

**Solution of Q.P. Code 33276 T.Y.B.Com Computer systems and Applications Semester VI
75/25 held on April 12, 2018**

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) The size of chart can be changed. **T**
- b) A template has the file name extension .XLTX **T**
- c) A workbook can contain maximum three worksheets. **F**
- (B) Attempt any **two** sub-questions from d), e) and f) in VISUAL BASIC (2)
(Multiple Choice)
- d) In a VB project, the form design is carried out in the _____.
1) Properties 2) Tool Box 3) Project Explorer **4) Form Window**
- e) Visual Basic controls are _____.
1) code 2) part of the menus 3) rules **4) objects**
- f) _____ is a valid object name for a text box.
1) TxtClass 2) Txt Class 3) Txt+class 4) TextClass
- (C) Attempt any **six** sub-questions from g), h), i), j), k), l), m), n), o) in (6)
E-Commerce. (True Or False).
- g) Traditional commerce is more reliable than E-Commerce. **T**
- h) Non-repudiation refers to non-denial of E-commerce transactions. **T**
- i) Portals earn revenue from advertising and referral fees. **T**
- j) Encryption is a process of converting cipher text to plain text. **F**
- k) Integrity in E-Commerce ensures that data is not altered during transmission. **T**
- l) In E-Commerce only credit cards can be used for making payments. **F**
- m) In public Key encryption there is only one key. **F**
- n) Hacking of credit cards and password is possible in E-Commerce. **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) A Computer to Computer exchange of business transaction is called _____.
A) E-Business B) Super Market **C) EDI** D) E-Market
- q) In _____ E-Commerce the consumers deals with each other.
A) C2C B) B2C C) B2B D) C2B
- r) It is a convention that all sites that use SSL connection while making a secure connection use _____ instead of HTTP.
A) SMTP **B) HTTPS** C) FTP D) TCP/IP
- s) The most commonly used form of payment in E-Commerce is _____.
A) Credit Card B) PayPal C) Petro Card D) Digital Cash

- t) In online stored value systems, cards that have embedded chips that store personal information is called _____.
 A) Debit Card **B) Smart Card** C) Credit Card D) Ideal card
- u) The full form of WAP in E-Commerce is Wireless ___ Protocol.
 A) And B) App **C) Application** D) Area
- v) The full form of HTTP in E-Commerce is Hyper Text _____ Protocol.
 A) Travel B) Topology C) Transmit **D) Transfer**
- w) The full form of P2P in E-Commerce is _____.
A) Peer to Peer B) Person to Person C) Peer to Person Person to Peer

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 are explained, 2 marks for each feature)
ANS: 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 any four Revenue models in Ecommerce.

(2 marks for each model maximum 8 marks)

ANS:The following are the major types of revenue models:

1. Advertising Revenue Model.

In this model websites which attract a lot of hits (number of people who visit this website) offer advertisement space on their pages for a fee. Such websites are widely sought after and earn high revenue from advertisements. Most of these websites are offering users content, services and/or products. Such websites are popular and hence become a good place for any business to advertise their products and get noticed.

2. Subscription Revenue Model

In this model the Company charges the users a subscription fee for having access to the material, offering it has on its website. Those who subscribe to this website are given a username and password using which they can access the website. Generally the subscription fee is valid for a certain period of time only.

A Company's website which offers daily tips to traders on the share market is one example of such a model.

3. Transaction Fee Revenue Model

In the Transaction Fee Revenue Model, a company charges a fee for the transaction it carries out. The fee amount depends on the number and size of the transactions. An example of such a model is websites that allow online auction facilities. Most of these websites charge a small fee when the item is sold. An example of this is ebay.com.

4. Sales Revenue Model

In the Sales Revenue Model companies obtain revenue by selling various products, information or services to its customers. Websites that market products and build sales revenue from merchandising belong to this model. For this the website has to build a brand of its own. An example of this is Amazon.com which is one of the popular sites for purchasing books.

5. Affiliate Revenue Model

In the Affiliate Revenue Model companies send business to an affiliate and receive a suitable fee which could be a flat fee, or even a percentage of the revenue generated. They also earn revenue by offering incentives for the transaction that take place. This is done by offering potential customers special deals. When the customers take advantage of this and make any purchase, they earn point which can be redeemed against various gift items. The company benefits from the fee it receives for sending the business to the affiliate. An example of this is mypoints.com

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

c) Explain any four advantages of E-Commerce.

(Any four points are explained give full marks)

ANS: Some of the important advantages of E-Commerce are

- Reduced time per transaction.
- Reduced cost to buyers.
- As orders are processed electronically errors in transactions are reduced.
- Reduced cost to the traders as the orders are obtained online.
- Even in remote areas new markets are easily created.
- Better quality achieved due to product standardization.
- Optimization of resource utilization.
- Lower inventory costs to the traders.
- Lower advertising costs.
- Equal opportunity for big and small merchants.

d) Explain SET protocol.

ANS: The Secure Electronic Transaction (SET) is a protocol developed by Visa and Master Card to full proof the online Credit Card transactions and to provide security in terms of **Confidentiality, Integrity and Authenticity** of the transaction.

The main features of SET protocol are as follows:

1. In a SET protocol all the sensitive information sent between the customer, the merchant and the merchant's bank is encrypted.
 2. All the above three parties have to get themselves authenticated by the SET certificate authority.
 3. The customer's credit card number is never seen by the merchant.
- SET covers all the aspects of online commerce. It authenticates the identification of the parties involved in the transaction by using a combination of cryptography system along with digital certificates.

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	DEPARTMENT	BASIC SALARY	DA	HRA
2	SUNITA	IT	85000		
3	BINA	SALES	75000		
4	PRAKASH	ACCOUNTS	50000		
5	JAY	HR	65000		
6	NITIN	SALES	35000		
7	REENA	ACCOUNTS	28000		

Write steps to obtain

i) DA as 125% of the Basic if Basic is more than 40,000 otherwise 110% of the Basic in column D.

ii) HRA as 24% of the Basic whenever Basic is below 30,000 otherwise 20% of the Basic in column E.

iii) Find number of cells where the Department is 'SALES' in cell C10.

ANS:

(i) To compute DA.

1. Select D2 and type the formula

=IF (C2>40000, C2*125%, C2*110%) and press enter.

2. Select D2 and drag the fill handle to D7.

(ii) To find HRA.

1. Select E2 and type the formula

=IF (C2<30000, C2*24%, C2*20%) and press enter.

2. Select E2 and drag the fill handle to E7.

(iii) Find number of cells where the Department is 'SALES' in cell C10.

1. Select C10 and type

=COUNTIF (B2:B7,"SALES") and press enter.

Marks 3+3+2

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

	A	B	C	D
1	NAME	SALES AMOUNT	DISCOUNT	NET PRICE
2	SAMIRA	50000		
3	SAIRA	60000		
4	NASIR	20000		
5	NITIN	30000		
6	SARITA	100000		
7	ADIL	75000		

Write steps to

i) Calculate Discount in column C using the following Discount Policy.

Sales Amount	Rate of Discount
First 25,000	6%
Next 25,000	9%
Excess	12%

ii) Calculate Net Price in column D

(Net Price = Sales Amount - Discount).

ANS:

DISCOUNT

1. Select C2 and type

=IF(B2<=25000,B2*6%,IF(B2<=50000,25000*6%+(B2-250000)*9%,(B2-50000)*12%+25000*9%+25000*6%))and press enter.

2. Select C2 and drag the fill handle to C7.

NET PRICE

1. Select D2 and type =B2-C2 and press enter.

2. Select D2 and drag the fill handle to D7.

Marks 6+2

(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
1	PRODUCT	QUANTITY	PRICE	TOTAL COST		PRODUCT	PRICE
2	OIL	1				LUX	45
3	KITKAT	4				DOVE	50
4	TEA	1				PEARS	44
5	SUGAR	2				HAMAM	25
6	PEARS	5				DETTOL	35
7	NESCAFE	6				LIRIL	40
8						KITKAT	20
9						NESCAFE	78
10						TEA	110
11						SUGAR	60
12						OIL	125

Write steps to find the Price in column C using VLOOKUP function. Table to be referred for finding the Price per unit is given in the range F2:G12. Also find Total Cost in Column D.

(Total Cost = Price * Quantity)

ANS:

i) To find Price

1. Select C2 and type the formula
=VLOOKUP(A2,\$F\$2:\$G\$12,2,FALSE)
2. Select C2 and drag the fill handle to C7.

ii) To find Total Cost

1. Select D2 and type =B2*C2 and press enter
2. Select D2 and drag the fill handle to D7.

Marks 5+2

d) Consider the following worksheet

	A	B	C	D	E	F
1	ROLL NO.	TEST1	TEST2	TEST3	AVERAGE	RESULT
2	A44	56	49	55		
3	A54	76	87	65		
4	A58	74	70	70		
5	A60	87	54	67		
6	A61	35	40	36		

Write steps to

- i) Calculate Average marks in column E.
- ii) Find the result in Column F, where result is "Pass" when Average marks are 40 or more otherwise "Fail".
- iii) Find number of students whose Average marks are more than or equal to 70 in cell E8.

ANS:

i) Average Marks:

1. Select E2 and type =AVERAGE (B2:D2) and press enter.
2. Select E2 and drag the fill handle to E6.

ii) Result:

1. Select F2 and type
=IF (E2>=40,"PASS","FAIL") and press enter.
2. Select F2 drag the fill handle to F6.

iii)

1. Select E8 and type
=COUNTIF (E2:E6,">=70") and press enter.

Marks 2+3+2

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 the stocks during January, February and March.

	A	B	C	D	E
1	ITEM	JAN	FEB	MAR	TOTAL
2	PENCIL	4000	4200	4500	
3	PEN	3000	3000	3100	
4	NOTE BOOK	2000	1800	1800	
5	WRITING PAD	1000	1100	1200	

Write steps to

i) Find the total stock of each product in the cells E2, E3, E4 and E5.

ii) Create 3-D Bar chart for the data.

iii) Create a Pie chart for the month of March.

iv) Create a Line diagram for Jan and March.

i) Find the total stock in each month in the cells E2 to E5.

1. Select E2 and type
=SUM (B2:D2) **OR** =B2+C2+D2 and press enter.
2. Select E2 and drag the fill handle to E5.

ii) To create Bar chart for the data.

1. Select the data A1:E5 (or B2:E5).
2. From the **Insert tab**, select bar chart, then select sub type 3-D.

iii) To create Pie chart for the month of March.

1. Select the data D1:D5
2. From the **Insert tab**, select Pie chart, then select any sub type.

iv) To Create a Line diagram for the stock in Jan and March.

1. Select the data B1:B5 and D1:D5
2. From **Insert Tab** select **Line** and then select any Sub type.

Marks 2+2+2+2

- b) The following table shows Quantity, Cost Price per unit (CPRICE) and Selling Price per unit (SPRICE).

	A	B	C	D	E	F	G
1	PRODUCT	QTY	CPRICE	SPRICE	COST	SALES	PROFIT
2	PRODUCT 1	200	100	123			
3	PRODUCT 2	240	75	120			
4	PRODUCT 3	430	28	60			
5	PRODUCT 4	120	45	70			
6	PRODUCT 5	320	40	55			
7	PRODUCT 6	230	50	65			
8	PRODUCT 7	250	65	80			
9	TOTAL PROFIT						

Write steps in Excel to calculate Cost in column E, Sales in column F, Profit in column G and Total Profit in G9 respectively. Write steps in Excel using Solver to find what the cost per unit should be in order to achieve the Total Profit of `75,000.

(COST= QTY*CPRICE
 SALES=QTY*SPRICE
 PROFIT =SALES-COST)

ANS:

i) COST

1. Select E2 and type =B2*C2 and press enter.
2. Select E2 and drag the fill handle to E8.

ii) SALES

1. Select F2 and type =B2*D2 and press enter.
2. Select F2 and drag the fill handle to F8.

iii) PROFIT

1. Select G2 and type =F2-E2 and press enter.
2. Select G2 and drag the fill handle to G8.

iv) TOTAL PROFIT

1. Select G9 and type =SUM (G2:G8) and press enter.

v) SOLVER

1. Select G9 and from the Data Tab select Solver.
2. In the dialog box in the 'Set objective' option the cell G9 is already selected.
3. In the 'To' option select 'Value of' and type 75000 in the text box.
4. In the option 'By Changing Variable cells' text box enter C2:C8
5. Then click on Solve. When Solver will obtain the result, click on ok.

Marks 1+1+1+1+4

Q4. (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
1	SNO	NAME	CITY	SALES AMOUNT
2	S001	AJAY	MUMBAI	35000
3	S002	POOJA	PUNE	55000
4	S003	AJIT	MUMBAI	42000
5	S004	JAY	BANGALORE	50000
6	S005	RITA	PUNE	52000
7	S006	SAMIR	MUMBAI	75000
8	S007	NEHA	BANGALORE	60000

Write steps to do the following:-

- i) Display only those rows where the City is 'Bangalore'.
- iii) Display only those rows where Sales Amount is below average Sales Amount.
- ii) Display only those rows where the Sales Amount is more than `48,000 but less than ` 70,000.

ANS:

- i) Display only those rows where the City is 'Bangalore'.
 1. Select the data A1:D8
 2. From DATA Tab select Filter.
 3. Click on the drop down arrow of City and from text filter select 'equals'.
 4. Type 'Bangalore' in the dialog box and click on ok.
- iii) Display only those rows where Sales Amount is below average Sales Amount.
 1. Select the data A1:D8.
 2. From DATA Tab select Filter.
 3. Click on the drop down arrow of Sales Amount and from number filter select 'below average'.
- ii) Display only those rows where the Sales Amount is more than 48,000 but less than 70,000.
 1. Select the data A1:D8.
 2. From DATA Tab select Filter.
 3. Click on the drop down arrow of Sales Amount and from number filter select 'greater than'.
 4. Type 48000 in the dialog box and then select 'And'.
 5. Select 'Less than'
 6. Type 70000 and click on ok.

Marks 3+2+2

(Give full marks irrespective of the order in which students write the answers.)

d) Explain the following functions in MS-EXCEL.

- 1) DATE() 2) COUNTBLANK() 3) LARGE() 4) NOW()
 5) SMALL() 6) MONTH() 7) WEEKDAY()

ANS:

(Give 1 mark if either definition or example or syntax is correct for each function)

1. **DATE (year, month, day):** Returns the date in American format.
e.g. = DATE (2016, 11, 16) gives 11/16/2016.
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. **LARGE (array, k):** Returns the kth largest value in the data set
e.g. = LARGE({45,23,67,87},3) gives 45 the 3rd largest value.
4. **NOW():** Returns the current system date and time.
e.g. 6/3/2014 11:48
5. **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
6. **MONTH (serial number):** Returns the month corresponding to a serial number or date text. The month returned has a value from 1 to 12.
e.g. =MONTH("3-JUNE-2015") gives 6
7. **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

Q5. (A) Answer any **one** sub-question from a) and b) in VISUAL BASIC (8)
(Note: Students can use text box or message box for output. Both are correct. In text box .TEXT is optional.)

a) Write a project in VB to design a suitable form which allows the user to enter a number and calculate and display whether the number is divisible by 7 or not.

Object	Property	Value
Form	Name	frmCheck
	Caption	Check
Label	Name	lblNum1
	Caption	Number1
Text Box	Name	txtNum
	Text	“ “ (blank)
Command Box	Name	cmdCheck
	Caption	&Check
Command Box	Name	cmdExit
	Caption	&Exit

(4 Marks)

```
Private sub cmdCheck_Click()  
Dim N As Integer  
N = Val(txtNum)
```

```

If N Mod 7 = 0 Then
MsgBox "Number is divisible by 7", vbOKOnly
Else
MsgBox "Number is not divisible by 7", vbOKOnly
End If
End Sub

```

(3 Marks)

```

Private Sub cmdExit_Click( )
End
End Sub

```

(1 Mark)

- b) Write a project in VB to design a suitable form which allows the user to enter Name and Basic Salary and calculate Bonus as 45% of Basic Salary whenever basic salary is less than 25000 otherwise 40% of Basic Salary using a 'Calculate' button and display the result.

OBJECT	PROPERTY	VALUE
Form	Name	FrmBonus
	Caption	Bonus
Label 1	Name	LblName
	Caption	NAME
Label 2	Name	LblBasicSal
	Caption	BASIC SALARY
Label 3	Name	LblBonus
	Caption	BONUS
Text Box 1	Name	TxtName
	Text	(Blank)
Text Box 2	Name	TxtBasicSal
	Text	(Blank)
Text Box 3	Name	TxtBonus
	Text	(Blank)
Command Button 1	Name	CmdCalculate
	Caption	CALCULATE
Command Button 2	Name	CmdExit
	Caption	EXIT

(4 Marks)

```

Private Sub CmdCalculate_click()
Dim BS,B as Single
BS=Val(TxtBasicSal)
If BS<25000 Then
B=BS*.45
Else
B=BS*.40
End If
TxtBonus=FormatNumber(B,2)
End Sub

```

(3 Marks)

```
Private CmdExit_click()
End
End Sub
```

(1 Marks)

OR

```
Private Sub cmdCalculate_Click()
If val(txtBasicSal)<=25000 Then
txtBonus = val(txtBasicSal)*.45
Else
txtBonus = val(txtBasicSal)*.40
End If
End Sub
```

(3 Marks)

```
Private Sub cmdExit_click()
End
End Sub
```

(1 Mark)

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

c) Write a project in VB to design a suitable form which allows the user to enter length of a side of a square and then calculate and display area and perimeter of the square.

(Area= Side*Side
Perimeter= 4*Side)

OBJECT	PROPERTY	VALUE
Form	Name	FrmSquare
	Caption	Area & Perimeter
Label 1	Name	LblSide
	Caption	LENGTH
Label 2	Name	LblArea
	Caption	AREA
Label 3	Name	LblPerimeter
	Caption	PERIMETER
Text Box 1	Name	TxtSide
	Text	(Blank)
Text Box 2	Name	TxtArea
	Text	(Blank)
Text Box 3	Name	TxtPerimeter
	Text	(Blank)
Command Button 1	Name	CmdCalculate
	Caption	CALCULATE
Command Button 2	Name	CmdExit
	Caption	EXIT

(3 Marks)

```
Private sub cmdCalculate_Click()
Dim S As Integer
Dim Area As Single
Dim Perimeter as Single
```

```

S = Val (txtSide)
Area = S * S
Perimeter=4*S
txtArea = FormatNumber(Area, 2)
txtPerimeter = FormatNumber(Perimeter, 2)
End Sub

```

(3 Marks)

```

Private Sub cmdExit_Click( )
End
End Sub

```

(1 Mark)

OR

```

Private Sub cmdCalculate_Click()
txtArea = val(txtSide)*val(txtSide)
txtPerimeter= 4*val(txt.side)
End Sub

```

(3 Marks)

```

Private Sub cmdExit_Click( )
End
End Sub

```

(1 Mark)

- d) Write a project in VB to design a suitable form which allows the user to enter an integer and calculate and display the factorial of that integer when the "Calculate" button is clicked.
(Factorial of N= 1*2*3-----*N)

Object	Property	Value/Setting
Form	Name	FrmFact
	Caption	Factorial
Label 1	Name	lblNum
	Caption	Number
Text box1	Name	TxtNum
	Text	"" (blank)
Command	Name	CmdFact
	Caption	&Calculate
Command	Name	CmdExit
	Caption	E&XIT

(3 Marks)

```

Private Sub CmdFact_Click()
Dim i, n, fact as Integer
n = Val(Txtnum1)
fact=1
For i=1 to n step 1
fact= fact* i
Next i
MsgBox "Fact = " &fact, vbOKOnly
End Sub

```

(3 Marks)

```

Private Sub CmdExit_click()

```

End
End Sub

(1 Mark)