JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **ENGLISH** **MARK: 35**
DATE: 01.08.2022 **TIME : 1 hrs**

SECTION – A (READING)

I. Read the passage given below and answer the question that follow:

1. The effects of plastic bags on the environment are really quite devastating. While there are many objections to the banning of plastic bags based solely on their convenience, the damage to the environment needs to be controlled.

2. There is no way to strictly limit the effects of plastic bags on the environment because there is no disposal method that will really help eliminate the problem. While reusing them is the first step, most people don't do that. These are bags not durable enough to survive numerous trips to the store. The best that citizens can do is to reuse them.

3. The biggest problem with this is that once they have been soiled they end up in the trash, which then ends up in the landfill or is burned. Either solution is very poor for the environment. Burning emits toxic gases that harm the atmosphere and increase the level of VOCs in the air while landfills hold them indefinitely as part of the plastic waste problem throughout the globe.

4. One of the greatest problems is that an estimated 300 million plastic bags end up in the Atlantic Ocean alone. These bags are very dangerous for sea life, especially those of the mammal variety. Any hunting mammal can easily mistake the size, shape and texture of the plastic bag for a meal and find its airway cut off. Needless deaths from plastic bags are increasing every year.

5. The environmental balance of the waterways is being thrown off by the rate of plastic bags finding their way into the mouths and intestinal tracts of sea mammals. As one species begins to die off at an abnormal rate, every other living organism in the waterways is impacted.

6. The indefinite period of time that it takes for the average plastic bag to break down can be literally hundreds of years. Every bag that ends up in the woodlands of the country threatens the natural progression of wildlife. Because the breakdown rate is so slow the chances that the bag will harmlessly go away are extremely slim. Throughout the world plastic bags are responsible for suffocation deaths of woodland animals as well as inhibiting soil nutrients. The land litter that is made up of plastic bags has the potential to kill over and over again. It has been estimated that one bag has the potential to kill one animal pet every three months due to unintentional digestion or inhalation.

7. While it's a noble thought to place the plastic bags in the recycling bin every week, studies have proven that there are very few recycling plants that actually recycle them. Most municipalities either burn them or send them off to the landfill after sorting. This is because it can be expensive to recycle this type of plastic. It doesn't melt down easily and is often not fit to be reused in its original form.

8. The premise of recycling these bags is nice. Yet funding for the upgrading of the recycling units just has not happened and thus less than 1% of all bags are sent to recycling plants worldwide. Most are left to become a pollution problem in one way or another.

9. There are always alternatives to plastic bags and the search for more alternatives continues. Paper bags are a possible option but they also take their toll on the environment. The use of trees to increase the production of paper products will also have a negative environmental effect.

10. Reusable plastic bags are being introduced to regions that want to outlaw the plastic bags altogether. These are stronger and more durable and can be used for three to five trips to the store. Of course, the reusable cloth bag is fast becoming a favourite among environmental supporters. While thus far no bag is without its issues, these are the bags that are currently recommended for use to help protect environmental concerns.

(a) On the basis of your reading of the above passage, answer the following questions by choosing the best option: **(1 x 2 = 2)**

1. What are the limitations of recycling units?
   (i) Premises are nice
   (ii) Plastic don't melt
   (iii) Recycling process is expensive
   (iv) Bags are not sent to the units

2. Which of the following statements is true in the context of the ninth paragraph?
   (i) There is no alternate for plastic bags
   (ii) Only plastic bags should be used
   (iii) Paper bags are an equal burden on environment
   (iv) Use of plastic bags would control the environment

(b) On the basis of your reading of the above passage, answer the following questions as briefly as possible: (1 x 6 = 6)

(i) Why do some people object to the banning of plastic bags?
(ii) Why is reusing plastic bags not considered practical?
(iii) Why is the disposal of plastic bags considered damaging to the environment?
(iv) How do plastic bags endanger the life of mammals in the sea?
(v) What factors discourage recycling of plastic bags
(vi) What according to the writer, is the best possible alternative to plastic bags?

(c) Find the words from the passage which mean the same as each of the following: (1 x 2 = 2)

(i) remove (Para 2) (ii) choking (Para 6)

SECTION – B (WRITING) (5 Marks)

2. You are Keshav/Karuna, living at 1, MG Road, bengaluru. You are very much concerned about the bad state of roads in the city. Write a letter to the editor of a newspaper expressing your concern over the problem faced by the commuters and giving suitable suggestions to solve the problem.

SECTION – C (LITERATURE)

3. Read the extract given below and answer the questions that follow: (1 x 6 = 6)

Fishermen in the cold sea
would not harm whales
and the man gathering salt
would look at his hurt hands.

(a) What does the poet expect of the fishermen and why?
(b) While gathering salt, what will the man do?
(c) What do the hurt hands imply?
(d) How would man and nature benefit in this moment of silence?
(e) "Would look at his hurt hands" Bring out the literary device used in the above line.
(f) Name the poem and the poet from which the extract is taken?

4. Read the following extract and answer the questions that follow: (1 x 4 = 4)

"Sometimes I think Grand Central is growing like a tree, pushing out new corridors and staircases like roots. There's probably a long tunnel that nobody knows about feeling its way under the city right now, on its way to times Square, and maybe another to Central Park. And maybe because for so many years Grand Central has been an exit, a way of escape- maybe that's how the tunnel I got into…..But I never told my psychiatrist friend about that idea."

(a) From the above extract what type of person was Charley?

(b) What can be inferred by the 'tunnel' from this extract?

(c) Why didn't Charley tell his Psychiatrist friend about this idea?

(d) Name the lesson from which the extract is taken?

5. Answer the following questions briefly: (5 x 2 = 10)

(a) what is the exotic moment that the poet refers to in keeping quiet
(b) what genre does the third level belong to explain
(c) what symbol from nature does the poet use to prove that keeping quiet is not total inactivity
(d) what do you infer from sam's letter to charley
(e) What are the different kinds of wars mentioned in the poem? What is Neruda's attitude towards these wars?

6. Answer the Details: (1 x 5 = 5)

(a) How did charley reach the third level? How was the grand central station according to charley extending and why?

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JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **BIOLOGY** **MARK: 35**
DATE: 22.07.2022 **TIME : 1 hrs**

General instructions:

(i) All questions are compulsory
(ii) The question paper has four sections and 16 questions. All questions are compulsory.
(iii) Section A has 5 questions of 1 marks each, Section B has 5 questions of 2 marks each and Section C has 5 questions of 3 marks each and Section – D has 1 questions of 5 marks.
(iv) Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION – A (5 x 1 = 5)

1. Name the glands that contribute to human seminal plasma.
2. In males , androgens are synthesized by which cells?
3. During entry into ovum , sperm induces changes in which layer? What does these changes prevent?
4. Why is colostrum a boon to the newborn baby?
5. What is implantation?

SECTION – B (5 x 2 = 10)

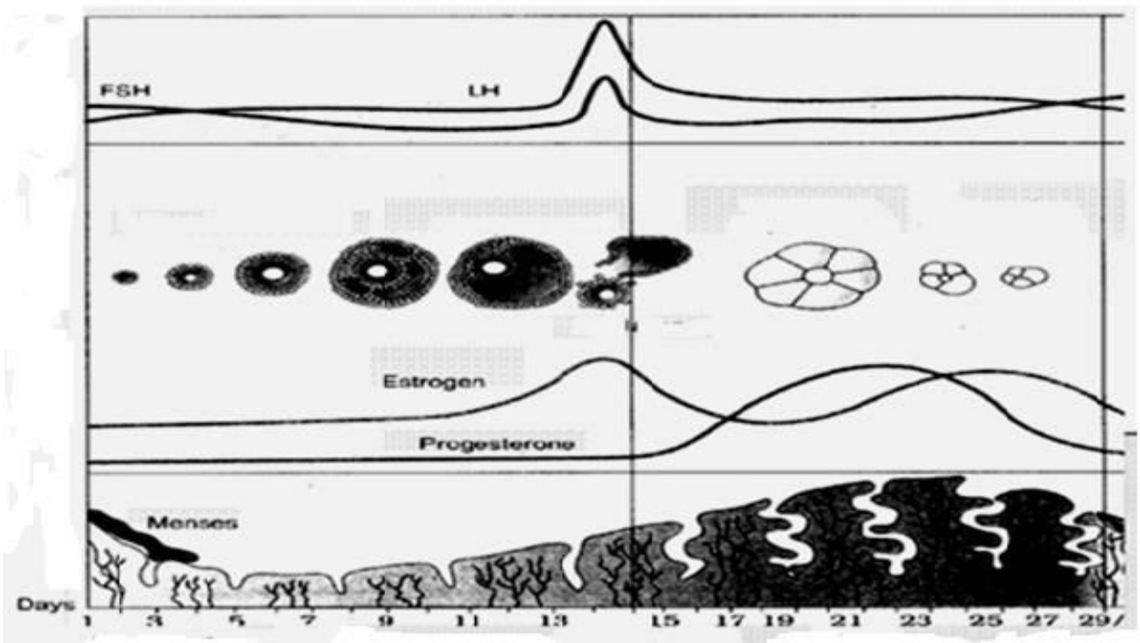
6. Where is acrosome present? Write its function.
7. Mention the relationship between Pituitary and Ovarian hormones during a menstrual cycle.
8. What happens to corpus luteum in human female if the ovum is (a) Fertilised (b) Not fertilized
9. Where does spermatogenesis occur in human male? Trace the path of spermatozoa upto the ejaculatory duct.
10. Differentiate between spermatogenesis and oogenesis on the basis of nature of meiotic division undergone by gamete mother cell.

SECTION – C (5 x 3 = 15)

11. State the role of Oxytocin in Parturition. What triggers its release from the ovary?
12. State any three functions of Placenta.
13. Draw a diagram of a mature sperm. Label and write function of any three parts.
14. What is alveoli? Mention its role in female mammary glands.
15. Why not all copulations lead to fertilization and pregnancy?

SECTION – C (1 x 5 = 5)

16. Study the graphical presentation and explain the <u>events during menstrual cycle</u> on the following days.



(a) Ovarian event from 6 to 13 days
(b) Ovarian event on the 14th day.
(c) Uterine event from 24 to 29 days
(d) Ovarian event and Ovarian hormone level during 15 to 23 days
(e) When is Pituitary hormone levels at their peak?

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JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **COMPUTER SCIENCE** **MARK: 35**
DATE: 22.07.2022 **TIME : 1 hrs**

SECTION – A **(6 x 2 = 12)**

1. Predict the output for the following Python code:
   for a in range $(10, 21, 3)$:
   print $(a + 200, end = ' \ ')$
2. Differentiate $'w'$ and $'a'$ mode.
3. (a) Suppose content of $'File\ 1.Txt'$ is
   "Computer Science"
   What will be the output of the following code?
   fh = open('File.Txt')
   n= fh .read( )
   print (len(n))
   fh . close ( )

   (b) Mention the module to be imported for stderr.write ( )
4. (a) A text file 'student.Txt' is stored in the storage device. Write the correct statement to open the file in write mode using the file object fh.
   (b) Write the Python statement to retain the previous data and allows to add new data in 'student.Txt' file using the file object fh.
5. (a) Which function displays the file content as list?
   (b) Mention the Python Jump statements.
6. What is file mode? Name the default file mode.

SECTION – B **(5 x 3 = 15)**

7. Differentiate Absolute and Relative path with example.
8. Assume the file Text3.txt has the following content:
   File handling
   Text files
   Write a Python code to display
   (a) 5 characters (b) entire content
9. (a) Suppose content of 'Mytext . txt' is
   'culture is the widening of the mind
   and of the spirit.'
   Predict the output of the following code.
   file 1 = open ('mytext . txt')
   x = file 1.read ( )
   y = x .count ('the')
   print (y)
   file 1.close ( )

   (b) Predict the output for the following
   a = 500
   While $a >= 100$:
   print (a + 50 , end = ' ')
   $a -= 100$
10. Write a Python code to accept a number and check whither it is odd or even.
11. a. Suppose the content of file "Text 4.txt" is
    Text File
    Binary File
    CSV File
    Predict the output for the following code:

    file 1 = open('Text 4.txt , 'r')
    S1 = file 1.read line ( )
    S2 = file 1. read (7)
    print(S1)
    print (S2)
    file 1.close ( )

    b. What is typecasting?

SECTION – C **(2 x 4 = 8)**

12. Explain mutable and immutable data type with example.
13. a. Write a Python code to display number of lines in Text5.txt file.
    b. How does readline() differ from readlines() ?

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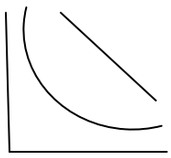
JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **CHEMISTRY** **MARK: 35**
DATE: 29.07.2022 **TIME : 1 hrs**

I. Answer the following questions: **(5 x 2 = 10)**

1. write the cell representation and cell reaction of Daniel cell.
2. what are primary cell and secondary cell? Give one example for each.
3. The conductivity of 0.20M solution of KCl at 298K is 0.025 S cm−1. Calculate its molar conductivity ?
4. State Kohlrausch law of independent migration.
5. The following curve is obtained when molar conductivity (∧m) is plotted against the square root of concentration, for two electrolytes A and B



(a) Identify A and B.
(b) How do you account for the increase in the molar conductivity of the electrolyte A on dilution.

II. Answer the following questions: **(5 x 3 = 15)**

6. (a) State Faraday's first and second law of electrolysis.
(b) How much charge is required for the conversion of 10 mole of $A1^{3+}\ to\ A1$.

7. (a) For the given cells : Lead storage cell, Mercury cell, Fuel cell and Dry cell.
(i) Which cell is used in hearing aids ?
(ii) Which cell was used in Apollo space programme ?
(iii) Which cell is used in automobiles and inverters ?
(iv) Which cell does not have long life ?
(b) Give two methods to prevent corrosion of metals.
8. calculate the standard free energy change for the following reaction at $25°C$. Predict whether the reaction will be spontaneous or not at $25°C$.

$$Ni(S) + 2\,Ag^{+} \rightarrow Ni^{2+}(aq) + 2\,Ag(S)$$

$E^{O}\ Ni^{2+}/Ni = -0.25\,V$ $E^{O}\ Ag^{+}/Ag = +0.8\,V$

9. write the anode, cathode and the reaction takes place in anode and cathode of mercury cell.
10. write a note on SHE.

III. Answer the following questions: **(2 x 5 = 10)**

11. (a) Calculate $e.m.f$ and ΔG for the following cell at $298\ K$.

$$Mg(S)/\ Mg^{2+}(0.01M)\ //Ag^{+}(0.0001\,M)\ /Ag(S)$$

Given $E^{O}\ Mg^{2+}/Mg = -2.27\,V$ $E^{O}\ Ag^{+}/Ag = 0.8\,V$

12. (a) Define limiting molar conductivity.
(b) Calculate the $\Lambda°_{H^{+}} = 349.6\,Scm^{2}mol^{-1}$ and $\Lambda°_{CH_3COO^{-}} = 40.9 Scm^{2}mol^{-1}$, if Λm of the $0.1\,M$ solution is $39.05\,S\ cm^{2}\ mol^{-1}$. Calculate its degree of dissociation.
13. A solution of $Ni(No_3)_2$ is electrolysed between platinum electrode using a current of $5A$ for $20\ min$. What mass of Ni is deposited at the cathode. (Atomic mass of $Ni = 58.7\ g\ mol^{-1}$)

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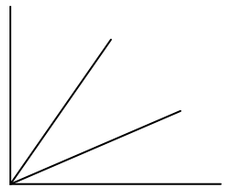
JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **PHYSICS** **MARK: 35**
DATE: 25.07.2022 **TIME : 1 hrs**

SECTION – A **(6 x 2 = 12)**

1. A short electric dipole has dipole moment of $4 \times 10^{-9}\ cm$. Determine the electric potential due to dipole at a point distant $0.3\ m$ from the centre of the dipole situated.
   (a) on the anial line (b) on the equatorial line
2. Define electric potential energy. Give its expression for the system of N point charges.
3. Draw the pattern of equipotential surfaces for
   (i) a positive point charge (ii) two equal and opposite point charges
   (iii) two equal positive charges (iv) for a uniform electric field
4. (a) Define the unit of capacitance of a conductor.
   (b) The given graph shows the variation of charge q versus potential difference V for two capacitors C_1 and C_2. The two capacitors have same plate separation but the plate area of C_2 is doubled than that of C_1. Which of the lines in the graph correspond to C_1 and C_2 and why?



5. What is meant by drift velocity and mobility of free electrons?
6. (i) Find the current flours through a copper wire of length $0.2\ m$, area of cross section $1\ mm^2$, when connected to a battery of $4\ V$. Given that electron mobility is $4.5 \times 10^{-6} m^2 s^{-1} v^{-1}$ and charge on an electron is $1.6 \times 10^{-19} C$. The number density of electron in copper wire is
   \ $8.5 \times 10^{18} m^3$.
   (ii) State Ohm's law.

SECTION – B **(6 x 3 = 18)**

7. (i) $5J$ of work is done in moving a positive charge of $0.5\ C$ between two points. What is the potential difference between these two points?
   (ii) How does the resistance of an insulator change with temperature?
   (iii) A charge given to the capacitor is doubled. What is its new capacitance?
8. (i) Write the expression which relates electric field and electric potential at a point.
   (ii) Write the expression for the work done on an electric dipole of dipole moment $\hat{P}$ in turning it from its position of stable equilibrium to a position of unstable equilibrium in a uniform electric field.
   (iii) What is the net charge of a charged capacitor?
9. (i) Derive an expression for the effective capacitance of series combination of capacitors.
   (ii) Net capacitance of three identical capacitors in series is $1\ \mu F$. What will be their net capacitance if connected in parallel?
10. Draw and explain in detail the construction and working of wheatstones bridge.
11. (i) State Kirchoff's laws (1 & 2)
    (ii) How many joules of energy are equivalent to $1\ kwh$?
    (iii) The maximum power dissipated in a $10000\ \Omega$ resistor is $1\ W$. What is the maximum current?
12. (i) The resistance of a nichrome wire at $0°C$ is 10Ω. if its temperature coefficient of resistance is $0.004/°C$. Find its resistance at boiling point of water. Comment on the result.
    (ii) Find the resistivity of a conductor in which current density of $2.5\ Am^{-2}$ is found to exist, when an electric field of $15\ Vm^{-1}$ is applied on it.

SECTION – C **(5 x 1 = 5)**

Case Study Based Questions:

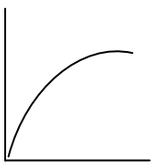
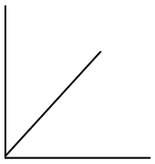
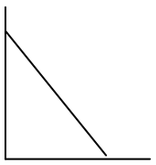
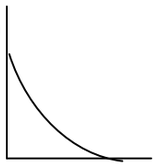
Any source of emf has some internal resistance itself, called internal resistance or source resistance. When we connect the terminals of a cell, a current flows in the wire from positive terminals of the cell towards the negative terminals. But inside the electrolyte of the cell, the positive ions flow from the lower to the higher potential against the background of other ions and neutral atoms of the electro lyte. So the electrolyte offers some resistance to the flow of current inside the cell. The resistance offered by the electrolyte to the flow of current between its electrode is called the internal resistance of the cell. It depends on nature and concentration of electrolyte, separation and common area of the electrode dipped in the electrolyte and temperature of the electrolyte. Internal resistance causes energy loss which occurs inside a

battery when a current is drawn round an external circuit. The greater the current, the greater the energy loss and small is the terminal potential difference of the battery. The internal resistance of a battery increases with age and so reduces the current it can drive. The knowledge of internal resistance becomes important when we consider how a source of emf can deliver maximum power to an appliance connected to it. According to maximum power theorem this occurs when the internal resistance of the source equals the resistance of the appliance.

1. The internal resistance of a cell.
   (a) always acts in the cell in open circuit
   (b) acts only in closed circuit and it reduces the EMF
   (c) acts only in closed circuit and it reduces the current
   (d) none of these

2. A battery of emf $10\ V$ and internal resistance $3\ \Omega$ is connected to a resistor. The current in the circuit is $0.5\ A$. The terminal voltage of the battery when the circuit is closed is
   (a) $10\ V$ (b) Zero (c) $1.5\ V$ (d) $8.5\ V$

3. A cell of emf $\mathcal{E}$ and internal resistance r is connected across an external resistance R. The graph showing the variation of P.D across R versus R is

(a)  (b)  (c)  (d) 

4. The maximum power drawn out of the cell from a source is given by
   (a) $\frac{\mathcal{E}^2}{2r}$ (b) $\frac{\mathcal{E}^2}{4r}$ (c) $\frac{\mathcal{E}^2}{r}$ (d) $\frac{\mathcal{E}^2}{3r}$
   Where 'r' in the internal resistance of the cell.

5. A battery of $16\ V$ and internal resistance $2\ \Omega$ is connected to an external resistance R. Find the value of current so that power in circuit is maximum.
   (a) $8\ A$ (b) $2\ A$ (c) $16\ A$ (d) $4\ A$

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JAWAHAR HIGHER SECONDARY SCHOOL – NEYVELI
REVISION EXAM – II – 2022 - 2023

CLASS: XII **MATHEMATICS** **MARK: 40**
DATE: 18.07.2022 **TIME : 1 hrs**

SECTION – A **(2 x 2 = 4)**

1. If $A = \begin{bmatrix} 3 & -5 \\ 2 & 0 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 17 \\ 0 & -10 \end{bmatrix}$. Find $|AB|$.
2. Find the equation of the line joining $(1\,,2)$ and $(3\;6)$ using determinants.

SECTION – B **(3 x 4 = 12)**

3. If $A = \begin{bmatrix} 2 & -3 \\ -4 & 7 \end{bmatrix}$ compute A^{-1} and show that $2A^{-1} = 9I - A$
4. If $A = \begin{vmatrix} 2 & -3 & 5 \\ 6 & 0 & 4 \\ 1 & 5 & -7 \end{vmatrix}$ Find,

(a) M_{23} (b) A_{22} (c) $A_{32} - a_{32}$ (d) $a_{11}A_{31} + a_{12}A_{32} + a_{13}A_{33}$

5. If area of triangle with vertices $(K\,,0), (1\,,1)$ and $(0\,,3)$ is $5\ sq$ units. Find K.
6. If $A + B + C = \pi$, find the value of

$$\begin{vmatrix} \sin(A+B+C) & \sin B & \cos C \\ -sin\,B & 0 & \tan A \\ \cos(A+B) & -\tan A & 0 \end{vmatrix}$$

SECTION – C **(6 x 4 = 24)**

7. Let $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 6 & 8 \\ 7 & 9 \end{bmatrix}$ verify that $(AB)^{-1} = B^{-1}A^{-1}$

8. Solve the system of equations $x - y + 2z = 1$,
$2y - 3z = 1$,
$3x - 2y + 4z = 2$
9. (i) If A is a square matrix of order 3×3 , $|A| = -8$ find $|adj\ A|$
(ii) A is a square matrix of order 2×2. If $|A| = -5$, find $|2A|$
(iii) If A and B are invertible matrices of order 3, $|A| = 2$ and $|(AB)^{-1}| = {}^{-1}/_{6}$ Find $|B|$
(iv) Find K for which $\begin{bmatrix} K & 2 \\ 3 & 4 \end{bmatrix}$ has no inverse.
10. For the matrix $A = \begin{bmatrix} 2 & 3 \\ -4 & -6 \end{bmatrix}$ verify $A\ (adj\ A) = (adj\ A)A = |A|\ I$.
11. Find the inverse of the matrix $A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}$
12. Determine the product $\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$ and use it to solve the system of equations $x - y + z = 4\,; x - 2y - 2z = 9\,; 2x + y + 3z = 1$

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