24. Explain the Napoleonic Code.
- Q25. Why was Zollverein formed?
- II. Prepare a project on any one of the following topics:-
- a) Disaster Management (Pertaining to class Xth curriculum of Disaster Management only)
- OR
- b) Popular Struggles and Movements
- OR
- c) Money and credit