(2½ Hours)   [Total Marks: 75]

Note: 1) All questions carry equal marks and are compulsory.
      2) Figures to the right indicate maximum marks for a question.

Q1. (A)   Attempt any *two* sub-questions from a), b) and c) in MS-EXCEL   (2)
              (True or False)
        a)   Worksheets can be linked with each other only if they are in different
              workbook.
        b)   The legend on a chart can be removed
        c)   Solver and goal seek are used for the same purpose in Excel.

      (B)   Attempt any *two* sub-questions from d), e), f) in VISUAL BASIC   (2)
              (Multiple Choice)
        d)   _____ is an event driven language.
              A) C   B) C++   C) BASIC   D) VISUAL BASIC
        e)   The standard prefix for Command button is _____.
              A)comd   B)cmd   C) com   d)cbo
        f)   _____is a part of Visual Basic IDE.
              A) Code window   B) Properties window
              C) Project Explorer window   D) All of the above.

      (C)   Attempt any *six* sub-questions from g), h), i), j), k), l), m), n), o) in   (6)
              E-Commerce. (True Or False).
        g)   In the subscription model a fee is charged to the user for having access to
              material on the website.
        h)   E- Market, EDI and Internet are parts of E-Commerce.
        i)   The volume of B2B transactions being done is more than B2C
              transactions.
        j)   Banners and sponsorships are examples of subscription revenue model.
        k)   Authenticity refers to the ability to determine the origin of the message
              received over the internet.
        l)   Encryption covers all the security issues.
        m)   Digital signature changes for every document.
        n)   In SSL the URL changes to HTTPS from HTTP.
        o)   Digital cash is the electronic parallel of notes and coins.

      (D)   Attempt any *five* sub-questions from p), q), r), s), t), u), v), w) in E-   (5)
              Commerce. (Multiple Choice)
        p)   _____segment of E-commerce focuses consumers dealing with each
              other.
              A) B2B   B) C2B   c) C2C   D) B2C
        q)   Buying and selling products on the internet is called_____
               A) EDI   B) E-Commerce   C) E-Business   D) E market

        r)   E-tailer model is_____ revenue model.
              A) Sales   B) Subscription   C) Advertising   D) Affiliate

s) The sender and receiver will have the same key in _____ Key encryption
   A) Symmetric   B) Asymmetric   C) Public   D)Private

t) _____ means converting cipher text to plain text.
   A) Encryption   B) Decryption
   C)Conversion   D)De-conversion

u) The full form of WAP in E-Commerce is Wireless __ Protocol.
   A)And   B)App   C)Application   D)Area

v) Ebay.com is _____
   A) onlyB2B   B) only C2C   C) onlyB2C   D) both B2B and B2C

w) When you make a payment using PayPal, you have to e-mail the payment to merchant's_____ account
   A) Current   B)Saving   C)PayPal   D)None of these

Q2. (A)   Answer any *one* sub-question from a) and b) in E-Commerce.   (8)
a) Explain the features of E-Commerce.

b) Explain the following B2C models in E-commerce.
   (i) E-Tailer   (ii) Content Provider
   (iii) Transaction Broker   (iv)Market Creator

(B)   Answer any *one* sub-question from c) and d) in E-Commerce.   (7)
c) Discuss the various security issues in E-Commerce.

d) Explain how an Online Credit Card Transaction Works?

Q3. (A)   Answer any *one* sub-question from a) and b) in MS-EXCEL   (8)

a) Consider the following worksheet

	A	B	C	D	E
1	**NAME**	**CITY**	**SALES**	**COMMISSION**	**BONUS**
2	RAHUL	MUMBAI	80000		
3	ANJALI	PUNE	100000		
4	POOJA	BANGLORE	50000		
5	RAJ	HYDERABAD	95000		
6	KAJOL	PUNE	200000		
7	ADITYA	BANGLORE	300000		
8	SEEMA	HYDERABAD	40000		

Write Steps to perform the following:
i) To compute Commission @8% of sales whenever sales are below
`75,000 otherwise @ 10% of Sales in column D.

ii) To compute the Bonus as 2% of the Sales for Sales up to `50,000
otherwise @ 5% of Sales in column E.

b) The following data has been entered in a worksheet.

	A	B	C	D	E	F	G
1	NAME	TEST1	TEST2	TEST3	TEST 4	AVERAGE MARKS	GRADE
2	SAMIRA	66	77	70	70		
3	SAIRA	56	67	72	77		
4	NASIR	45	54	55	60		
5	NITIN	40	45	48	56		
6	SARITA	67	78	80	85		
7	ADIL	65	66	69	78		

Where Test1, Test 2, Test 3 and Test 4 are marks scored by the candidates in 4 tests.

Write steps to
    i) Find the Average marks in column F.
    ii) Assign Grade in Column G using the following policy:

Average Marks	Grade
80 or more	O
60 or more but below 80	A
Less than 60	B

Q.3 (B)   Answer any *one* sub-question from c) and d) in MS-EXCEL   (7)

c) The following data has been entered in a worksheet.

	A	B	C	D	E	F	G	H
1	NAME	DESIGNATION	HRA	DA		DESIGNATION	HRA	DA
2	SONU	PEON				PEON	4000	5000
3	PINKY	CLERK				CLERK	8000	10000
4	RINKU	CLERK				MANAGER	15000	20000
5	SOPHIE	MANAGER						
6	PREM	PEON						
7	BINDU	CLERK						
8	TINA	MANAGER						

Write steps to find the HRA and DA in column C and D respectively using VLOOKUP function. Policy table to be referred for finding the HRA and DA is given in the range F2:H4.

d) Consider the following worksheet

	A	B	C	D
1	NAME	MONTHLY SALARY	ANNUAL INCOME	INCOME TAX
2	RAHUL	80000		
3	ANJALI	100000		
4	POOJA	50000		
5	RAJ	65000		
6	KAJOL	40000		
7	ADITYA	125000		
8	SEEMA	40000		

Write steps to calculate Annual Income in column C and Income Tax in column D where Income-Tax is calculated as follows.

Taxable Annual Income	Rate
First 1,00,000	Nil
Next 2,00,000	10%
Excess	20%

Q4. (A)   Answer any **one** sub-question from a) and b) in MS-EXCEL   (8)

a) The following data is entered in a worksheet regarding expenses (in `) during January, February, March and April.

	A	B	C	D	E
1	ITEM	JAN	FEB	MAR	APRIL
2	EDUCATION	6000	6000	6000	6000
3	FOOD	15000	16000	17000	16000
4	RENT	45000	45000	45000	45000
5	CAR	12000	15000	13000	14000
6	TOTAL				

Write the steps to
 i) Find the total expenses in each month in the cells B6, C6, D6 and E6.
ii) Create 3-D Bar chart for expenses of January, February, March and April.
iii) Create a Pie chart for the month of March.
iv) Create a Line diagram for the months February and April.

b) The following table shows Quantity, Unit Price, Income and total Income of a shopkeeper who sells rice, dal, sugar and tea.

	A	B	C	D	E
1	ITEM	QUANTITY	PRICE	INCOME	
2	RICE	100	80	8000	
3	DAL	50	120	6000	
4	SUGAR	60	70	4200	
5	TEA	45	250	11250	
6					

Write steps to find Total Income in D6.
Write steps in Excel using Solver to find how much quantity of rice, dal, sugar and tea should be sold in order to achieve total income of `50,000, assuming that quantity should be integer only.

Q4. (B)   Answer any *one* sub-question from c) , d) in MS-EXCEL   (7)

c)   The following data has been entered in a worksheet

	A	B	C	D
1	**EMPNO**	**NAME**	**SALARY**	**INCOME TAX**
2	E001	DOLLY	35000	
3	E002	ANJALI	55000	
4	E003	DIPALI	42000	
5	E004	RAJ	50000	
6	E005	KAJOL	52000	
7	E006	ADITYA	75000	
8	E007	REEMA	60000	

Write steps to do the following:-

i) Display only those rows where the Salary is more than ` 50,000.

ii)Display only those rows where the Salary is more than `45,000 but

less than `65,000.

iii) Display only those rows where name do not start with "M".

d)   Explain the following functions in MS-EXCEL.

1) TODAY( )   2) COUNTBLANK( )   3) SMALL( )   4) YEAR( )
5) CORREL( )   6) WEEKDAY( )   7)DAY( )

Q5. (A)   Answer any *one* sub-question from a) and b) in VISUAL BASIC   (8)

a)   Write a project in VB to accept students name and marks in Accounts, Economics and MHRM. Calculate and display total mark and percentage.

b)   Write a project in VB to design a suitable form which allows a user to enter three numbers in text boxes. Find and display the maximum number among them.

Q5. (B)   Answer any *one* sub-question from c) and d) in VISUAL BASIC   (7)

c)   Write a project to design a suitable form to allow the user to enter name of salesperson and the total sales. Calculate and display the commission earned by the salesperson based on the following table. Use appropriate controls.

Total Sales(Rs)	Commission
Less than or equal to 90,000	Nil
Between 90,000 and up to 1,50,000	10 %
More than 1,50,000	12%

d)   Write a project in VB to compute and display the sum of the series
$2 + 5 + 8 + 11 + \cdots + 32$

****

<center>(2½ Hours)   [Total Marks: 75]</center>

Note: 1) All questions carry equal marks and are compulsory.
2) Figures to the right indicate maximum marks for a question.

Q1. (A)   Attempt any *two* sub-questions from a), b) and c) in MS-EXCEL   (2)
            (True or False)
    a)   Worksheets can be linked with each other only if they are in different   **F**
          workbook.
    b)   The legend on a chart can be removed   **T**
    c)   Solver and goal seek are used for the same purpose in Excel.   **F**

    (B)   Attempt any *two* sub-questions from d), e), f) in VISUAL BASIC   (2)
            (Multiple Choice)
    d)   _____ is an event driven language.
          A) C   B) C++   C) BASIC   **D) VISUAL BASIC**
    e)   The standard prefix for Command button is _____.
          A)comd   **B)cmd**   C) com   d)cbo
    f)   _____is a part of Visual Basic IDE.
          A) Code window   B) Properties window
          C) Project Explorer window   **D) All of the above.**

    (C)   Attempt any *six* sub-questions from g), h), i), j), k), l), m), n), o) in   (6)
            E-Commerce. (True Or False).
    g)   In the subscription model a fee is charged to the user for having access to **T**
          material on the website.
    h)   E- Market, EDI and Internet are parts of E-Commerce.   **T**
    i)   The volume of B2B transactions being done is more than B2C transactions.   **T**
    j)   Banners and sponsorships are examples of subscription revenue model.   **F**
    k)   Authenticity refers to the ability to determine the origin of the message   **T**
          received over the internet.
    l)   Encryption covers all the security issues.   **F**
    m)   Digital signature changes for every document.   **F**
    n)   In SSL the URL changes to HTTPS from HTTP.   **T**
    o)   Digital cash is the electronic parallel of notes and coins.   **T**

    (D)   Attempt any *five* sub-questions from p), q), r), s), t), u), v), w) in E-   (5)
            Commerce. (Multiple Choice)
    p)   _____segment of E-commerce focuses consumers dealing with each
          other.
          A) B2B   B) C2B   **c) C2C**   D) B2C
    q)   Buying and selling products on the internet is called_____
           A) EDI   **B) E-Commerce**   C) E-Business   D) E market
    r)   E-tailer model is_____ revenue model.
          A) Sales   B) Subscription   C) Advertising   D) Affiliate
    s)   The sender and receiver will have the same key in _____Key encryption
          A) Symmetric   B) Asymmetric   C) Public   **D)Private**
    t)   _____ means converting cipher text to plain text.

1

A) Encryption   **B) Decryption**
C)Conversion   D)De-conversion

u)   The full form of WAP in E-Commerce is Wireless ___ Protocol.
A)And   B)App   **C)Application**   D)Area

v)   Ebay.com is _____
A) onlyB2B   **B) only C2C**   C) onlyB2C   D) both B2B and B2C

w)   When you make a payment using PayPal, you have to e-mail the payment to merchant's_____ account
A) Current   B)Saving   **C)PayPal**   D)None of these

Q2.   (A)   Answer any *one* sub-question from a) and b) in E-Commerce.   (8)

a)   Explain the features of E-Commerce.
Give full marks if any four features of E-Commerce explained. (2 marks for each feature)
The important features of E-Commerce as listed below.
Ubiquity:
When we say that E-Commerce is ubiquitous, it means that it is available just about everywhere and at any time. It removes the boundaries of space and makes it possible to shop from the confines of your home or office and even when travelling by various modes of transport. Hence it liberates the market from any physical space that we normally associate with carrying out commerce.
Global Reach:
E-Commerce technology permits commercial transactions to cross various cultural boundaries, as well as the geographical boundaries that have been made by mankind across the globe. Hence the size of the market that is available for E-Commerce includes the entire population which is going online.
Universal Standards:
The technical standards used in E-Commerce are universal standards i.e. they are used all over the world. This is chiefly due to the fact that the technical standards used in the internet are universal standards, which are accepted and shared all over the world.
The use of these universal standards in E-Commerce has resulted in a great reduction in the costs involved in searching for products, as they can be viewed by one and all.
Interactivity:
 The technologies used in E-Commerce are interactive i.e. they allow a two way communication between the parties involved in the transaction, which are the merchant making the sale and the buyer. For example, a website may ask the consumer to fill in a form and depending on the data entered in that form, various options are displayed, from which the consumer can choose the appropriate one.
Richness:
Richness refers to the complexity and content of information on a product, which is traded in E-Commerce. Using audio and video the richness of the information that is given is greatly enhanced. This, in turn, becomes a powerful tool for selling in the commercial environment.
Information Density.

Information density refers to the total amount and quality of information that is available to all the stakeholders (market participants, consumers and merchants). The wide use of E-Commerce has greatly reduced the cost of collection of information, its storage, processing and communication. Personalization.

This enables the merchants and traders to have better information of the requirements in the market, due to which they can modify their marketing strategies. Due to the interactive nature of technology used in E-Commerce, the past preferences and behavior of the user is known. This enables merchants to customize i.e. give the product or service as desired by the user.

b) Explain the following B2C models in E-commerce.
 (i) E-Tailer   (ii) Content Provider
 (iii) Transaction Broker   (iv)Market Creator

TWO Marks each, Give full marks if any two points are given.

(i) E-tailer :
The customers and the seller interact directly, it includes
• Organize an online catalogue of products
• Take orders through Web site
• Shopping cart technology
• Accept payments in a secure environment
• Send merchandise to customers
• Manage customer data
• Market Web site to potential customers
• Revenue through product sales
• Low barriers to entry -> very competitive

(ii) Content providers :
Content providers distribute digital content (news, music, video and artwork) over the Web. Revenue is generated through subscription fees, pay for download, or advertising.

(iii) Transaction Broker :
Sites that process transactions for consumers. It primary value proposition is saving of time and money for customers. It is a typical revenue model with a transaction fee is charged for facilitating transactions.
Industries using this model:
• Financial services
• Travel services
• Job placement services

(iv) Market Creator :
Market creator model uses internet technology to build markets where buyers and sellers can meet, decide on a product and fix the price for that product. The web has made it possible to delink markets from physical space. Ebay.com is one such market place. Ebay.com earns revenue by charging a fee to list the product and also a fee on such sale. Digital market place has to attract many buyers and sellers otherwise the model will not be feasible.

(B)   Answer any *one* sub-question from c) and d) in E-Commerce.   (7)
c)   Discuss the various security issues in E-Commerce.

3

If any 3 relevant points are written give full 7 marks

One of the things that have slowed down the growth of E-Commerce is the problems of security. Many of those who would like to use E-Commerce are afraid about the theft of their credit card numbers. This is because the technologies that form the basis of E-Commerce can be used to obtain confidential information. Some of the issues of security in E-Commerce are discussed below.

1. INTEGRITY

Integrity refers to the ability to check and ensure that the data being displayed on a web site or what data is sent over the internet has not been changed in any way. This can be done if it is possible to authenticate and verify who sent the information and from which computer and that the information has not been tampered with.

All those who want to use E-Commerce will be harboring suspicions on the integrity of the system. Only those with the authority to access and alter the data should be capable of doing so. If this power falls in the wrong hands, the threat to the integrity of the system is very real and can be very dangerous. A digital signature is normally used to ensure integrity of the message and this is discussed later in this chapter.

2. NON REPUDIATION

Non repudiation refers to the requirement that the parties who are doing E-Commerce, namely the buyer and the seller, do not deny that they have initiated the transaction.

This means that the buyer should not deny placing the order and the seller should not deny that the order has been received. The main worry for the company doing E-Commerce is that the customer should not deny placing the order, as this will mean the company loses money on freight and packing. For the customer, the worry is of someone hacking into their account and placing an order on their behalf, and using their credit card number. Thus non repudiation is used to ensure that the buyer and the seller cannot deny that the transaction has occurred.

3. AUTHENTICITY

Authenticity refers to the ability to determine the origin of the message received over the internet. This refers to knowing the identity of the person who has sent the message, from where the message was sent and the identity of the computer used to send the message.

Proper identification is very important for both the parties dealing in E-Commerce. It would help confirm whether the order received is genuine or not and would eliminate the possibility of fraud.

4. CONFIDENTIALITY

Confidentiality ensures that the message and data are viewed only by the person to whom they are sent and who has the authority to view them. These concerns regarding access to data and privacy are meant to ensure that within an organization no unauthorized person can lay their hands on such information. It is well known that there is very sensitive data, such as credit card details, which are sent as part of an E-Commerce transaction. It is important to ensure that even if the data is hacked into, it cannot be easily read. Normally to ensure confidentiality data encryption is used, which is discussed later.

5. AVAILABILITY

Availability means that the E-Commerce systems are available continuously at all times when needed. The customer must get a fully functional E-Commerce site which works as it is intended to. It would be very irritating to the customer to see that the site is down due to some problem, when a transaction has to be urgently done.

As long as all the above mentioned dimensions are functioning as intended there will be no security issue in E-Commerce.

d) Explain how an Online Credit Card Transaction Works?

(if any 4 points are covered give full 7 marks)

1. The customer goes to the merchant's website, selects the products to be purchased, by adding them to a shopping cart and then clicks on the button 'Proceed to checkout'. A secure and encrypted form opens on the web browser which is indicated on the screen, by a sign at the bottom.

2. The customer enters in this form his name, address, credit card details i.e. Visa or MasterCard etc. the credit card number and expiration date etc., then clicks on the submit button.

3. A secure tunnel is created through the internet using SSL for sending this card information and the payment application encrypts and transmits the credit card information to the merchant.

4. The merchant sends this credit card information to a clearing house, which is a financial intermediary, which verifies card details and checks whether there is sufficient credit available for making the purchase. If there is insufficient balance on the card, a message declining the transaction is generated.

5. The clearing house sends the information over the appropriate credit card network to the customers issuing bank for verification and payment. The customers issuing bank generates a confirmation number which is sent to the merchant via the clearing house.

6. The merchant sends this confirmation number along with purchase order details to the customer and requests the customer to take a print out of this information for the customer's record. The merchant then proceeds to shipping the order.

7. At the end of the day the customer's issuing bank sends the amount of the transaction to the clearing house. The clearing house credits the merchant's bank with the amount and keeps a small percentage as processing fee. The customer's issuing bank sends a monthly statement to the customer for payment which contains the details of purchases made during that month.

Q3. (A) Answer any *one* sub-question from a) and b) in MS-EXCEL (8)

a) Consider the following worksheet

	A	B	C	D	E
1	**NAME**	**CITY**	**SALES**	**COMMISSION**	**BONUS**
2	RAHUL	MUMBAI	80000		
3	ANJALI	PUNE	100000		

4	POOJA	BANGLORE	50000		
5	RAJ	HYDERABAD	95000		
6	KAJOL	PUNE	200000		
7	ADITYA	BANGLORE	300000		
8	SEEMA	HYDERABAD	40000		

Write Steps to perform the following:

i) To compute Commission @8% of sales whenever sales are below

`75,000 otherwise @ 10% of Sales in column D.

ii) To compute the Bonus as 2% of the Sales for Sales up to `50,000

otherwise @ 5% of Sales in column E.

Solution:

(i)To compute Commission.

1. Select D2 and type the formula
   =IF (C2<75000, C2*8%, C2*10%) and press enter.
2. Select D2 and drag the fill handle to D8.

(ii) To find Bonus.

1. Select E2 and type the formula
   =IF (C2<=500000, C2*2%, C2*5%) and press enter.
2. Select E2 and drag the fill handle to E8.

MARKS (4+4)

b) The following data has been entered in a worksheet.

	A	B	C	D	E	F	G
1	NAME	TEST1	TEST2	TEST3	TEST 4	AVERAGE MARKS	GRADE
2	SAMIRA	66	77	70	70		
3	SAIRA	56	67	72	77		
4	NASIR	45	54	55	60		
5	NITIN	40	45	48	56		
6	SARITA	67	78	80	85		
7	ADIL	65	66	69	78		

Where Test1, Test 2, Test 3 and Test 4 are marks scored by the candidates in 4 tests.

Write steps to

i) Find the Average marks in column F.

ii) Assign Grade in Column G using the following policy:

Average Marks	Grade
80 or more	O
60 or more but below 80	A
Less than 60	B

i)Total Marks:

1. Select F2 and type =Average (B2:E2) and press enter.
2. Select F2 and drag the fill handle to F7.

ii) Grade:

1. Select G2 and type =IF (F2>=80,"O", IF (F2>=60,"A","B")) and press enter.
2. Select G2 drag the fill handle to G7.

<div align="right">MARKS (3+5)</div>

(B) Answer any *one* sub-question from c) and d) in MS-EXCEL (7)

c) The following data has been entered in a worksheet.

	A	B	C	D	E	F	G	H
1	**NAME**	**DESIGNATION**	**HRA**	**DA**		**DESIGNATION**	**HRA**	**DA**
2	SONU	PEON				**PEON**	**4000**	**5000**
3	PINKY	CLERK				**CLERK**	**8000**	**10000**
4	RINKU	CLERK				**MANAGER**	**15000**	**20000**
5	SOPHIE	MANAGER						
6	PREM	PEON						
7	BINDU	CLERK						
8	TINA	MANAGER						

Write steps to find the HRA and DA in column C and D respectively using VLOOKUP function. Policy table to be referred for finding the HRA and DA is given in the range F2:H4.
i)To calculate HRA
1. Select C2 and type the formula
   =VLOOKUP(B2,$F$2:$H$4, 2,FALSE)
   OR =VLOOKUP(B2,$F$2: $G$4,2,FALSE)
2. Select C2 and drag the fill handle to C8.
ii)To calculate DA
1. Select D2 and type the formula
   =VLOOKUP(B2,$F$2:$H$4,3, FALSE)
2. Select D2 and Drag the fill handle to D8.

<div align="right">MARKS (4+3)</div>

d) Consider the following worksheet

	A	B	C	D
1	**NAME**	**MONTHLY SALARY**	**ANNUAL INCOME**	**INCOME TAX**
2	RAHUL	80000		
3	ANJALI	100000		
4	POOJA	50000		
5	RAJ	65000		
6	KAJOL	40000		
7	ADITYA	125000		
8	SEEMA	40000		

Write steps to calculate Annual Income in column C and Income Tax in column D where Income-Tax is calculated as follows.

Taxable Annual Income	Rate
First 1,00,000	Nil
Next 2,00,000	10%
Excess	20%

Solution:
i) To calculate Annual Income:
1. Select C2 and type= B2*12
2. Select C2 and drag the fill handle to C8.
ii) To calculate Income Tax:
=IF (C2<=100000, 0, IF (C2<=300000, (C2-100000)*.10, (C2-300000)*.20+200000*.10))   and press enter.
2. Select D2 and drag the fill handle to D8.

MARKS (2+5)

Q4.   (A)   Answer any *one* sub-question from a) and b) in MS-EXCEL   (8)

a)   The following data is entered in a worksheet regarding expenses (in `) during January, February, March and April.

	A	B	C	D	E
1	ITEM	JAN	FEB	MAR	APRIL
2	EDUCATION	6000	6000	6000	6000
3	FOOD	15000	16000	17000	16000
4	RENT	45000	45000	45000	45000
5	CAR	12000	15000	13000	14000
6	TOTAL				

Write the steps to
 i) Find the total expenses in each month in the cells B6, C6, D6 and E6.
ii) Create 3-D Bar chart for expenses of January, February, March and April.
iii) Create a Pie chart for the month of March.
iv) Create a Line diagram for the months February and April.
Solution:
i) **Find the total** expenses in each month in the cells B6 to E6.
    1. Select B6 and type =SUM (B2:B5) and press enter.
    2. Select B6 and drag the fill handle to E6.
ii) **To create 3-D Column chart for** expenses of January, February, March and April.
    1.   Select the data A1:E5 (or A1:E6 or B2:E5).
    2.   From the **Insert tab,** select Column chart, then select sub type 3-D.
iii) **To create Pie chart** for the month of March.
    1.   Select the data D2:D5 (or D1:D5)
    2.   From the **Insert tab, select** Pie chart, then select any sub type.
iv) **To Create a Line diagram for** the months February and April.

1. Select the data C2:C5 and E2:E5.
2. From **Insert tab** select **Line**, then select any Sub type.

Marks 2+2+2+2

b) The following table shows Quantity, Unit Price, Income and total Income of a shopkeeper who sells rice, dal, sugar and tea.

	A	B	C	D	E
1	ITEM	QUANTITY	PRICE	INCOME	
2	RICE	100	80	8000	
3	DAL	50	120	6000	
4	SUGAR	60	70	4200	
5	TEA	45	250	11250	
6					

Write steps to find Total Income in D6.

Write steps in Excel using Solver to find how much quantity of rice, dal, sugar and tea should be sold in order to achieve total income of `50,000, assuming that quantity should be integer only.

Solution:

1. Select D6 and type = Sum (D2:D5) and press enter.
2. Select D6 and from the Data Tab select Solver.
3. In the dialog box in the 'Set objective' option the cell D6 is already selected.
4. In the 'To' option select 'Value of' and type 50000 in the text box.
5. In the option 'By Changing Variable cells' text box enter B2:B5.
6. Then click on Solve. When Solver will obtain the result, click on ok.

Marks (step-wise) 1+1+1+2+2+1

Q4. (B) Answer any *one* sub-question from c) , d) in MS-EXCEL   (7)

c) The following data has been entered in a worksheet

	A	B	C	D
1	EMPNO	NAME	SALARY	INCOME TAX
2	E001	DOLLY	35000	
3	E002	ANJALI	55000	
4	E003	DIPALI	42000	
5	E004	RAJ	50000	
6	E005	KAJOL	52000	
7	E006	ADITYA	75000	
8	E007	REEMA	60000	

Write steps to do the following:-

   i) Display only those rows where the Salary is more than ` 50,000.

   ii)Display only those rows where the Salary is more than `45,000 but

      less than `65,000.

   iii) Display only those rows where name do not start with "M".

Solution:

i) Display only those rows where the Salary is more than 50,000.

1. Select the data A1:C8.
2. From DATA Tab select Filter.
3. Click on the drop down arrow of Salary and from number filter select 'greater than'.
4. Type 50000 in the dialog box and click on ok.

ii) Display only those rows where the Salary is more than `45,000 but less than `65,000.
1. Select the data A1:C8
2. From DATA Tab select Filter.
3. Click on the drop down arrow of Salary and from number filter select 'greater than'.
4. Type 45000 in the dialog box and then select 'And'.
5. Select 'Less than'
6. Type 65000 and click on ok.

iii) Display only those rows where the name does not start with "M".
Solution:
1. Select the data A1:C8
2. From DATA Tab select Filter.
3. Click on the drop down arrow of Name and from Text filter select 'does not begin with'.
4. In the dialog box type M and click on ok.

<div align="right">

Marks 2+3+2

</div>

d) Explain the following functions in MS-EXCEL.

1) TODAY()	2) COUNTBLANK()	3) SMALL()	4) YEAR()
5) CORREL()	6) WEEKDAY()	7)DAY()	

(Give 1 mark if either definition or example or syntax is correct for each function)
1) TODAY( ): Returns the current system date.
    e.g. =TODAY() returns 16/11/2016
2) COUNTBLANK(range): Counts the number of empty cells in a specified range of cells
    e.g. COUNTBLANK(D1:D5) gives 3 if there are only two values in the cells from D1 to D5

3) SMALL(array,k): Returns the kth smallest value in the data set
e.g. = SMALL({45,23,67,87},3) gives 67 the 3rd smallest value
4) YEAR(serial number): Returns the year corresponding to a serial number or date text. The year returned has a value from 1900-9999.
e.g. =YEAR("3-JUNE-2015") gives 2015
5) CORREL(array1,array2): Returns the correlation coefficient between two data sets.
e.g. If D1:D3 contains the values 45,34,67 and E1:E3 contains the values 49,44,75 then CORREL(D1:D3,E1:E3) gives .983358 the correlation coefficient between these two data sets.
 We can also type =CORREL({45,34,67},{49,44,75}) which gives the same result .983358

6) WEEKDAY(serial_number, return_type): Returns the day of the week corresponding to a date. The day is given as an integer, ranging from 1 (Sunday) to 7 (Saturday), by default.
e.g. =WEEKDAY("4/13/16") gives 4
7)Day(serial number): Returns the day of the month corresponding to a serial number or date text. e.g. =DAY("11/16/2016") gives 16.

Q5. (A)   Answer any *one* sub-question from a) and b) in VISUAL BASIC   (8)

a) Write a project in VB to accept students name and marks in Accounts, Economics and MHRM and then calculate total mark and percentage.

Object	Property	Setting
Form	Name	Frmpercntge
	Caption	Percentage
Label	Name	Label1
	Caption	Accounts
Label	Name	Label2
	Caption	Economics
Label	Name	Label3
	Caption	MHRM
Text Box	Name	TxtAccounts
	Text	(Blank)
Text Box	Name	TxtEco
	Text	(Blank)
Text Box	Name	TxtMhrm
	Text	(Blank)
Label	Name	Label4
	Caption	Total Marks
Label	Name	Label5
	Caption	Percentage

Text Box	Name	TxtTotalmarks
	Text	(Blank)
Text Box	Name	TxtPercent
	Text	(Blank)
Command Button	Name	CmdCalc
	Caption	&Calculate
Command Button	Name	CmdExit
	Caption	&Exit

Code

```
Private Sub cmdCalc_click()
Dim A,B,C As Integer
Dim Totalmarks  As Single
Dim Percent As Single
A=Val(TxtAccounts.Text)
B=Val(TxtEco.Text)
C=Val(TxtMhrm.Text)

Totalmarks=A+B+C
Percent=(Totalmarks*100)/300
TxtTotalmarks=FormatNumber(Totalmarks,2)
TxtPercent.Text=FormatNumber(Percent,2)
End Sub

Private Sub CmdExit_Click()
End
End Sub
```

(Minimum 2 marks may be given for attempting to answer the program)
(4+3+1)

b) Write a project in VB to design a suitable form which user to enter three numbers in text boxes and find the maximum number among three.
Solution:

Object	Property	Setting
Form	Name	FrmLargest
	Caption	Largest
Label	Name	Label1

	Caption	First Number
Label	Name	Label2
	Caption	Second Number
Label	Name	Label3
	Caption	Third Number
Text Box	Name	TxtNum1
	Text	(Blank)
Text Box	Name	TxtNum2
	Text	(Blank)
Text Box	Name	TxtNum3
	Text	(Blank)
Label	Name	Label4
	Caption	Largest
Command Button	Name	CmdLargest
	Caption	&Find Largest
Command Button	Name	CmdExit
	Caption	&Exit

Code

```
Private Sub CmdLargest_Click()
Dim a, b, c, largest As Integer
a = Val(Txtnum1.Text)
b = Val(TXtNum2.Text)
c = Val(TxtNum3.Text)
If a >= b And a >= c Then
largest = a
Else If b >= c Then
largest = b
Else
largest = c
End If
End If
MsgBox "Largest No.   " &Str(Largest) , vbOkOnly
End Sub
```

Private Sub CmdExit_Click()
End
End Sub

(Minimum 2 marks may be given for attempting to answer the program)
(4+3+1)

Q5. (B)   Answer any **one** sub-question from c) and d) in VISUAL BASIC   (7)

c)   Write a project to design a suitable form to allow the user to enter name of
a salesperson and the total sales. Calculate and display the commission
earned by the salesperson based on the following table. Use appropriate
controls.

Total Sales(Rs)	Commission
Less than or equal to 90,000	Nil
Between 90,000 and up to 1,50,000	10 %
More than 1,50,000	12%

Solution:

Object	Property	Setting
Form	Name	FrmComm
Label	Name	Label1
	Caption	Enter Name
Text	Name	TxtSales
Command Button	Name	CmdCalc
	Caption	&Calculate or Calculate
Command Button	Name	CmdExit
	Caption	&Exit

Code

```
Private Sub cmdCalc_Click()
Dim comm, tsales As Single
tsales = Val(txtSales)
If        tsales <= 90000    Then
   comm = 0
    Else
 If        tsales < 150000    Then
   comm = 0.1 * tsales
 Else
   comm = 0.12* tsales
 End If
End If
MsgBox "The total Commission is"&Str(comm)
End Sub
 Private Sub CmdExit_Click()
      End
      End Sub
```

(Minimum 2 marks may be given for attempting to answer the program)
(2+4+1)

d) Write a project in VB to compute and display the sum of the series
$2 + 5 + 8 + 11 + \cdots + 32$
Ans:

Object	Property	Value/Setting
Form	Name	Form1
	Caption	SUM OF SERIES
Command Button	Name	CmdCalc
	Caption	&Calculate or Calculate
Command Button	Name	CmdExit
	Caption	E&xit or Exit

2 Marks

Private Sub cmdCalc_Click()   (**4 Marks**)
 Dim I, S as Integer
 S=0
 For I=2 to 32 step 3
 S = S + I
 Next I
 MsgBox "Sum = " &S, vbOKOnly
End Sub
Note: Any loop may be used.

Private Sub cmdExit_click()   (**1 Mark**)
 End
End Sub
(Minimum 2 marks may be given for attempting to answer the program)