Class12th
Subject: Biotechnology

1. Prepare the project file on anyone topic:

a) DNA Sequencing

b) 2D gel electrophoresis and its application

2. Prepare your practical file with practicals and proper cover.

3. Solve the CBSE sample paper shared with you in group and learn it.

4. Complete the following board questions of chapter 1 and 2 in your notebook..

(Do not copy any questions just write the answers with the proper serial number.

Subject: IP (065)

- What will be the output of following code-
  import pandas as pd
  s1=pd.Series([1,2,2,7,'Sachin',77.5]) print(s1.head())
  print(s1.head(3))

- Write a program in python to find maximum value over index in Data frame.

- What are the purpose of following statements-

1. df.columns
2. df.iloc[: , :-5] 3. df[2:8]
4. df[:]
5. df.iloc[: -4 , :]

Write a python program to sort the following data according to ascending order of Age.

Name	Age	Designation
Sanjeev	37	Manager
Keshav	42	Clerk
Rahul	38	Accountant

Consider the following record in dataframe IPL

Player	Team	Category	BidPrice	Runs
Hardik Pandya	Mumbai Indians	Batsman	13	1000
KL Rahul	Kings Eleven	Batsman	12	2400
Andre Russel	Kolkata Knight riders	Batsman	7	900
Jasprit Bumrah	Mumbai Indians	Bowler	10	200
Virat Kohli	RCB	Batsman	17	3600
Rohit Sharma	Mumbai Indians	Batsman	15	3700

Retrieve first 2 and last 3 rows using python program.

- Write a command to install pandas in your computer?
- What is dataframe?
- Write the following steps to create dataframe?
- Give any three examples through a pandas dataframe can be created?
- When we create a dataframe ,ndarrays must be of ---------- Length? (Inequal/same/none of these).
- columns:[] index[], this shows an empty Dataframe? (true/false).
- While creation of dataframe from dictionary of ndarrays/lists,Thelength of the index is equal to the length of the Arrays?(/true/false).
- Write the output?

  Data={name':[shraddha','suman','mohan','alok'], 'age':[29,42,37,39]} Print('df')

- **Predict the output?**

  mylists=[20,30,40,50]

  myframe=pd.dataframe(mylists)

  myframe

- Write the uses of the following terms in creating a dataframe?

  a) data

  b) index

SUB: PHYSICS

CLASS: XII

1.WRITE ATLEAST ONE EXPT AND TWO ACTIVITIES IN RECORD COPY.

2.MAKE ONE INVESTIGATORY PROJECT.

3. STATE GAUSS'S THEOREM AND GIVE ITS APPLICATIONS.

4. DEFINE ELECTRIC DIPOLE. DERIVE EXPRESSION FOR ELECTRIC FIELD ON AXIAL AND EQIUTORIAL LINE DUE TO AN ELECTRIC DIPOLE.

5. STATE THE PRINCIPLE OF PARALLEL PLATE CAPACITOR. ALSO DERIVE AN EXPRESSION OF IT WITH AND WITHOUT DIELECTRIC CONSTANT.

विषय : हिंदी

ज्ञान और बोध आधारित प्रश्न

1- समाचार पर आधारित अपठित गद्यांश पर बहुविकल्पीय दस प्रश्न उत्तर सहित लिखना |

2- भक्तिन पाठ से पांच बहुविकल्पीय प्रश्न उत्तर सहित लिखना |

3- काव्य पाठ (आत्मपरिचय + एक गीत) से पांच बहुविकल्पीय प्रश्न उत्तर सहित लिखना |

रचनात्मक कौशल आधारित प्रश्न

4 - प्रत्येक पर 150 शब्दों पर रचनात्मक लेख लिखिए -

- **एक भारत ,श्रेष्ठ भारत**
- **कोरोना : एक** चुनौती
- आत्मनिर्भर भारत
- स्वास्थ्य का आधार - योग

प्रश्न निर्माण कौशल

काव्यांश और गद्यांश आधारित पांच -पांच लघु उत्तरीय प्रश्न उत्तर सहित(50-60शब्दों में)

Class - XII D Sub- Economics

Practice National Income and accounting numericals 5 in each (Value Added method.Income method. Expenditure method . Real GDP and Nominal GDP)

Learn CBSE NCERT Hots Question Answers .

Sub- Chemistry

1. write two experiment in the practical Notebook
2. Make one investigatory Project.
3. Prepare following topics:
   (a) Solubility of Gas in liquid with Henry law and its applications.
   (b) Vapour pressure of Liquid –Liquid solutions with graph and____
   (c) Raoult's law as special case of Henry Law.
   (d) Define ideal and non ideal solution with example.
   (e) Positive and Negative deviation in Vapour Pressure from raoult's law with graph and example.
   (f) Azeotrops
   (g) Elevation in Boiling point
   (h) Van't Hoff factor
   (i) Numericals(two from each colligative properties)
   (j) Variation in conductivity and molar conductivity with concentration.
   (k) Kohlrausch's law
   (l) Faraday's law of Electrolysis.
   (m) Exercise and in text question of Electrochemistry.

Note: - All the Home Assignment must be done in Notes copy.

SUBJECT: ENGLISH
CLASS XII
HOLIDAY HOMEWORK

1) Practice of Speaking in English at home.
2) Read English Newspaper and note down at least two difficult words with their meaning in your English Notebook. (Date wise for 20 days).
3) Notice on CCA Event -1
4) Formal Invitation -1 (Marriage)
5) Informal Invitation -1
6) Informal invitation Reply -2 types
7) application for a job with bio data or resume-1 (application for the post of PGT Physics)
8) Letters to the editor-1 (on frequent power cut in your area)
9) Article on any two of the following
    a) Global Warming and its effects
    b) Child labour
    c) Adult Education
    d) Sustainable Development
    e) Increasing crime rate
    f) Vocational Training
10) Report Writing on Annual Day Celebration of the school

K.V.No.1 Armapur

Accountancy Homework

Class XII

1 Ritesh and Hitesh are childhood friends. Ritesh is a consultant whereas Hitesh is an architect. They contributed equal amounts and purchased a building for ₹ 2 crores. After a year, they sold it for ₹ 3 crores and shared the profits equally. Are they doing the business in partnership? Give reason in support of your answer.

2 What is meant by Fixed Capital of partners?

3 What is meant by Partnership Deed?

4 Give the average period in months for charging interest on drawings for the same amount withdrawn at the beginning of each quarter.

5 What share of profits would a "sleeping partner", who has contributed 75% of the total capital, get in the absence of a deed?

6 Mohit and Rohit were partners in a firm with capitals of ₹ 80,000 and ₹ 40,000 respectively. The firm earned a profit of ₹ 30,000 during the year. Mohit's share in the profit will be:

(i) ₹ 20,000 (ii) ₹ 10,000 (iii) ₹ 15,000 (iv) ₹ 18,000

7 The interest on Partner's Capital accounts is to b credited to……

(i) Profit & Loss A/c (ii) Interest A/c

(iii) Partner's Capital A/c (iv) None of these

8 X has given a loan of ₹ 50,000 to the firm. He claims 10% p.a. interest. Is his claim valid in case partnership deed is silent in his matter?

9 Which one of the following items cannot be recorded in the profit and loss appropriation account?

(i) Interest on Capital (ii) Interest on Drawings

(iii) Rent paid to Partners (iv) Partner's Salary

10 Net profit of a firm is ₹ 79,800. Manager is entitled to a commission of 5% of profits after charging his commission. Manager's commission will be:

(i) ₹ 4,200 (ii) ₹ 380 (iii) ₹ 3,990 (iv) ₹ 3,800

11 On 1-4-2021, Jay and Vijay, entered into partnership for supplying laboratory equipments to government schools situated in remote and backwards areas. They contributed capitals of ₹ 80,000 and ₹ 50000 respectively and agreed to share the profits in the ratio of 3:2. The partnership deed provided that interest on capital shall be allowed at 9% p.a. During the year, the firm earned a profit of ₹ 7,800.

Showing your calculations clearly, prepare 'Profit and Loss Appropriation Account' of Jay and Vijay for the year ended 31-3-2022.

12 Zee and Vee are partners in a firm. Their capital accounts showed the balance on 1st April, 2017 as ₹ 20,000 and ₹ 15,000 respectively. During the year 2017-18, Zee introduced additional capital of ₹ 10,000 on August 1, 2017 and Vee introduced ₹ 15,000 on 1st October, 2017. Interest on capital is allowed @ 6% p.a. on the capital. Calculate interest on capital of each partner.

13 A, B and C are partners sharing profits in the ratio of 5:4:1. C is given a guarantee that his share of profits in any given year would be ₹ 5,000. Deficiency if any, would be borne by A and B equally. The profit for the year ended 31st March, 2016 amounted to ₹ 40,000. Pass necessary entries in the books of the firm.

14 The partners of a firm , Alia, Bhanu and Chandu distributed the profits for the year ended 31st March, 2017, ₹ 80,000 in the ratio of 3:3:2 without providing for the following adjustments:

(i) Alia and Chandu were entitled to a salary of ₹ 1,500 each p.m.

(ii) Bhanu was entitled for a salary of ₹ 4,000 p.a.

Pass the necessary Journal entry for the above adjustments in the books of the firm.

15 Moli, Bhola and Raj were partners in a firm haring profits and losses in the ratio of 3:3:4. Their partnership deed provided for the following;

(i) Interest on capital @ 5% p.a.

(ii) Interest on Drawing @ 12% p.a.

(iii) Interest on partner's loan @ 6% p.a.

(iv) Moli was allowed an annual salary of ₹ 4,000; Bhola was allowed a commission of 10% of net profit as shown by Profit and Loss Account and Raj was guaranteed a profit of ₹ 1,50,000 after making all the adjustments as provided in the partnership agreement.

(v) Their fixed capitals were Moli: ₹ 5,00,000; Bhola: ₹ 8,00,000 and

Raj: ₹ 4,00,000. On 1st April, 2016 Bhola extended a loan of ₹ 1,00,000 to the firm. The net profit of the firm for the year ended 31st March, 2017 before interest on Bhola's loan was ₹ 3,06,000.

Prepare Profit and Loss Appropriation account of Moli, Bhola and Raj for the year ended 31st March, 2017 and their Current Accounts assuming that Bhola withdrew ₹ 5,000 at the end o each month. Moli withdrew ₹ 10,000 at the end of each quarter and Raj withdrew ₹ 40,000 at the end of each half year.

16 On March 31st ,2014, the balances in the capitals accounts of Ekta, Ankit and Chahat after making adjustments for profits and drawings were ₹ 1,50,000; ₹ 2,10,000 and ₹ 2,70,000 respectively. Subsequently, it was discovered that the interest on capital and drawings had been omitted.

(i) The profit for the year ended 31st March, 2014 was ₹ 1,20,000.

(ii) During the year Ekta withdrew ₹ 24,000 and Ankit and Chahat each withdrew a sum of ₹ 24,000 in equal instalments in the middle of each quarter.

(iii) The interest on drawing is to be charged @ 5% p.a. and interest on capital is to be allowed @10% p.a.

(iv) The profit sharing ratio among the partners was 1:2:3.

(v) Showing your working notes clearly, pass the necessary rectifying entry.

KENDRIYA VIDYALAYA NO. 1

Holiday Homework (2022-23)

BUSINESS STUDIES

CLASS- XII

1 What is meant by "Effectiveness in Management"?

2 What are the organizational objectives of management?

3 Give any two points of the features of Art.

4 "The management principles can be applied to all types of activities." Which characteristic of management is highlighted by this statement?

5 ITC contributes Rs. 1 on the sale of every four classmate notebooks to its rural development initiative that supports, among other projects, primary education in villages. It uses eco-friendly and chlorine free paper for the production of its notebooks.
Identify the management objective which ITC is trying to achieve.

6 Volvo Ltd's target is to produce 10,000 shirts per month at a cost of Rs. 100 per shirt. The production manager achieved this target at a cost of Rs. 90 per shirt. Do you think the 'Production manager' is effective? Give one reason in support of your answer.

7 "In an organisation, the employees are happy and satisfied, there is no chaos and the effect of management is noticeable." Which characteristic of management is highlighted by this statement?

8 Anmol, the sales manager of PQR Ltd., is given the responsibility of selling 2,000 LEDs in a month. This target could be achieved if he has a sales team of 10 people. Presently, only 8 persons are working under him. He was not allowed to hire more persons by his superiors. As a result, he fails to meet the target. Which principle of management is being violated here?

9 Mr. Ram started a small business with limited investment, he hired labour at very less wages. Over the time with broad vision of Ram and hard work of his employees, the business started earning very good revenue. But, with increase in earning capacity of company also Ram did not increase the wages and salary of his employees, they were not able to maintain a reasonable standard of living.
Identify the principle of management, overlooked by Mr. Ram.

10 What do you meant by principle of management?

11 Explain the followings:

(i) Principle of Scalar Chain

(ii) Unity of Command

12 Management has evolved like a discipline. There are number of books on management. Students are learning various principles and theories of management from these books. But all students of MBA do not become successful only by learning these principles. The success depends upon creative application of these principles. Today many companies have started giving importance to corporate social responsibility and Business Ethics.

In the above para one feature of Science, Art and Profession each are given. Identify each one of them by quoting lines.

13 XYZ Power Ltd. set up a factory for manufacturing solar lanterns in a remote village as there was no reliable supply of electricity in rural areas. The revenue earned by the company was sufficient day by day, so the company decided to increase production to generate higher sales. For this they decided to employ people from the nearby villages as very few job opportunities were available in that area. The company also decided to open schools and crèches for the children of its employees

Identify and explain the objectives of management discussed above.

14 Management is a series of continuous interrelated functions. Comment.

15 Ashutosh Goenka was working in 'AxeLtd.', a company manufacturing air purifiers. He found that the profits had started declining from last six months. Profit has an implication for the survival of the firm, so he analysed the business environment to find out the reasons for this decline.

(i) Identify the level of management at which Ashutosh Goenka was working.

(ii) Explain three functions being performed by Ashutosh Goenka.

16 Explain any five features of Management Principles.

17 Company X is facing a lot of problems these days. It manufactures white goods like washing machines, microwave ovens, refrigerators and air conditioners. The company's margins are under pressure and the profits and market share are declining. The production department blames marketing for not meeting sales targets and marketing blames production department for producing goods, which are not of good quality meeting customers expectations. The finance department blames both production and marketing for declining return on investment and bad marketing.

What quality of management do you think the company is lacking? Explain it and also explain the importance of it?

Class :- XII

Subject :- Biology Holiday Homework for summer vacation

1) Write the notes of the chapters 1, 2, 3, 4, 13, 14, 15 and 16. That are discussed in the class.

2) Solve the exercise questions of the chapter mentioned above.

3) Solve the question papers of the last 5 years.

4) Prepare the practicle file. Experiment No 1 to 5.

5) Solve the following additional Questions related to the given chapters :-

Ques :-) Why are date palm plants referred to as dioecious?

Ques :-) Define life span of an organism.

Ques :-) Why are gametes produced in large number in organisms that exhibit external fertilisation?

Ques :-) What are zoospores? Name two groups of organisms that produce them.

Ques :-) What are homogametes? Give an example of an organism that produces homogametes.

Ques :-) Mention two functions performed by the pericarp.

Ques :-) Mention the common function that cotyledons and nucellus perform.

Ques :-) How is pollination effected in hydrophytes?

Ques:-) Draw a well labelled diagram of a dicot, albuminous seed. Name an example.

Ques:-) What is the significance of epididymis in human male reproductive system?

Ques:-) What is the function of trophoblast in human embryo?

Ques:-) What is foetal ejection reflex? How does it lead to parturition?

Ques:-) Draw a neat labelled diagram of a human sperm?

Ques:-) Name two sexually transmitted diseases caused by bacteria

Ques:-) How is GIFT different from ZIFT?

Ques:-) Why is 'saheli' a well-accepted contraceptive?

Ques:-) Mention any four characteristics than an ideal contraceptive should have?

Ques:-) What are osmoconformers?

Ques:-) What is 'Allen's Rule'?

Ques:-) How is a cactus adapted to survive in its habitat?

Ques:-) When does a population growth curve assume 'J'-shape?

Ques:-) Why is a food web formed in nature?

Ques:-) What are ecosystem services? Enumerate the ecosystem services of a forest.

:-) Name the two forms of reservoir of carbon that regulate the ecosystem carbon cycle.

:-) What are 'seed banks'?

s:-) Describe the main causes of bio diversity loss.

s:-) What are sacred groves? Mention their role in biodiversity conservation.

es:-) Discuss briefly the municipal solid wastes.

es:-) What are algal blooms? How do they affect the other living beings?

Pramod Kumar

Subject-CS(083)

Q.No.	Question
1.	**Write the valid identifier in the following:** **(i) My.File (ii) My-File (iii) 2um (iv) pie**
2.	**Write the type of tokens from the following:** **(i) 12.6 (ii) False**
3.	**Name the Python Library modules which need to be imported to invoke the following functions:** **(i) ceil( ) (ii) randint( )**
4.	**Which of the following are valid operators in Python:** **(i) */ (ii) is** **(iii) ^ (iv) like**
5.	**Write one difference between list and tuple?**
6.	**Which of the following statements create a dictionary?** **a) d = {}** **b) d = {"john":40, "peter":45}** **c) d = {40:"john", 45:"peter"}** **d) All of the mentioned above**
7.	**Write a code to convert list L = [10,20,30,40] to tuple**
8.	**What is the use of a return statement in a function ?**
9.	**Write one difference between actual parameter and formal parameter.**
10.	**What type of objects can be used as keys in dictionaries?**

11. **Find and write the output of the following python code:**

```
for x in range(10,20):
    if(x%2==0):
        continue
 print(x)
```

12. **Find and write the output of the following python code:**

```
a=10
def call():
  global a
  a=15
  b=20
  print(a)
call()
```

13. **Select the possible output(s) of the following code from the given option. Also, specify the maximum and minimum value that can be assigned to variable NUM.**

```
import random
cities = ['Agra', 'Delhi', 'Chennai', 'Bhopal']
NUM = random.randint(1,2)+1
for city in cities:
  for I in range(1,NUM):
    print(city, end='')
  print('\n')
```

(i)
```
Agra
DelhiDelhi
ChennaiChennaiChennai
BhopalBhopalBhopalBhopal
```

(ii)
```
Agra
Delhi
Chennai
Bhopal
```

(iii)
```
AgraAgra
DelhiDelhi
ChennaiChennai
BhopalBhopal
```

(iv)
```
ChennaiChennai
BhopalBhopal
```

14. **Explain the following :**

i) Positional Argument **ii) default argument**

15. **Write the difference between local and global variables with an example.**

16. **Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.**

```
250 = Number
WHILE Number <= 1000:
  if Number => 750:
     print Number
  Number = Number + 100
   else
     print Number*2
     Number = Number + 50
```

17.	**Find and write the output of the following python code:** **def makenew(mystr):** **newstr = ""** **count = 0** **for i in mystr:** **if count%2 != 0:** **newstr = newstr + str(count)** **else:** **if i.islower():** **newstr = newstr + i.upper()** **else:** **newstr = newstr + i** **count += 1** **newstr = newstr + mystr[:1]** **print("The new string is:", newstr)** **makenew("sTUdeNT")**
18.	**Find and write the output of the following python code:** **def modify(P ,Q=30):** **P=P+Q** **Q=P-Q** **print(P,"#",Q)** **return (P)** **R=100** **S=150** **R=modify(R,S)** **print(R,"#",S)** **S=modify(S)**
19.	**What is Function? Explain various types of function with examples.**
20	**Write the output of the following python code.** **def runme(x=1, y=2):** **x = x+y** **y+=1** **print(x, '$', y)** **return x,y** **a,b = runme()** **print(a, '#', b)** **runme(a,b)** **print(a+b)**

21	**What possible outputs(s)are expected to be displayed after the execution of the program from the following code? Also specify the minimum values that can be assigned to the variables FROM and TO.** **import random** **start=3** **VAL=[15,25,35,45,55,65,75,85];** **From=random.randint(1,3)** **To =random.randint(start,4)** **for I in range(From,To+1):** **print(VAL[I],"*", end=' ')** **(i) 35 * 45 * 55 * 65 * 75 *** **(ii) 35 * 45 * 55 *** **(iii) 15 * 25 * 35 * 45 *** **(iv) 35 * 45 * 55 * 65 ***

- **Write a python program to search an element in a list and display the frequency of elements present in the list and their location using linear search by using a user defined function. [List and search element should be entered by user.**
- **Write a python program to pass a list to a function and double the odd values and half even values of a list and display list elements after changing.**
- **Write a Python program input n numbers in tuple and pass it to function to count how many even and odd numbers are entered.**

SUMMER VACATION H.W. (CLASS-XII)

CHAPTER-1

1. If $f: R \to R$ is a function, defined as $f(x) = \frac{3x-2}{5}$, show that f is bijective.

2. If the function $f: R \to R$ is given by $f(x) = \frac{x+3}{2}$ and $g: R \to R$is given by $g(x) = 2x - 3$, show that both the functions are bijective.

3. Show that the relation S in the set A=$\{ x \in Z: 0 \leq x \leq 12\}$ given by S=$\{(a, b): a, b \in Z, |a - b| \; is \; divisible \; by \; 4\}$ is an equivalence relation.

4. Consider $f: R_+ \to [-9, \propto)$ given by $f(x) = 5x^2 + 6x - 9$. Prove that f is one-one and onto.

5. Let A=R-{2} and B=R-{1}. If $f: A \to B$ is a function defined by $f(x) = \frac{x-1}{x-2}$, show that f is one-one and onto.

6. Let N be the set of all natural numbers and R be the relation on N×N defined by $(a, b)R(c, d) \; if \; ad = bc$ for all , $(a, b), (c, d) \in N \times N$. Prove that R is an equivalence relation and also obtain the equivalence class [(2,6)].

7. Let N be the set of all natural numbers and R be the relation on N×N defined by $(a, b)R(c, d) \; if \; ad(b + c) = bc(a + d)$ for all , $(a, b), (c, d) \in N \times N$.Check whether R is an equivalence relation.

8. Let R is a relation in the set A={0,1,2,3,4,5} given by $R = \{(a, b): 2 \; divides \; (a - b)\}$. Show that R is an equivalence relation and also write the equivalence class [0].

CHAPTER-2

Find the value / principal value of the following

1	$\tan^{-1}\sqrt{3} - \sec^{-1}(-2)$
2	$\sin^{-1}(\sin 2\pi/3)$
3	$\cos^{-1}(1/2) + 2\sin^{-1}(1/2)$
4	$\tan^{-1}(-1)$
5	$\cos^{-1}(\cos 7\pi/6)$

6	$\sin[\pi/3 - \sin^{-1}(-1/2)]$
7	$\text{cosec}^{-1}(-2)$
8	$\cos^{-1}[\cos(33\pi/5)]$
9	$\cos^{-1}(\cos 3\pi/2)$
10	$2\sec^{-1}(2) + \sin^{-1}(1/2)$
11	$\tan^{-1}(\sqrt{3}) + \sec^{-1}(-2) - \text{cosec}^{-1}(2/\sqrt{3})$
12	$\cos^{-1}(-1/2) + 2\sin^{-1}(-1/2)$

CHAPTER-3

1. Express following matrices as a sum of two matrices such that one is symmetric and the other is skew-symmetric

(a) $\begin{bmatrix} 3 & 2 & 5 \\ 4 & 1 & 3 \\ 0 & 6 & 7 \end{bmatrix}$ (b) $\begin{bmatrix} 3 & -2 & -4 \\ 3 & -2 & -5 \\ -1 & 1 & 2 \end{bmatrix}$

2. If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$

Verify that $A^2-4A-5I=O$.

3. If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$

Verify that $A^3-6A^2+7A+2I=O$.

4. Let $A = \begin{bmatrix} 2 & 3 \\ -1 & 2 \end{bmatrix}$. Then show that $A^2-4A+7I=O$. Using this result calculate A^5 also.

5. Find the matrix A satisfying the matrix equation:

$$\begin{bmatrix} 2 & 1 \\ 3 & 2 \end{bmatrix} A \begin{bmatrix} -3 & 2 \\ 5 & -3 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

6. Find the value of $a, b, c \text{ and } d, if$

$$3\begin{bmatrix} a & b \\ c & d \end{bmatrix} = \begin{bmatrix} a & 6 \\ -1 & 2d \end{bmatrix} + \begin{bmatrix} 4 & a+b \\ c+d & 3 \end{bmatrix}$$

7. Find the matrix A such

$$\begin{bmatrix} 2 & -1 \\ 1 & 0 \\ -3 & 4 \end{bmatrix} \text{A} = \begin{bmatrix} -1 & -8 & -10 \\ 1 & -2 & -5 \\ 9 & 22 & 15 \end{bmatrix}$$

8. To promote making of toilets for women, an organization tried to generate awareness through (i) house calls (ii) letters, and (iii) announcements. The cost for each mode per attempt is given below:

(i)Rs. 50 (ii)Rs. 20 (iii)Rs. 40

The number of attempts made in three villages X, Y and Z are given below:

	(i)	(ii)	(iii)
X	400	300	100
Y	300	250	75
Z	500	400	150

Find the total cost incurred by the organization for three villages separately, using matrix algebra.

9. There are two families A and B. There are 4 men, 6 women and 2 children in family A, and 2 men, 2 women and 4 children in family B. the recommend daily amount of calories is 2400 for men, 1900 for women, 1800 for children and 45 grams of proteins for men, 55 grams for women and 33 grams for children. Represent the above information using matrix. Using matrix multiplication, calculate the total requirement of calories and proteins for each of the two families.