

Name of the Course : B.Com. (Hons.) CBCS

Name of the Paper : Computer Applications In Business

Attempt All questions.

### PART A

Q. 1. State *True* or *False* with reasons:

5×2=10

(a) ROM is a volatile memory.

(b) The process of writing such program instructions for an analyzed problem is called Coding.

(c) Overall functions of the O.S. are to manage I/O, files and memory.

(d) Audit software is one of the type of CATT tools.

(e) [32] of decimal number is equivalent to 100000 of binary number.

Ans. (a) *False*. ROM is non-volatile in nature. It does not lose data when power is switched off.

(b) *True*. Coding is the process of writing program instructions in a programming language.

(c) *True*. O.S. provides service to all application softwares and to the user of those programs. Its basic functions are resource management (I/O), File management and memory management.

(d) *True*. It is used by the auditor to examine entity computer files and may be used during test of control and testing of transactions and balances.

(e) *True*.  $(100000)_2 = 1 \times 2^5 + 0 + 0 + 0 + 0 + 0 = 32$

Q. 2. Attempt the following questions:

(a) What do you mean by computer network? State reasons for which you may like to have a network of computers instead of having stand alone computers? 5

(b) What are network devices? Explain with examples. 5

Ans. (a) See Q. 16, Unit I. [Page 9

(b) See Q. 20, Unit I. [Page 12

Or

(a) How is editing performed in work book? 5

(b) How are Templates used in a presentation? How do we insert worksheet objects and drawing objects? 5

Ans. (a) Excel enables to change the cell contents either in the active cell or in the formula bar. For editing data in the cell, go to the cell address where alterations need to be made; delete the entered data and type new one. To edit cell contents in the formula bar, click the mouse in the right side of the formula bar.

(b) PowerPoint provides many templates with different backgrounds and text formatting to begin the presentation. User can create a new presentation based on one of the PowerPoint design templates. User can preview each design by highlighting the template name on the list. Press OK after choosing a design.

To insert worksheet objects and drawing objects:

(i) Position the cursor at insertion point, where object (worksheet/drawing) is to be inserted.



- (ii) Click: Insert menu → point to object → click worksheet/drawing.
- (iii) Select the required worksheet/drawing object.
- (iv) Choose: Insert the worksheet object or drawing object will be inserted at the cursor position in the document.
- (v) The worksheet or drawing object can be resized and moved as per the requirement.

**Q. 3. Attempt the following questions:**

(a) What is an Operating System? Discuss various functions of operating system. 5

(b) What do you mean by attributes? What are the various types of attributes in a Database? 5

Ans. (a) See Q. 17, Unit I.

[Page 10

(b) See Q. 1, Unit IV.

[Page 44

Or

(a) Explain the different types of operators in MS-Excel. 5

Create a simple formula to calculate the sum of marks obtained by a student in B.Com III Year.

(b) Discuss all the types of Alignment in a Word Document. How do we create Bullets in a document? 5

Ans. (a) Operators specify the type of calculation that users want to perform on the elements of a formula.

Microsoft Excel includes four different types of calculation operators: arithmetic, comparison, text and reference.

**Arithmetic operators** are used to perform basic mathematical operations such as addition, subtraction or multiplication; combine numbers and produce numeric results. For example,

Arithmetic Operator	Meaning (Example)
+ (plus sign)	Addition (3+3)
- (minus sign)	Subtraction (3-1) Negation (-1)
* (asterisk)	Multiplication (3*3)
/ (forward slash)	Division (3/3)
% (percent sign)	Percent (20%)
^ (caret)	Exponentiation (3^2)

**Comparison operators** are used to compare two values with the following operators. When two values are compared by using these operators, the result is a logical value either TRUE or FALSE.

Comparison Operator	Meaning (Example)
= (equal sign)	Equal to (A1=B1)
> (greater than sign)	Greater than (A1>B1)
< (less than sign)	Less than (A1<B1)
>= (greater than or equal to sign)	Greater than or equal to (A1>=B1)
<= (less than or equal to sign)	Less than or equal to (A1<=B1)
<> (not equal to sign)	Not equal to (A1<>B1)



**Text concatenation operator** the ampersand (&) is used to join, or concatenate, one or more text strings to produce a single piece of text.

Text operator	Meaning (Example)
& (ampersand)	Connects or concatenates two values to produce one continuous text value ("North"&"wind")

**Reference operators** combine ranges of cells for calculations with the following operators.

Reference operator	Meaning (Example)
: (colon)	Range operator, which produces one reference to all the cells between two references, including the two references (B5:B15)
, (comma)	Union operator, which combines multiple references into one reference (SUM(B5:B15,D5:D15))
(space)	Intersection operator, which produces one reference to cells common to the two references (B7:D7 C6:C8)

Formula to calculate sum of marks obtained by a student in B.Com III Year.

$$= \text{Sum} (A1 : A5) \text{ or}$$

$$= (A1 + A2 + A3 + A4 + A5)$$

(Assuming the marks of the student are stored in cell range A1 : A5).

**(b) Types of alignment in a document.** Broadly there are two types of alignment in a document, viz., (i) horizontal and (ii) vertical.

(i) **Horizontal alignment** determines the appearance and orientation of the edges of the paragraph: left-aligned, right-aligned, centred, or justified. In a left-aligned paragraph (the most common alignment), the left edge of the paragraph is flush with the left margin. In a justified alignment, horizontal spacing is adjusted so that text is aligned evenly along both the left and right margins. Justifying text creates a smooth edge on both sides.

(ii) **Vertical alignment** determines the paragraph's position relative to the top and bottom margins. This is useful, for example, when we are creating a title page, because we can position text precisely at the top or center of the page, or justify the paragraphs so that they are spaced evenly down the page.

**Bullet.** Bullet is a dot or other symbol placed before text to add emphasis to it such as items in a list.

**Steps to create bullets in a document:**

- (i) Type \* (asterisk) to start a bulleted list, and then press SPACEBAR or TAB.
- (ii) Type any text.
- (iii) Press ENTER to add the next list item. Word automatically inserts a bullet.
- (iv) To finish the list, press ENTER twice, or press BACKSPACE to delete the last bullet in the list.

**Steps to add bullets or numbering to existing text:**

- (i) Select the items to add bullets to.
- (ii) On the Formatting toolbar click Bullets.



Q. 4. (a) What is spreadsheet? Explain different steps of printing worksheet in Excel. 5

(b) Give the purpose, syntax and application of PMT function in MS Excel. How is it different from IPMT and PPMT? 5

Ans. (a) Spreadsheet refers to an application commonly used for budgets, forecasting and other finance related tasks that organizes data values using cells, where relationships between cells are defined by formulas. Spreadsheet program is used to perform calculations, store information in the memory of a computer and display information or the results in the required format on the computer screen. It also provides graphing capabilities for output and various formatting options for text, numeric values and graph feature.

Steps of printing: See 3(b), 2014.

[Page 94

(b) IPMT and PPMT are two financial functions. See Q. 12, Unit III. [Page 35

Or

(a) Discuss relationship between hardware and software. 5

(b) Explain any three internet protocol with examples. 5

Ans. (a) Hardware is the mechanical and electro mechanical components of a computer system. It includes the physical device of a computer system. Thus, the input, storage, processing, control and output devices are all hardware.

Software is a sequence of instructions written in a language that can be understood by a computer. It includes the programs that control the processing activity of the computer viz, system development software and system management software.

However, for a computer to produce useful output, the hardware and software must work together:

- Nothing useful can be done with the computer hardware on its own and the software cannot be utilized without supporting hardware.
- To get a particular job done by a computer, the relevant software should be loaded in the hardware before processing starts.
- Both hardware and software are necessary for a computer to perform a useful job. Both are complementary to each other.
- The same hardware can be used with different softwares to make a computer system perform different type of jobs. Except for upgrades (like increasing the memory or hard disk capabilities or adding other peripherals) hardware is normally a one time expense, whereas software is a continuous expense.

(b) Computers adhere to certain protocols that define the manner in which communication takes place. A *protocol* is a set of rules that coordinates the exchange of information. If one computer is sending information to another and they both follow the same protocol, the message gets through; regardless of what types of machines they are and on what operating systems they are running. Most commonly used protocols are:

- **Transmission Control Protocol/Internet Protocol (TCP/IP).** TCP and IP are the standards that enable computer users to exchange data through the Internet while sending a large block of data. TCP divides the data into small data packets and also adds some additional information (such



as error correction code). IP puts destination address information on such data packets. TCP ensures that any data sent through the Internet reaches the destination computer intact while IP is responsible for routing the data packets to a desired destination IP address. TCP/IP are also called Internet Protocols.

- **File Transfer Protocol (FTP).** FTP is used to get the files or information from the Internet to a computer. FTP is a system of rules and software program that enables a user to log on to another computer and transfer information between it and his/her computer. FTP allows the user to get access to the files stored in the directory of a remote computer that is connected to the Internet. Using FTP, one can upload and download files from the remote computer (known as FTP servers), if he/she has access permission on the remote machine.
- **Hypertext Transfer Protocol (HTTP).** HTTP is the set of rules, or protocols that governs the transfer of hypertext between two or more computers. The World Wide Web encompasses the universe of information that is transferred via HTTP. HTTP is the Internet protocol responsible for transferring and displaying Web pages.
- **Telnet.** The word 'telnet' is derived from telecommunications and network and is a protocol that allows a user to log on to a remote computer. Telnet is also known as *remote login*, which means connecting one machine to another in such a way that a person may interact with another machine as if it is being used locally.

#### PART B

Q. 5. Write the syntax of any *two* logical functions in MS-Excel. 7

Ans. See Q. 6(a), 2014.

[Page 98

Q. 6. (a) Explain Kurtosis and Skewness as statistical functions in Excel giving the syntax and examples. 7

(b) Complete the table for frequency distribution. Write down the formula in the appropriate cells: 7

	A	B	C	D	E
1	50	40	30	25	69
2	12	34	80	95	99
3	18	8	32	54	76
4					
5	Lower limit	Upper limit	Frequency		
6	0	20	?		
7	20	40	?		
8	40	60	?		
9	60	80	?		
10	80	100	?		

Ans. (a) (i) Excel provides SKEW function as a way to calculate skewness of S i.e., if R is a range in Excel containing the data elements in S then  $SKEW(R) = \text{Skewness of } S$ .



Example. Suppose  $S = \{2, 5, -1, 3, 4, 5, 0, 2\}$

The skewness of  $S = -0.43$  i.e.,  $SKEW(R) = -0.43$  where  $R$  is a range in an Excel worksheet containing the data in  $S$ . Since this value is negative, the curve representing the distribution is skewed to the left.

- (ii) **Kurtosis.** Kurtosis provides a measurement about the extremities of the distribution of data and therefore provides an indication of the presence of outliers. Excel provides the KURT function as a way to calculate the Kurtosis of  $S$ , i.e., if  $R$  is a range in Excel containing the data elements in  $S$  then  $KURT(R) = \text{Kurtosis of } S$ .

Example. Suppose  $S = \{2, 5, -1, 3, 4, 5, 0, 2\}$

The Kurtosis of  $S = -0.94$  i.e.,  $KURT(R) = -0.94$  where  $R$  is a range in excel worksheet containing the data in  $S$ .

(b) To find out frequency.

$C6 = \text{FREQUENCY}(A1 : E3, C6 : C10)$  Press **CTRL + SHIFT + ENTER**

Mean from Grouped data:

1. To find mid-values of group in cell D6, enter formula as  $= (A6 + B6)/2$  which is copied to cells D7 ..... D10.
2. To find the product of mid-values with frequency in cell E6 enter the formula as  $= D6 * C6$ , which is copied to E7 ..... E10.
3. To find total observation, we sum the cells, C6 ..... C10 in C11  
 $= \text{SUM}(C6 : C10)$
4. To find the sum of product of frequency and mid-value in cell E11, type formula as  $= \text{SUM}(E6 : E10)$ .
5. To find the MEAN in cell I6 we write formula as  $= E11/C11$ .

Or

(a) Define ratio analysis. Write formulas for current ratio and liquidity ratio by giving examples. 7

(b) Complete the following table for Regression Analysis. Write down the appropriate formula in the relevant cells: 7

	A	B	C	D	E
1	Year	Output	Estimated output	Slope	?
2	2001	100	?	Intercept	?
3	2002	125	?		
4	2003	190	?		
5	2004	210	?		

**Ans. (a)** Ratio analysis is a technique under which relationship between figures of the financial statement is expressed as a ratio. It is easy to understand and is more meaningful than the financial figures.

Current ratio = Current Assets/Current Liabilities

Liquidity ratio = Current Assets - Stock /Current Liabilities

Example:

	A	B	C	D
1	Liabilities	Amount	Assets	Amount
2	Equity Share Capital	60,000	Goodwill	25,000



3	Debentures	25,000	Machinery	55,000
4	Sundry Creditors	10,000	Stock	15,000
5	Unclaimed Dividend	5,000	Cash	5,000
6	Total	1,00,000	Total	1,00,000

(i) Current Ratio

$$= (D4 + D5) / (B4 + B5)$$

i.e., = (Stock + Cash) / (Sundry Creditors + Unclaimed Dividend)

$$= (15,000 + 5,000) / (10,000 + 5,000)$$

$$= 20,000 / 15,000 = 4 : 3$$

(ii) Quick Ratio

$$= D5 / (B4 + B5)$$

$$= 5,000 / (10,000 + 5,000)$$

$$= 5,000 / 15,000 = 1 : 3$$

(b) In cell E1 slope will be calculated as = Slope(B2 : B5, A2 : A5)

Likewise in cell E2 Intercept will be calculated as = Intercept (B2 : B5, A2 : A5)

With the help of calculated intercept and slope we have estimated the value of 'y' for all values of 'x' by putting in cell C2 the formula = SES2 \* SES1 \* A2, then copying it to the cell C3 ... C5.

Q. 7. (a) How are COUNT, COUNTA and COUNTIF functions different from each other? 7

(b) Complete the table for the first year of the Loan and Lease Statement. Write down the formula in the appropriate cells:

	A	B	C	D	E
1	Loan Amount	120000			
2	Rate of Interest	12%	P.A.		
3	Time	3 Years	36 months		
4	Effective Rate of Interest	?			
5	Instalment	?			
6	Period	Opening Balance	Interest	Instalment	Closing Balance
7	1	?	?	?	?

Ans. (a) 1. COUNT ( ). It counts the number of cells in a range that contain numbers and also numbers within the list of arguments. Use COUNT to get the number of entries in a number field that is in a range or array of numbers. COUNT (Value 1, Value 2 .....

2. COUNTA ( ). It counts the number of cells in a range that are not empty and the values within the list of arguments. Use COUNTA to count the number of cells that contain data or anything with text or numbers. COUNTA (Value 1, Value 2 .....

3. COUNTIF ( ). It counts only those cells that match the specified criteria and it takes the form = COUNTIF (range, criteria), where range is the range to be tested and criteria is the logical test to be performed on each cell.

- (b) (i) Type in Cell B4 = B2/12 and press enter  
(ii) Type in Cell B5 = PMT(B4, C3, B1) and press enter  
(iii) Type in Cell B7 = B1 and press enter  
(iv) Type in Cell C7 = B1\*B4 and press enter  
(v) Type in cell D7 = B5 and press enter  
(vi) Type in cell E7 = B7 - (D7 - C7) and press enter

Or

(a) Explain how a Pie Chart is inserted in an Excel worksheet? 7

(b) Write the formula for the following generalized Payroll Statement for M/S ABC Limited to calculate gross salary of each employee. Employees are paid Basic Salary, Dearness Pay (DP), Travel Allowance (TA) and Bonus: 7

- DP is paid at 15% of Basic
- TA is paid at 10% of Basic if Basic < 15000 otherwise at 12% of Basic
- Bonus is paid at 5% of company profit
- Company profit is ₹5,00,000.

	A	B	C	D	E	F
1	Employee Name	Basic Salary	DP	TA	Bonus	Gross
2	ABC	15000	?	?	?	?
3	DEF	13000	?	?	?	?
4	GHI	17000	?	?	?	?
5						
6	Company Profit	500000				

**Ans. (a) Steps to insert a pie chart in an Excel Worksheet:**

- (i) Select the data range to be used for a chart.
  - (ii) Click the Chart button on the toolbar.
  - (iii) Select the pie chart option from the available types of charts.
  - (iv) Choose chart option such as specifying chart and Axis title displaying or hiding axes category, displaying or hiding a legend, displaying Data labels, adding a data table etc.
  - (v) Tell Excel where to put the chart i.e., on the same sheet or in a separate file.
  - (vi) Finally, click on finish option.
- (b) (i) Type in C2 = 15% \* B2, press enter  
Copy the formula in cells C3 and C4.  
(ii) Type in D2 = if (B2 < 15,000, 10% \* B2, 12% \* B2)  
Copy the formula in cells D3 ... D4.  
(iii) Type in E2 = 5% \* B6  
Copy the formula in cells E3 ... E4.  
(iv) Type in F2  
=B2 + D2 + E2  
Copy the formula in F3 ... F4.

