

## COMPUTER SCIENCE (CBSE)

### 1- Write Python programs for the following:

1. Input a welcome message and display it.
2. Input two numbers and display the larger / smaller number.
3. Input three numbers and display the largest / smallest number.
4. Generate the following patterns using nested loops.

Pattern-1	Pattern-1	Pattern-1
*	1 2 3 4 5	A
**	1 2 3 4	A B
***	1 2 3	A B C
****	1 2	A B C D
*****	1	A B C D E

Write a program to input the value of x and n and print the sum of the following series

- $1 + x + x^2 + x^3 + x^4 + \dots x^n$
- $1 - x + x^2 - x^3 + x^4 - \dots x^n$
- $x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \dots \frac{x^n}{n}$
- $x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots \frac{x^n}{n!}$

## COMPUTER (UP)-

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Illuminating Global Education Through Indianic Values

# NEW STANDARD GROUP OF INSTITUTES



Name.....

Class.11 (UP & CBSE) Sec. ....

Branch.....

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

**2- Prepare taught topics in all subjects for test will be held just on reopening of the school.**

**हिन्दी— (CBSE/UP)**

1. 'वर्तमान समय में सरकारी विद्यालयों की वास्तविकता दशा' विषय पर लगभग 120 शब्दों में एक लेख व्याकरण की कॉपी में लिखिए।
2. अपने क्षेत्र में पेयजल की समस्या के निराकरण हेतु जल निगम के अधिशासी अभियन्ता को एक पत्र लिखिए।

**ENGLISH-(CBSE)**

- 1- You are the Secretary of the Literary Club of your school. Write a notice in about 50 words informing students about an upcoming Inter-School Writing Workshop. Include details about the guest speaker, date, time venue, and how to register.
- 2- Your school is organizing a 'Say No to Plastics' Awareness Rally in the city. As the Head Boy / Head Girl, draft a notice inviting students from classes IX-XII to participate and contribution to a greener environment. Mention the assembly point and timings.
- 3- Write a letter to the Editor of a national daily expressing your concern over the increasing traffic congestion and reckless driving in your city, which has made commuting a nightmare for students and elderly people. Provide a few suggestions for the authorities.
- 4- Draft a job application for the post of Front Desk Executive at a newly opened luxury hotel in your city. Mention your educational qualification, communication skills, and why you are suitable for the hospitality industry. Assume yourself as Amit/Amita of 24/B, Civil Lines, Prayagraj (Include a brief Bio-Data)
- 5- Write an article in 120-150 words on the topic.  
"The Role of Artificial Intelligence in Modern Education: A Boon or a Bane?"

**ENGLISH-(UP BOARD)**

- 1- Write the central idea of the poem "Voice of the Rain" in about 120-150 words.
- 2- Write the central idea of the poem "A Photograph" in about 120-150 words.
- 3- You are Kanika/Karan. Your school's Fitness Club hosted a workshop called "Art of Living for Students." Write a letter to the editor of the local daily newspaper expressing your views on the matter.
- 4- Write an article in 150-200 words on the topic "Role of trees in reducing pollution."

**5- Translate the following passage into English.**

लेजर एक उपकरण है जो प्रकाश को शक्ति प्रदान करता है। लेजर किरण प्रकाश की एक पतली धार पैदा करती है जो इतनी सशक्त होती है कि हीरे में भी छेद कर दे। लेजर शब्द Light Amplification by Stimulated Emission of Radiation का संक्षिप्त रूप है। इस शक्तिशाली प्रकाश ने कई क्षेत्रों में क्रांतिकारी प्रभाव डाला है। जैसे-औषधि, संचार, वैज्ञानिक, शोध कार्य, उद्योग और सैनिक कार्यवाही। लेजर प्रकाश बिजली के बल्ब अथवा ट्यूब तथा सूर्य से उत्पन्न प्रकाश से भिन्न होता है इन सभी स्रोतों से आया प्रकाश सभी दिशाओं में फैलता है लेकिन लेजर प्रकाश केवल एक ही दिशा में और एक ही संकरी धार में चलता है लेजर प्रकाश बहुत तेज और खतरनाक होता है।

**MATHS-(CBSE & UP BOARD)**

- 1- If  $A = \{a, e, i\}$ ,  $B = \{e, o, u\}$  and  $C = \{a, i, u\}$  then verify that:  
 $A \cap (B - C) = (A \cap B) - (A \cap C)$ .
- 2- Draw the graph of the greatest integer function  $f(x) = [x]$  and find its range.
- 3- If two finite set having  $m$  and  $n$  elements respectively and number of subsets of first set is 112 more than second set, find  $m$  and  $n$ .
- 4- If  $A$  and  $B$  are two sets such that  $n(A) = 10$  and  $n(B) = 7$ , find-  
(i) Least value of  $n(A \cap B)$ .  
(ii) Greatest value of  $n(A \cup B)$ .
- 5- If  $X = \{8^n - 7n - 1; n \in \mathbb{N}\}$ . and  $Y = \{49(n-1); n \in \mathbb{N}\}$ , then prove that  $X \subseteq Y$ .
- 6- If  $A$  and  $B$  are two sets such that  $n(A) = 17$ ,  $n(B) = 23$  and  $n(A \cup B) = 38$ , find:  
(i)  $n(A \cap B)$                       (ii)  $n(A - B)$                       (iii)  $n(B - A)$
- 7- A survey shows that 63% of Americans like cheese where as 76% like apples. If  $x\%$  of the Americans like both cheese and apples, find the value of  $x$ .
- 8- Find the domain and range of the function:  $f(x) = 5 - |x + 1|$ .
- 9- Write the relation  $R = \{(x, x^3): x \text{ is a prime number less than } 10\}$ , in the roster form.
- 10- Out of 100 students: 28 passed in Mathematics, 30 passed in Science, 42 in English, 8 in Mathematics and Science, 10 in English and Science, 5 in Mathematics and English, 3 in all the three. How many passed in exactly one subject?

- 11- Let  $A = \{6, 7, 8, 10\}$ ,  $B = \{1, 6, 8, 9\}$ . Find the elements of relation  $(A \cap B) \times A \cup B$ .
- 12- Let  $A = \{6, 7, 8, 9, 10\}$  and  $f: A \rightarrow N$  be defined by  $f(n) =$  the highest prime factor of  $n$ ,  $n \in A$ , find the range of  $f$ .
- 13- Let  $A = \{1, 2, 3, 4\}$ ,  $B = \{1, 4, 9, 16, 25\}$  and  $R$  be a relation defined from  $A$  to  $B$  as  $R = \{(x, y); x \in A, y \in B \text{ and } y = x^2\}$

**On the basis of above information, answer the following questions-**

- (i) Depict this relation using arrow diagram]  
 (ii) Find the domain of  $R$ .  
 (iii) Find the range of  $R$
- 14- Two non empty sets  $A$  and  $B$  are give by-  
 $A = \{x : x \text{ is a letter in MATHEMATICS}\}$  and  $B = \{x; x \text{ is a letter in STATISTICS}\}$   
 Based on above information, answer the following questions:  
 (i) Find the value of  $A \cup B$ .                      (ii) Find the value of  $A \cap B$ .  
 (iii) Find the value of  $A - B$ .

### **PHYSICS- (CBSE & UP)**

- 1- Complete two experiments in the lab manual.  
 Ex.-1- To measure diameter of a small spherical body using vernier calliper.  
 Ex.-2- To measure the internal diameter and depth of given beaker/calorimeter by using vernier calliper and hence find its internal volume.
- 2- Prepare a colorful chart of SI base quantities, units, and symbols.
- 3- Perform a simple measurement activity (length, mass, time) and calculate percentage error.
- 4- Draw graphs for displacement-time, velocity-time, and acceleration-time.

### **CHEMISTRY- (CBSE & UP)**

- 1- Complete two salt analysis experiments in lab manual (Ammonium carbonate and lead acetate).
- 2- What is the difference between the wave associated with a small moving particle and the wave emitted by a heater?
- 3- Why are cathode rays produced only at very low pressure ?
- 4- Give two commercial uses of cathode rays.
- 5- H-atom has only one electron, yet several lines are observed in its spectrum, why?
- 6- In Hund's rule, what does maximum multiplicity describe?

### **BIOLOGY- (UP&CBSE)**

**Do these experiments/spots in your lab manual**

- 1- Study the parts of a compound microscope- eye piece and objective lens, mirror, stage, coarse and fine adjustment knobs.
- 2- Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).
- 3- Test for presence of urea, sugar, albumin and bile salts in urine.

### **PHYSICAL EDUCATION (CBSE)**

- 1- Make the chart paper and indicate all Olympic games where and when they were held up to 2024.
- 2- Complete the first lab manual experiment (Games and Sports). Kabaddi, Kho-Kho, Volleyball, Football, Basketball (Choose any one)
- 3- Design five questions from the syllabus covered so far and write their answers in your fair notebook.
- 4- Prepare a file on Yogasanas and Pranayama, Include four asanas and four pranayamas, along with their procedure, benefits and contraindication.