Holiday Homework 2024-25 Class XII

Accountancy

1. Do 3-3 questions related to each topic from the chapters Partnership fundamental, Goodwill Change in profit sharing ratio. Admission of a new partner.

2. Write down important points related to theory from each chapter.

3. Write down formulas used in chapters.

4. Do practice of all the chapters.

Economics

1. Prepare a project file on the topic "Unemployment".

2. Solve Assignments: Indian Economic Development Chapter :- (1-5)

Business Studies

1. Prepare a project file on the topic "Principles of Management".

2. Solve Assignments: Management Chapter :-1& 2

English

Research on child Labour in India in general and also focus on children like Saheb-E-Alam, from Seemapuri, who forage the garbage dumps, and Mukesh, form Firozabad, who work in bangle making factory.

• Prepare a project based on your research. The salient points to be focused upon are as follows:

•Introduction on Child Labour in Indian scenario.

• Causes of increasing rate of child Labour. Child Labour Acts, Seminars at National and International levels.

•What needs to be done to eradicate child Labour.

•Write about the works and contributions of Kailash Satyarthi- A prominent

•Social Worker who worked towards alleviating the deplorable condition of the child labour in India.

•An interview with a child Labour.

•Essay of about 800 words on Child Labour (a gist of your research work)

Paste suitable pictures wherever possible.

To be submitted in a shoelace file .

SECTION C EXPLORE

Explore the following concepts and write a brief note in your own words. Note that all these concepts will be helpful in understanding the chapters/poems.

- * Socialism
- * Romanticism
- * Feminism
- * Racism

Casteism

- * Satire
- * Patriarchy
- * Dramatic Irony

Section - D

Practise the Reading Comprehension Passage of last 5 cbse sample papers issued by cbse.

•. Reading suggestions -

I. The Alchemist by Paulo Coelho

ii. The 7 Habits of Highly Effective People" by Stephen Covey. ...

"The Power of Positive Thinking" by Norman Vincent Peale. ...

"The 5 AM Club" by Robin Sharma. ...

"The Power of Now" by Eckhart Tolle. ...

"Mindset" by Carol Dweck. ...

"Drive: The Surprising Truth About What Motivates Us" by Daniel H.

Physical education

Make a Project File.

Topics -

Practical-1: Fitness tests administration. (SAI Khelo India Test)

➢ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.

Practical-3: Anyone one IOA recognized Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills.

Painting

Practical

1. Still life (1) pencil shade

2. Still life (1) water colour

3. Portrait (1) pencil shade

4. Portrait (1) water colour

5. Folk art (1) water colour

6. Landscape (1) pencil shad

7. Landscape (1) water colour

8. Any Bird (1) pencil shade

9. Any Flower with leaves (1) water colour

10 . Any Festival (1) water colour

• Note . All work is to be done on A2 sheets .

Section (B) Theory

• Write an essay on the biography of Maharana Pratap

5 marks

* Write an essay on Mughal Dynasty 5 Marks

* All work is to be done on A4 Size

INFORMATICS PRACTICES

Visit the website "Code.org" Complete at least two online courses available on the website. Submit the
completion certificate of the same.(5+5=10 MARKS)Complete an 'Android development Course' from any websites like Coursera, Edx etc . And deposit
print of screenshot of the completion of course.(5+5=10 MARKS)

| MATHS - CHAPTER – 1 RELATIONS AND FUNCTIONS | |
|---|--|
| 1. | Show that the relation R in the set $\{1, 2, 3\}$ given by $R = \{(1, 2), (2, 1)\}$ is symmetric but neither reflexive nor transitive. |
| 2. | Let A be the set of all real numbers. Check whether the relation R in A, defined by $R = \{(a,b) : a \le b^2\}$ is reflexive, symmetry or transitive. |
| 3. | Show that the relation R defined in the set $\{1, 2, 3, 4, 5, 6\}$ as $R = \{(a, b) : b = a + 1\}$ is neither reflexive, nor symmetry or nor transitive. |
| 4. | Show that the relation R in the set A of all the books in a library of a college given by $R = \{(x, y) : x \text{ and } y \text{ have same number of } pages\}$ is an equivalence relation. |
| 5. | Let A be the set of all real numbers. Show that the relation R in A, defined by $R = \{(a,b) : a \le b\}$ is reflexive and transitive but not symmetry. |
| 6. | Let the function $f: N \to N$ given by $f(n) = \begin{cases} \frac{n+1}{2}, & \text{when } n \text{ is odd} \\ \frac{n}{2}, & \text{when } n \text{ is even} \end{cases}$, Show that the function is many one |
| | onto. |
| 7. | Show that the function $f : R \to R$ given by $f(x) = x^2$, is neither one-one nor onto, where R is the set of all real numbers. |
| 8. | Check the injectivity and surjectivity of the function $f: N \rightarrow N$ given by $f(x) = x^2$. |
| 9. | Show that the function $f : R \to R$ given by $f(x) = x^2$, is neither one-one nor onto, where R is the set of all real numbers. |
| 10. | Show that the function $f: R \to R$ given by $f(x) = [x]$, is neither one-one nor onto, where $[x]$ denote the greatest integer function less than or equal to x. |
| 11. | Show that the function $f: R \to R$ given by $f(x) = x $, is neither one-one nor onto, where R is the set of all real numbers. |
| 12. | Check the injectivity and surjectivity of the function $f: Z \rightarrow Z$ given by $f(x) = x^3$. |
| 13. | Show that the function $f: R_* \to R_*$ given by $f(x) = \frac{1}{x}$, is one-one nor onto, where R_* is the set of all non zero real numbers. |
| | |

CHAPTER - 2 INVERSE TRIGONOMETRIC FUNCTIONS1.Find the principal value branch of the following:
(a)
$$\sin^{-1}\left(-\frac{1}{2}\right)$$
 (b) $\cos^{-1}\left(-\frac{1}{\sqrt{2}}\right)$ (c) $\cot^{-1}\left(\sqrt{3}\right)$ (d) $\csc^{-1}(2)$
(e) $\csc^{-1}\left(\frac{\sqrt{3}}{2}\right)$ (f) $\cos^{-1}\left(-\frac{1}{2}\right)$ (g) $\tan^{-1}(-1)$ (h) $\tan^{-1}(-\sqrt{3})$
(i) $\sec^{-1}\left(\frac{\sqrt{2}}{\sqrt{3}}\right)$ (j) $\csc^{-1}(-\sqrt{2})$ 2.Write the following functions in simplest form:
(a) $\tan^{-1}\left(\sqrt{\frac{1-\cos x}{1+\cos x}}\right)$ (b) $\tan^{-1}\left(\frac{\sqrt{1+x^2}-1}{x}\right)x \neq 0$ 3.Prove the following:
(a) $\tan^{-1}\left(\frac{\sqrt{1-\cos x}}{1+\cos x}\right)$ (b) $3\cos^{-1}x = \cos^{-1}(4x^2-3x), x \in \left[-\frac{1}{2}, \frac{1}{2}\right]$ 4.Find the values of each of the following:
(a) $\tan^{-1}\left[2\cos\left(2\sin^{-1}\frac{1}{2}\right)\right]$ (b) $\tan\frac{1}{2}\left[\sin^{-1}\frac{2x}{1+x^2} + \cos^{-1}\frac{1-y^2}{1+y^2}\right]$ 5.Prove that: $\cot^{-1}\left(\frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}}\right) = \frac{x}{2}, x \in \left[0, \frac{\pi}{4}\right]$.6.Prove that: $\tan^{-1}\left(\frac{\sqrt{1+x}-\sqrt{1-x}}{\sqrt{1+x}-\sqrt{1-x}}\right) = \frac{\pi}{4} - \frac{1}{2}\cos^{-1}x, -\frac{1}{\sqrt{2}} \le x \le 1$.7.Prove that: $\tan^{-1}\left(\frac{a\cos x - b\sin x}{b\cos x + a\sin x}\right) = \tan^{-1}\frac{a}{b} - x$.8.Prove that: $\cot^{-1}\left(\frac{1}{\sqrt{x^2-1}}\right) = \sec^{-1}x, |x| > 1$.

CHAPTER – 3 MATRICES

| 1. | Compute the indicated product: $\begin{bmatrix} 1 & 2 & 4 \\ 3 & 6 & 9 \\ 7 & 8 & 7 \end{bmatrix} \begin{bmatrix} 1 & 8 & 5 \\ 6 & 5 & 7 \\ 6 & 8 & 6 \end{bmatrix}.$ |
|----|---|
| 2. | If $\begin{bmatrix} \sin \alpha & \cos \alpha \\ -\cos \alpha & \sin \alpha \end{bmatrix}$, then verify that $A^T A = I$. |
| 3. | If $F(x) = \begin{bmatrix} \cos x & -\sin x & 0\\ \sin x & \cos x & 0\\ 0 & 0 & 1 \end{bmatrix}$, then show that $F(x+y) = F(x) + F(y)$. |
| 4. | Find: $A^2 - 5A + 6I$, if $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$. |
| 5. | Prove that: $A^3 - 6A^2 + 7A + 2I = 0$, if $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$. |
| 6. | Show that the matrix $A = \begin{bmatrix} 1 & -1 & 5 \\ -1 & 2 & 1 \\ 5 & 1 & 3 \end{bmatrix}$ is a symmetric matrix. |
| 7. | Prove that the inverse of a matrix in unique. |
| 8. | If A and B are invertible matrices of the same order, then show that $(AB)^{-1} = B^{-1}A^{-1}$. |
| | PROJECT WORK |

Do activities in Lab manual pages.

- (1) Draw the graph of inverse trigonometric functions.
- (2) To demonstrate a function which is one-one but not onto.
- (3) To demonstrate a function which is not one-one but onto.