

7- If $A = \begin{bmatrix} 1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4 \end{bmatrix}$ then prove that:

A. $\text{adj}(A) = |A| \cdot I$, where I is an identity matrix of order 3.

8- Check whether the relation R defined in the set $\{1, 2, 3, 4, 5, 6\}$ as $R = \{(a, b) : b = a + 1\}$ is Reflexive, Symmetric or Transitive.

9- Show that the relation in the set R of real no. Defined $R = \{(a, b) : a b^3\}$, is neither reflexive nor symmetric nor transitive.

10- Solve the system of linear equations by matrix method:
 $x - y + z = 4$, $2x + y - 3z = 0$ and $x + y + z = 2$.

11- Find the equation of the line joining $A(1, 3)$ and $B(0, 0)$ using Determinant. Find the value of k , if $C(k, 0)$ is a point such then area of ΔABC is 3 square unit.

12- If $y = (\tan^{-1}x)^2$, show that- $(x^2 + 1)^2 y_2 + 2x(x^2 + 1)y_1 = 2$.

13- If $x = a(\cos t + t \sin t)$ $Y = a(\sin t - t \cos t)$, find d^2y/dx^2 .

14- Prove that $f(x) = |x|$ is not differentiable at $x = 0$.

15- Find the Domain and Range of the function $f(x) = \sin^{-1}(3x - 1)$.

Our Institutes

- ⇒ **NEW STANDARD PUBLIC SCHOOL SENIOR SECONDARY SCHOOL**
Tripula, Raebareli
- ⇒ **NEW STANDARD BALIKA VIDYA MANDIR**
Semri Kothi, Super Market, Raebareli
- ⇒ **NEW STANDARD PUBLIC SCHOOL INTERMEDIATE COLLEGE**
Baba Devadas Ashram, Salethu, Maharajganj, Raebareli
- ⇒ **NEW STANDARD PUBLIC SCHOOL**
Bagha, Salon, Raebareli
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Surendra Saraswati Nagar, Lalganj, Raebareli
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- ⇒ **NEW STANDARD ACADEMY**
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Note: Admission open for B.A. and B.Sc. for 2023-24

Illuminating Global Education Through Indian Values

NEW STANDARD GROUP OF INSTITUTES



HOME ASSIGNMENT 2023



Name.....

Class -12(UP & CBSE) Sec.

Branch.....

Note:1- All the written work is to be done in the fair note book.

2- Prepare in all subject taught topics for test just on reopening of the school.

हिन्दी— (CBSE)

1. 'गर्मियों में पहाड़ी क्षेत्रों की यात्रा' विषय पर 200 शब्दों में फीचर लिखिए।
2. 'सिल्वर वेडिंग पाठ' को पढ़कर उससे सम्बन्धित 15 प्रश्नों को स्वतः बनाकर उसके उत्तर लिखिए। (प्रत्येक प्रश्न का उत्तर एक पंक्ति में) 140 पेज की कॉपी पर
3. अभिव्यक्ति माध्यम से सम्बन्धित प्रश्नों को कंठस्थ कीजिए।

हिन्दी— (UP BOARD)

1. प्रवक्ता एवं लिपिक पद हेतु आवेदन पत्र लिखिए।
2. काव्यांग— (रस, छन्द, अलंकार) लिखिए।
3. आदिकाल व भक्तिकाल की रचनाएं व प्रवृत्तियों को कंठस्थ कीजिए।

ENGLISH-(CBSE & UP BOARD)

- 1- Write an article on Mobile Phone describing whether it is necessary for the students in schooling life or it is only an addiction.
- 2- Writing an article give your opinion about skill oriented and job oriented education.
- 3- Prepare all the taught topics for snap test.

PHYSICS-(CBSE & UP BOARD)

- 1- Compute electric potential at a distance of 0.1m from a point-charge of $4 \times 10^{-9} \text{C}$.
- 2- A capacitor when charged to 1000V, takes $2 \mu\text{C}$ of charge. Find the capacity of the capacitor.
- 3- The cross-sectional area of a wire is $1.0 \times 10^{-7} \text{m}^2$ and the density of free electron is $2.0 \times 10^{28} \text{m}^{-3}$. What will be the drift velocity of the free electrons for a current of 3.2A in the wire?
- 4- A current of 4.0A flows in a heating-wire of 100W. Determine the resistance of the wire.
- 5- Two cells A and B, each having emf 1.5V and internal resistance 1.5Ω and 0.5Ω respectively, are joined in parallel with a 1.0Ω resistor. Calculate currents drawn from the cells and their terminal potential differences.

CHEMISTRY-(CBSE & UP BOARD)

- 1- For an elementary reaction, $2A + B \rightarrow 3C$, the rate of appearance of C at time 't' is $1.3 \times 10^{-4} \text{mol L}^{-1} \text{s}^{-1}$. Calculate at this time: (i) rate of reaction, (ii) rate of disappearance of A.
- 2- For a reaction $R \rightarrow P$, the rate becomes 2 times when the concentration of the reactant A is increased 4 times. What is the order of reaction?
- 3- A first order reaction is 20% completed in 5 minutes. In what time will the reaction be 60% completed?
- 4- A first order reaction is 75% completed in 60 minutes. Find the half-life of this reaction.
- 5- The rate of a particular reaction quadruples when the temperature changes from 293 K to 313 K. Calculate activation energy.

BIOLOGY-(UP&CBSE)

- 1- Explain Microsporogenesis with the diagrammatic representation of flow chart and explain the functions of tepetum layer also.
- 2- Write the phenomenon of separation of characters during dihybrid cross by Morgan's Experiment.
- 3- Explain genetic disorders i.e., Phenylketonuria and Sickle Cell Anaemia with the progeny of disease.
- 4- If a heterozygous female with blood group A marry a homozygous male with blood group B then what will be the blood group of the children explain with the help of cross?
- 5- Explain female heterogamy with the help of cross.
- 6- Colour-blindness is more frequent in males as compared to females. Comment.
- 7- Justify the statement that it is better to have colour-blind father than to have colour-blind mother.
- 8- A very small sample of tissue or even a drop of blood can help to determine paternity'. Provide a scientific explanation to substantiate the statement.

OR

Name a technique to establish the paternity of a new-born baby. Describe the procedure that you would follow.

- 9- Justify the statement that sex of the child is determined at the time of fertilization.

MATHS-

1. Find the value of $\tan^{-1}(-\sqrt{3}) + \sec^{-1}(-2)$.
- 2- If A is a finite set containing '3' distinct elements, then find the number of Reflexive and Symmetric relations.
- 3- Prove that a relation, $R = \{(a, b) : 2 \text{ divides } (a - b)\}$ on the set of integer Z, is an equivalence relation.
- 4- If $A = \begin{bmatrix} 1 & 2 \\ 4 & 2 \end{bmatrix}$ then show that: $|2A| = 4|A|$.
- 5- If $(\cos x)^y + (\cos y)^x = (y)^x$ then find $\frac{dy}{dx}$.
- 6- If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$ then prove that: $A^3 - 6A^2 + 7A + 2I = 0$, where I is and identity matrix of order 3.

COMPUTER SCIENCE(CBSE)

All the student will complete the given Project File with synopsis and Python-MySQL coding in Spiral Binding.(As explained in Class room by Subject Teacher).

COMPUTER (UP BOARD)

- 1- Write a program to add any two number using class and object in c++.
- 2- Write a program in which get any array of 3X3 by user and exhibit its transpose in c++.
- 3- What is PDLC△ Explain about seven stages.
- 4- Write the algorithm to find the largest of the three number x, y, z also draw the flowchart.

PHYSICAL EDUCATION

- 1- Write the duties of the following committe's:-
(i) Technical Committe (ii) Media Committe
- 2- Draw the fixture of knock tournament of 25 teams with four seeded teams.
- 3- Make a practical / manual file of any one game.
(i) Kho-Kho (ii) Kabaddi (iii) Volley ball
- 4- Write the importance of Yoga.
- 5- Draw the stick diagram of following Yoga's asana.
(i) Virksha Asana (ii) Bhujanga Asana
(iii) Tada Asana (iv) Trikona Asana