

# KV AFS BAGDOGRA

## CLASS XII (sc)

### SUMMER VACATION HOLIDAYHOMEWORK

#### Subject: English (core)

Book : Flamingo Chapter 1 . The Last Lesson

Chapter 2. My mother at sixty six.

Vistas Chapter 2. The tiger king

Attempt all the Previous Years' board questions in your preparatory copy.

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#### Subject: Hindi

१. सिल्वर बैडिंग (बितान) प्रश्न संख्या - 1, 4, 6, 8

२. पतंग (आरोह) -> प्रश्न संख्या 1,2,3,4

३. कबिता के बहाने - (आरोह) प्रश्न संख्या- 1,2,3

४. अनुच्छेद - आतंकवाद समस्या एवं समाधान

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#### Subject: Mathematics

CHAPTER 1 RELATIONS AND FUNCTION

EXERCISE-1.1- Q2,Q5,Q8,Q9,Q10,Q11,Q12,Q13,Q14,Q16

EXERCISE-1.2- Q1,Q2(i),(iii),(iv),Q3,Q4,Q5,Q7,Q8,Q9,Q10

EXERCISE-1.3- Q1,Q2,Q4,Q6,Q7,Q8,Q9,Q13,Q14

MISCELLANEOUS EXERCISE ON CHAPTER 1-Q1,Q2,Q3,Q4,Q5,Q7,Q8,Q10,Q11,Q15,Q16,Q17,Q18,Q19

Including all examples questions

CHAPTER-3 MATRICES

EXERCISE 3.1- Q2,Q3,Q5,Q6,Q8,Q9,Q10.

EXERCISE 3.2- Q2(ii),(iv) ,Q3(ii),(iv),(v) ,Q5,Q6,Q7(ii)

Q12,Q13,Q16,Q17,Q18,Q19,Q21,Q22

EXERCISE 3.3- Q2,Q5,Q6,Q8,Q9,Q10,Q12

EXERCISE 3.4- Q15,Q16,Q17 (By using elementary row and column operation)

MISC. EXERCISE-Q1,Q2,Q3,Q4,Q5,Q6,Q9,Q10,

Q11,Q12,Q15

Including all examples questions

CHAPTER-4(DETERMINANTS)

EXERCISE-4.1-Q3,Q4,Q5,Q8

EXERCISE-4.2-Q2,Q3,Q5,Q6,Q8,Q9,Q10(i),11(i),Q12,Q13,Q14,Q15

EXERCISE 4.3- Q2,Q4

EXERCISE 4.4- Q3,Q4,Q5

EXERCISE 4.5- Q4,Q7,Q10,Q11,Q12,Q14,Q16,Q17,

Q18

EXERCISE 4.6- Q4,Q5,Q6,Q13,Q14,Q15,Q16

MISC. EXERCISE- Q1,Q2,Q3,Q4,Q6,Q7,Q8,Q11,Q12,Q15,Q16,Q17,Q18,Q19

Including all examples questions

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**Subject: Chemistry**

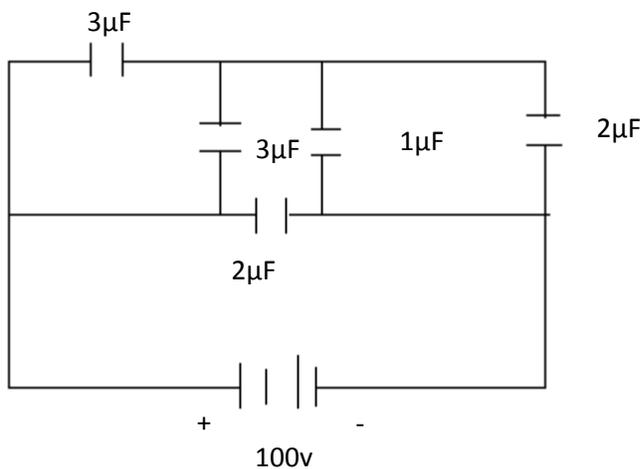
CLASS	SUBJECT	CHAPTER	HOME WORK	PASE NO.
XII	CHEMISTRY	1.SOLUTON 2.ELECTROCHEMISTRY 3.CHEMICAL KINETICS	EXERCIES EXERCIES EXERCIES	50-62 91-92 117-120

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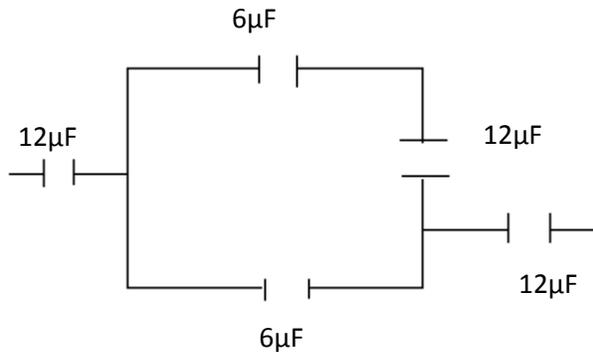
**Subject : Physics**

1. Derive the electric field due to a circular loop of charge.
2. Derive electric field on (i) axial line (ii) equatorial line, due to an electric dipole.
3. Derive the expression for torque on electric dipole system placed in uniform electric field.
4. State Gaus's theorem and prove it .
5. derive the formula for electric field due to(i) a line charge

- (ii) infinite plane sheets of charge
  - (iii) 2 infinite plane sheets of charge
  - (iv) A uniformly charge spherical shell.
6. Derive the formula for electric potential difference .
  7. Derive the formula for electric potential at any point due to an electric dipole
  9. Prove electric field as potential gradient.
  10. Define equipotential surfaces and write their properties.
  11. Derive the formula for electric potential energy of a systems of (i) 2 point charges (ii) 3 point charges (iii) in point charges
12. Expression for potential energy of an electric dipole system when placed in uniform electric field.
  - 13.a. Derive capacitance of a spherical conductor.
    - b. Derive capacitance of parallel plate capacitor.
  14. Derive capacitance of a parallel plate capacitor when a dielectric slab partially fills the space between plates.
  15. Capacitance of capacitors grouped in (i) series (ii) parallel
  16. Expression for energy stored in a charged capacitor.
  17. Derive the expression for loss of energy on sharing of charges by two capacitors.
  18. Calculate the total charge and energy stored in the network.



19. Calculate the equivalent capacitance of the capacitors given below:



**Subject: Biology**

1). To collect the previous five years questions from

AISSCE for chapters one to five and do them in your Preparatory copy.

2) Plan and try to do any two INVESTIGATORY PROJECTS

Either of your own choices or from the topics given in The Laboratory Book. We would later finalize one for the Actual Board Exams

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**Subject :Computer Science**

Answer the following questions:

1. A program having multiple functions is considered better designed than a program without any functions. Why?
2. What all information does a function header give you about the function?
3. What do you understand by flow of execution?
4. What are arguments? What are parameters? How are these two terms different yet related? Give example.
5. What is the utility of:
  - a. Default arguments
  - b. Keyword arguments?
6. Explain with a code example the usage of default arguments and keyword arguments.
7. Describe the different styles of functions in Python using appropriate examples/
8. Can a function return multiple values? How?
9. What is scope? What is the scope resolving rule in Python?
10. What is the difference between local and global variables?

11. When is global statement used? Why is its use not recommended?
12. Write the term suitable for following descriptions:
  - a. A name inside the parentheses of a function header that can receive a value.
  - b. An argument passed to a specific parameter using the parameter name
  - c. A value passed to a function parameter
  - d. A value assigned to a parameter name in the function header
  - e. A value assigned to a parameter name in the function call,
  - f. A name defined outside all function definitions.
  - g. A variable created inside a function body.

Programming practice: Write the following program code in Python using user defined functions.

13. Find all the prime numbers within a given range.
  14. Form a list of dictionary elements of name and marks pair. Sort them using Bubble sorting algorithm.
  15. Input a name from user as string and print the abbreviated name. Name can have any number of parts
    - a. e.g.1 Input: Tapan Kumar Das Output: T.K.Das
    - b. e.g.2 Input: Ananya Roy Output: A.Roy
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