

K.V.M PUBLIC SCHOOL, HALDWANI (2025-26) **HOLIDAY HOMEWORK CLASS – XI COMMERCE**

MATHEMATICS

- 1. For any two sets A and B prove that $(A B) \cup B = A \cup B$
- 2. For any three sets A and B, prove that: (i) $A (B \cap C) = (A B) \cup (A C)$
 - (ii) A (B U C) = (A B) \cap (A C) (iii) A \cap (B C) = (A \cap B) (A \cap C)
- 3. Draw appropriate Venn diagram for each of the following (i) $(A \cup B)'$ (ii) $(A \cap B)'$.
- 4. A = $\{1,2,3,5\}$ and B = $\{4,6,9\}$. Define a relation R from A to B by R = $\{(x, y) : \text{the difference}\}$ between x and y is odd ; $x \in A, y \in B$.

5. If
$$f(x) = \frac{1+x}{1-x}$$
 show that $\frac{f(x) \cdot f(x^2)}{1+[f(x)]^2} = \frac{1}{2}$.

- 6. Find the domain and range of $f(x) = \frac{x-2}{x-1}$. 7. Find the domain and range of $y = \frac{1}{2-\sin 3x}$.
- 8. Draw the graph of functions and find domain and range. (i) constant function (ii) identity function (iii) modulus function (iv) signum function(v) greatest integer function
- 9. Express 42⁰ 57' 16" in radian measurement
- 10. A circular wire of radius 4 cm is cut and bent so as to lie along a circumference of a hoop whose radius is 56 cm. find the angle in degrees which is subtended at the centre of hoop.
- 11. If Sin x = 3/5, and x lies in the second quadrant, find the other five trigonometric functions.
- 12. If x lies in the 3rd quadrant then show that $\sqrt{\frac{1-\cos x}{1+\cos x}} + \sqrt{\frac{1+\cos x}{1-\cos x}} = -2\csc x$.
- 13. Find the least value of $Sin^2x + Cosec^2 x$.
- 14. Find the range of $f(x) = 1 + 5 \operatorname{Sin} 2x$.
- 15. Find the value of $\operatorname{Tan}_{\frac{13}{12}}^{\frac{13}{12}}$.
- 16. Find the value of $\sin \frac{7\pi}{12}$.

17. If Sin
$$\alpha = K \operatorname{Sin} \beta$$
, prove that Tan $\frac{\alpha + \beta}{\alpha} = \frac{K-1}{K+1} \operatorname{Tan} \frac{\alpha + \beta}{\alpha}$.

- 18. If $\cos(A+B) \sin(C+D) = \cos(A-B) \sin(C-D)$, then show that $\cot A$. $\cot B$. $\cot C = \cot D$.
- 19. Prove that 2 Cos x = $\sqrt{2 + \sqrt{2 + 2\cos 4x}}$.
- 20. Prove that $\sin 2x + 2 \sin 4x + \sin 6x = 4 \cos^2 x \sin 4x$.

21. Prove that
$$\cos x$$
. $\cos \left(\frac{\pi}{2} + x\right) \cos \left(\frac{\pi}{2} - x\right) = \frac{1}{4} \cos 3x$.

22. Prove that $\frac{1+\sin 2A-\cos 2A}{1+\sin 2A+\cos 2} = \tan A$

SUBJECT - ENGLISH

- 1.Read any of the following classic stories from the options below: The Bet – Anton Chekhov The Gift of the Magi – O. Henry The Last Leaf – O. Henry
 - The Model Millionaire Oscar Wilde
 - A Cup of Tea Katherine Mansfield
 - An Astrologer's Day- R K Narayan
- 2. Write an analytical response for any of the stories (400–500 words each) including:
 - a. Summary (in your own words, 100–120 words)
 - b. Main conflict (internal or external? How is it resolved?)
 - c. Character analysis Focus on one main character
 - d. Central theme/message of the story
 - e. Use of literary devices (irony, symbolism, foreshadowing, etc.)
 - f. Personal reflection What did the story teach you? Did it surprise you?

YOGA

- 1. What is the definition and purpose of yoga?
- 2. What are the benefits of practicing asanas and how to perform them correctly?
- 3. What are the different types of pranayama and their benefits?
- 4. What is meditation (dhyan) and how is it practiced?
- 5. What is the relationship between yoga and health?

PHYSICAL EDUCATION (048)

Prepare track and field file. The file must include the following points and should be in the given sequence: - *History (world and Indian)

*Dimensions of track and field (dimensions of track, throwing events and jumping events)

*Terminology use in track and field

*Skill use in track and field

* Write about all events of running, throwing and jumping

*Famous personality international and national both male and female

*Venue

INFORMATICS PRACTICES

1. Programming Assignments

Write a Python program that performs basic operations (addition, subtraction, multiplication, division).**2. Research and Presentation**

Research a recent technology trend (like AI, IoT, or Blockchain) and prepare a presentation. Discuss its applications, benefits, and challenges.

ECONOMICS

Note: Answer the following questions in your revision note book and prepare the Assignment in A-4 sheets.

- 1. What do you mean by rotation in PPC? Explain using a suitable diagram.
- **2.** "Scarcity is a universal phenomenon". Do you agree with this statement? Justify you answer with valid reasons.
- 3. Explain the two prominent features of resources.
- **4.** "Growing rate of unemployment in India results in shift in PPC towards left". Defend or refute the statement with valid reason.
- 5. Differentiate between capitalistic and socialistic economy.
- **6.** Gulf countries have acquired more capital goods by selling oil to various countries. What would be it's impact on Production Possibility Curve?
- 7. Differentiate between Cardinal Utility and Ordinal Utility approach.
- **8.** Economic slowdown in some parts of the world has adversely affected demand for Indian exports. What will be it's effect on the Production Possibility Frontier of India? Explain.
- **9.** "Law of Diminishing Marginal Utility will operate even if consumption takes place in intervals". Do you agree with this statement? Why or why not?
- **10.** Establish the relation between Total Utility and Marginal Utility using a suitable schedule and diagram.
- Prepare an Assignment on the topic "Economic Development of Uttarakhand".

BUSINESS STUDIES

- 1. Define cooperative organisation. Explain the features of cooperative organisation.
- 2. Explain the merits and limitations of cooperative organisation.
- 3. Explain various types of cooperative societies.
- 4. Define a Joint Stock Company. Explain its features.
- 5. Explain the merits and demerits of a company.

- 6. Differentiate between a Private Company and Public Company.
- 7. Explain the procedure for formation of a company.
- 8. List the documents required for the formation of a company.

Note: Answer the above questions in your classwork note book.

ACCOUNTANCY

Make a project file on the topic Source Documents and Vouchers.

The project should be prepared and presented in this order:

1-Cover Page4- Certificate7- Conclusion

- 2- Acknowledgement5- Index8- Bibliography
- 3- Index
- 6- Content Pages
- 9- Teacher's remark

Instructions: i. It must be hand written.

ii. Relevant pictures and specimen must be pasted.