

ASCENT INTERNATIONAL SCHOOL, GR. NOIDA
HOLIDAY HOMEWORK (2017 - 18)
CLASS - IX

ENGLISH

1. Read the novel – Three Men in a Boat, chapter 1 to 10.
 - a) Write the character sketch of the narrator and his friends.
 - b) Pick up 20 words from the book. Find the dictionary meanings and use them in sentences of your own.
2. Answer the following questions:-
 - a) What is the theme of 'Three Men in a Boat'? Answer with reference to chapter 1 to 10.
 - b) Why was narrator averse to a sea voyage?
 - c) What impression did you gather about the three friends attitude towards work?
 - d) What is the role of Montmorency in the making of the story of 'Three Men in a Boat'?
3. Today while going to your office you happened to get caught in a massive traffic jam due to a VIP movement. You also saw that an ambulance with a critical patient was also halted. Write a diary entry in 100-120 words expressing your feeling.
4. Tourism is to travel not just for pleasure but to experience the arts or history of a location, to immerse oneself in the culture and religion of a region and to know the language. It not only brings people into contact with each other but also develops understanding of the other religions and culture.
Write a paragraph and make a Brochure on any one country around the world.

Note: It should be hand written.

Use A4 sheets, actual pictures, photographs and data.

You may refer to the following websites for information.

www.asiatravel.com

www.southaustralia.com

www.vacationspoint.com

www.wikipedia.org

MATH

1. Write five rational numbers and five irrational numbers between the rational numbers $\frac{3}{5}$ and $\frac{7}{8}$.
2. Express $0.6 + 0.\bar{7} + 0.4\bar{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

3. Represent $2.67, 2 + \sqrt{2}, 2\sqrt{3}, \frac{\sqrt{5}}{2}$ on the number line.
4. Arrange in ascending order of the following $\sqrt[3]{4}, \sqrt[5]{2}, \sqrt[4]{3}, \sqrt[6]{2}$.
5. If $x = 5 - \sqrt{24}$, find the value of $(x^3 + \frac{1}{x^3}) - 10(x^2 + \frac{1}{x^2}) + 4(x + \frac{1}{x}) - 30$.
6. If $x = \frac{\sqrt{2a+3b} + \sqrt{2a-3b}}{\sqrt{2a+3b} - \sqrt{2a-3b}}$, prove that $3bx^2 - 4ax + 3b = 0$.
7. Prove that: $(\frac{x^l}{x^{-m}})^{l-m} \times (\frac{x^m}{x^{-n}})^{m-n} \times (\frac{x^n}{x^{-l}})^{n-l} = 1$.
8. Prove that: $(\frac{x^{a^2+b^2}}{x^{-ab}})^{a-b} \times (\frac{x^{b^2+c^2}}{x^{-bc}})^{b-c} \times (\frac{x^{c^2+a^2}}{x^{-ca}})^{c-a} = 1$
9. If $a^x = b^y = c^z$ and $\frac{b}{a} = \frac{c}{b}$, prove that $\frac{2z}{x+z} = \frac{y}{x}$.
10. Factorise each of the following expressions: (i) $x^6 - 729$ (ii) $x^9 - y^9$ (iii) $x^{12} - y^{12}$
11. Let $f(x) = x^3 + kx^2 + hx + 6$. Find the value of h and k so that $(x + 1)$ and $(x - 2)$ are factors of $f(x)$.
12. $P(x) = kx^3 + 3x^2 - 3$ and $q(x) = 2x^3 - 5x + k$ when divided by $(x - 4)$ leave the same remainder in each case, find the value of k .
13. Find the values of m and n in the polynomial $2x^3 + mx^2 + nx - 14$ such that $(x - 1)$ and $(x + 2)$ are its factors.
14. Factorise :- (i) $x^3 - 2x^2 - 5x + 6$ (ii) $x^3 + 9x^2 + 23x + 15$
15. Factorise: - (i) $8p^3 + \frac{12}{5}p^2 + \frac{6}{25}p + \frac{1}{125}$ (ii) $a^3 - 2\sqrt{2}b^3$ (iii) $x^4 - 16y^4$ (iv) $x^8 - 256$
16. If $p(x) = x^2 - 4x + 3$, evaluate $p(2) - p(-1) + p(1/2)$
17. Find the zeroes of the polynomial $p(x) = (x - 2)^2 - (x + 2)^2$
18. Without finding the cubes factorize: $(x - 2y)^3 + (2y - 3z)^3 + (3z - x)^3$
19. If both $x - 2$ and $x - \frac{1}{2}$ are factors of $px^2 + 5x + r$, show that $p = r$.
20. If a, b, c are all non-zero and $a + b + c = 0$, prove that $\frac{a^2}{bc} + \frac{b^2}{ca} + \frac{c^2}{ab} = 3$.
21. If $a + b + c = 5$ and $ab + bc + ca = 10$, then prove that $a^3 + b^3 + c^3 - 3abc = -25$
22. Show that $y - 1$ is a factor of $y^{20} - 1$ and also $y^{21} - 1$.
23. Factorise: $x^3 - \frac{1}{x^3} - 14$
24. Using identities find the products of $(x - 1)(x + 1)(x^2 + 1)(x^4 + 1)$.
25. Factorise: (i) $a^4 + a^2 + 1$ (ii) $x^4 + 3x^2 - 28$

Note: The holiday homework should be done on A-4 size sheets.

SCIENCE

PHYSICS:

1. Can a body exist in a state of absolute rest or of absolute motion? Explain with example.
2. What can you say about the motion of an object whose distance-time graph is a straight line parallel to the time axis?
3. Under what condition is distance and the magnitude of the displacement equal?
4. When do you say that a body is in uniform acceleration?

5. Give an example of a motion in which average velocity is zero, but the average speed is not zero.
6. Explain how is it possible for an object to move with a constant speed but with uniform acceleration.
7. Under what condition, the average speed is equal to the magnitude of the average velocity. Justify your answer.
8. What is the difference between uniform motion in a straight line and uniform circular motion?
9. Joseph jogs from one end A to the other end B of a straight 300m road in 2 minutes 50 seconds and then turns around and jogs 100m back to point C in another 1 minute. What are Joseph's average speeds and velocities in jogging (a) from A to B and (b) from A to C?
10. A motor boat starting from rest on a lake accelerates in a straight line at a constant rate of 3.0 ms^{-2} for 8.0 s. How far does the boat travel during this time?

CHEMISTRY:

1. Why does food cook faster in pressure cooker?
2. Which cause more severe burns, steam or boiling water at same temperature? Why?
3. Why is ice at 273K more effective in cooling than water at same temperature?
4. Which property of matter is helpful in survival of aquatic plants and animals?
5. Explain by an activity that gases can be compressed up to a large extent?
6. Write and define the name of the process of the following state change
 - a) Solid to liquid
 - b) Liquid to solid
 - c) Liquid to gas
7. An inflated balloon collapses when pricked. Name the property of gases exhibited by this.
8. Prepare a project report by collecting information about the topic "**molecular model of gases, liquids and solids**" to show packing and density
9. Why do doctors advised to put strips of wet cloth on the forehead of the person having high fever?
10. Explain the effect of temperature and pressure on the different states of matter.
11. The melting point of three solids X, Y and Z are 298K, 314K and 398K respectively. Arrange these in increasing order of their inter particle force of attraction.
12. How does evaporation differ from boiling?

BIOLOGY:

1. How do substance like CO_2 and water move into and out of the cell? Discuss.
2. If the organization of a cell is destroyed due to some physical or chemical influence, what will happen?
3. How does Amoeba obtained food?
4. State the feature that is similar and one feature that is dissimilar with respect to mitochondria and plastids.

5. i) A fruit is green when unripe but become beautifully coloured when ripe.
How does this change occur?
- ii) What is the importance of this change?
- iii) What is mutualism involved?
- iv) Give an example of such a mutualism in our society.
6. What are the functions of cell membrane? How is the cell membrane able to perform diverse functions. Give an example of diversity in functioning in any segment of human society.
7. Bacteria do not have chloroplast but some bacteria are photoautotrophic in nature and perform photosynthesis. Which part of bacterial cell perform this?
8. Which cell organelle control most of the activities of the cell?
9. Draw a plant cell and label the parts which
 - a) Determine function and development of the cell.
 - b) Provides resistance to microbes and to withstand hypotonic external medium without injury.
 - c) Packages materials coming from the endoplasmic reticulum.
 - d) Is a fluid contained inside the nucleus?
 - e) Is site for many biochemical reactions necessary to sustain life?
10. Draw a well labelled diagram of eukaryotic nucleus. How is it different from nucleoid?
11. During vacations, Neha got an opportunity to visit to a village. She found ladies cooking food in open pans. She sat with them for some time and advised them to use pressure cooker instead of open containers in order to save time as well as fuel.
 - a) How does cooking in a pressure cooker help in saving time?
 - b) How does cooking in a pressure cooker help in saving fuel?
 - c) What is the value associated with this gesture of Neha?
12. During summers, many children suffer from dehydration, to overcome with dehydration non alcoholic drinks should be given in plenty like Coconut water, barley water, sugarcane juice or glucose water are the best.
 - a) What is meant by dehydration?
 - b) Name the elements present in water.
 - c) Name the fruits containing maximum amount of water.
 - d) How will you make children aware about taking sufficient amount of liquid and water to prevent dehydration?
 - e) "Water is precious on Earth" Suggest some measures to preserve water at home.
 - f) RO purification of water is a boon or just wastage of water? Justify your answer.

SOCIAL SCIENCE

CIVICS

1. Why is democracy considered the best form of government?
2. Differentiate between Democracy & Dictatorship by giving examples.
3. How can we say that China is not a democratic country despite holding elections regularly after every five years, for electing the country's parliament?
4. Why the public is not happy with the ruling party in Zimbabwe where the popular leader of the government acts in undemocratic way?
5. What steps were taken by General Pervez Musharraf in Pakistan to empower /enhance himself?

ECONOMICS

1. What can be done to encourage non-farm activities in our villages?
2. Distinguish between fixed & working capital.
3. How does unemployment affect the overall growth of an economy?
4. Which capital would you consider the best- land, labour, physical capital or human capital? Why?
5. In which field, do you think, India can build the maximum employment opportunities?

GEOGRAPHY:

1. Draw a map of India and locate these points- The Aravali hills, K2, Anaimudi, Nanga parbat, Western Ghat, Eastern Ghat, Maldives, Chotanagpur, Thar Desert, Chilika and Majuli lake.
2. Find out the name of the Glaciers and passes that lie in Great Himalayas.
3. Find the name of the states where highest peaks are located in the map of India.

HISTORY:

1. Point out the places in the map of France- Marseilles, Waterloo, Estrees, Ruffec, La farte, Bourdeaux, Normandy and different neighbouring counties.
2. Find out more about the revolutionary figures you have read about in this chapter French Revolution. Write short biography on these persons- a) Montesque b) Rousseu

COMPUTER SCIENCE

All answers should be picture based with proper presentation of the topic:

1. Make a list of different email addresses that you or yourfriends use and identify different Host names.
2. Search on Internet for different e-learning programs that are available. List down the benefits derived by you. Which e-learning program is used by your school and find out the information derived by them.

3. Identify the local TV programs that are using Videoconferencing. Can you make a list of advantages whilewatching the program? Also list what were the disadvantages of video conferencing that you notice.
4. Make a reservation of a ticket online and make a list of all the steps needed.
5. List all social media sites you are using. Identify what benefits you feel by their use. Also identify the restrictions these websites put on you as a user.
6. Create an account in Facebook. How can you use the gaming facility on the Facebook?
7. Complete all the application based questions (chapter-2,pg. no.-58) with good picture based presentation.

Note: This all above work you have to do in your practical file of ICT.

HINDI

परियोजना

1. पी-15 (P-15) का नाम माउन्ट ऐवरेस्ट पड़ा जानकारी प्राप्त कर परियोजना तैयार कीजिए।
2. भारत में बालश्रम की समस्या पर विवरणात्मक तथा चित्रात्मक वर्णन कीजिए।

प्रश्नोत्तर

3. गाँव के बचपन और नगर के बचपन में क्या अंतर होता है?
4. गोधूलि को गाँव की संपत्ति मानने के पीछे क्या तर्क है ?
5. 'दुख का अधिकार' कहानी हमारे समाज में गरीब लोगों की मानसिक व आर्थिक स्थिति को उजागर करती है ? स्पष्ट कीजिए।
6. कवि ने सोने व सुहागे की बात किस संबंध में कही है और क्यों ?
7. चित्रकूट कहाँ स्थित है ? अवध नरेश चित्रकूट में कब और क्यों रहे थे ?
8. हमारे पूर्वजों को पुनः धरती पर अपने प्रियजनों से मिलने हेतु कब और कैसे आना होता है ? क्या ऐसा संभव है?
9. व्यक्ति के सुख दुख में समाज की क्या भूमिका होती है ? 'दुख का अधिकार' पाठ के आधार पर लिखो।

लेखन

10. आप ग्रीष्मवकाश में शिमला स्थित पर्वतारोहण संस्थान से प्रशिक्षण पाना चाहते हैं, पर आपने पिताजी के अनुमति नहीं दी। उन्हें समझाते हुए पत्र लिखिए कि पर्वतारोहण सीखने के क्या लाभ हैं।