

1st Semester

CBCS Syllabus

GE I

Generic Elective Paper GE-I (Interdisciplinary for other department)

GE-I T1 : Computer Fundamentals

Theory: 60 lectures

Introduction: Introduction to computer system, uses, types.	6L
Data Representation: Number systems and character representation, binary arithmetic	12L
Human Computer Interface: Types of software, Operating system as user interface, utility programs	6L
Devices: Input and output devices (with connections and practical demo), keyboard, mouse, joystick, scanner, OCR, OMR, bar code reader, web camera, monitor, printer, plotter	10L
Memory: Primary, secondary, auxiliary memory, RAM, ROM, cache memory, hard disks, optical disks	6L
Computer Organisation and Architecture: C.P.U., registers, system bus, main memory unit, cache memory, Inside a computer, SMPS, Motherboard, Ports and Interfaces, expansion cards, ribbon cables, memory chips, processors.	12L
Overview of Emerging Technologies: Bluetooth, cloud computing, big data, data mining, mobile computing and embedded systems.	8L

Reference Books:

1. A. Goel, Computer Fundamentals, Pearson Education, 2010.
2. P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006
3. P. K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007

GE-I P1: Computer Fundamentals Lab

Practical: 60 lectures

Practical exercises based on MS Office/ Open Office tools using document preparation and spreadsheet handling packages.

MS Word

1. Prepare a **grocery list** having four columns (Serial number, The name of the product, quantity and price) for the month of April, 06.
 - Font specifications for Title (Grocery List): 14-point Arial font in bold and italics.
 - The headings of the columns should be in 12-point and bold.
 - The rest of the document should be in 10-point Times New Roman.
 - Leave a gap of 12-points after the title.
2. Create a **telephone directory**.
 - The heading should be 16-point Arial Font in bold
 - The rest of the document should use 10-point font size
 - Other headings should use 10-point Courier New Font.
 - The footer should show the page number as well as the date last updated.
3. Design a **time-table form** for your college.

- The first line should mention the name of the college in 16-point Arial Font and should be bold.
 - The second line should give the course name/teacher's name and the department in 14-point Arial.
 - Leave a gap of 12-points.
 - The rest of the document should use 10-point Times New Roman font.
 - The footer should contain your specifications as the designer and date of creation.
4. XYZ Publications plans to release a new book designed as per your syllabus. Design the first page of the book as per the given specifications.
- The title of the book should appear in bold using 20-point Arial font.
 - The name of the author and his qualifications should be in the center of the page in 16-point Arial font.
 - At the bottom of the document should be the name of the publisher and address in 16-point Times New Roman.
 - The details of the offices of the publisher (only location) should appear in the footer.
5. Create the following one page documents.
- a. Compose a note inviting friends to a get-together at your house, Including a list of things to bring with them.
 - b. Design a certificate in landscape orientation with a border around the document.
 - c. Design a Garage Sale sign.
 - d. Make a sign outlining your rules for your bedroom at home, using a numbered list.
6. Create the following documents:
- (a) A newsletter with a headline and 2 columns in portrait orientation, including at least one image surrounded by text.
 - (b) Use a newsletter format to promote upcoming projects or events in your classroom or college.
7. Convert following text to a table, using comma as delimiter
Type the following as shown (do not bold).
- Color, Style, Item**
Blue, A980, Van
Red, X023, Car
Green, YL724, Truck
Name, Age, Sex
Bob, 23, M
Linda, 46, F
Tom, 29, M
9. Enter the following data into a table given on the next page.

Salesperson	Dolls	Trucks	Puzzles
Kennedy, Sally	1327	1423	1193
White, Pete	1421	3863	2934
Pillar, James	5214	3247	5467

York, George	2190	1278	1928
Banks, Jennifer	1201	2528	1203
Atwater, Kelly	4098	3079	2067

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Add a column Region (values: S, N, N,S,S,S) between the Salesperson and Dolls columns to the given table Sort your table data by Region and within Region by Salesperson in ascending order.

In this exercise, you will add a new row to your table, place the word "Total" at the bottom of the Salesperson column, and sum the Dolls, Trucks, and Puzzles columns.

10. Wrapping of text around the image.
11. Following features of menu option must be covered

FILE	Complete menu
EDIT	Complete menu
VIEW	Complete menu
INSERT	Complete menu
FORMAT	Complete menu
TABLE	Complete menu
WINDOW	Complete menu
HELP	Complete menu
TOOLS	All options except Online collaboration, Tools on Macro, Templates

MS Excel

1. Enter the Following data in Excel Sheet

REGIONAL SALES PROJECTION

State	Qtr1	Qtr2	Qtr3	QTR4	Qtr Total	Rate Amount
Delhi	2020	2400	2100	3000		15
Punjab	1100	1300	1500	1400		20
U.P.	3000	3200	2600	2800		17
Haryana	1800	2000	2200	2700		15
Rajasthan	2100	2000	1800	2200		20

**TOTAL
AVERAGE**

(a) Apply Formatting as follow: I.Title
in TIMES NEW ROMAN

- ii. Font Size - 14
- iii. Remaining text - ARIAL, Font Size -10
- iv. State names and Qtr. Heading Bold, Italic with Gray Fill Color.
- v. Numbers in two decimal places.
- vi. Qtr. Heading in center Alignment.
- vii. Apply Border to whole data.

(b) Calculate State and Qtr. Total

(c) Calculate Average for each quarter

(d) Calculate Amount = Rate * Total.

2. Given the following worksheet

	A	B	C	D
1	Roll No.	Name	Marks	Grade
2	1001	Sachin	99	
3	1002	Sehwag	65	
4	1003	Rahul	41	
5	1004	Sourav	89	
6	1005	Har Bhajan	56	

Calculate the grade of these students on the basis of following guidelines:

If Marks	Then Grade
≥ 80	A+
$\geq 60 < 80$	A
$\geq 50 < 60$	B
< 50	F

3. Given the following worksheet

	A	B	C	D	E	F	G	
1	Salesman	Sales in (Rs.)						
2	No.	Qtr1	Qtr2	Qtr3	Qtr4	Total	Commission	
3	S001	5000	8500	12000	9000			
4	S002	7000	4000	7500	11000			
5	S003	4000	9000	6500	8200			
6	S004	5500	6900	4500	10500			
7	S005	7400	8500	9200	8300			
8	S006	5300	7600	9800	6100			

Calculate the commission earned by the salesmen on the basis of following Candidates:

If Total Sales

Commission

< 20000	0% of sales
> 20000 and < 25000	4% of sales

> 25000 and < 30000	5.5% of sales
> 30000 and < 35000	8% of sales
>= 35000	11% of sales

The total sales is sum of sales of all the four quarters.

4. A company XYZ Ltd. pays a monthly salary to its employees which consists of basic salary, allowances & deductions. The details of allowances and deductions are as follows:

Allowances

- HRA Dependent on Basic
 - 30% of Basic if Basic \leq 1000
 - 25% of Basic if Basic $>$ 1000 & Basic \leq 3000
 - 20% of Basic if Basic $>$ 3000
- DA Fixed for all employees, 30% of Basic
- Conveyance Allowance Rs. 50/- if Basic is \leq 1000
Rs. 75/- if Basic $>$ 1000 & Basic \leq 2000
Rs. 100 if Basic $>$ 2000
- Entertainment Allowance NIL if Basic is \leq 1000 Rs. 100/- if Basic $>$ 1000

Deductions

- Provident Fund 6% of Basic
- Group Insurance Premium Rs. 40/- if Basic is \leq 1500
Rs. 60/- if Basic $>$ 1500 & Basic \leq 3000
Rs. 80/- if Basic $>$ 3000

Calculate the following:

Gross Salary = Basic + HRA + DA + Conveyance + Entertainment
 Total deduction = Provident Fund + Group Insurance Premium
 Net Salary = Gross Salary – Total Deduction

5. Create Payment Table for a fixed Principal amount, variable rate of interests and time in the format below:

No. of Instalments	5%	6%	7%	8%	9%
3	XX	XX	XX	XX	XX
4	XX	XX	XX	XX	XX
5	XX	XX	XX	XX	XX
6	XX	XX	XX	XX	XX

Use an array formula to calculate Simple Interest for given principal amounts given the rate of Interest and time

Rate of Interest	8%
Time	5 Years
Principal	Simple Interest

1000	?
18000	?
5200	?

7. The following table gives year wise sale figure of five salesmen in Rs.

Salesman	2000	2001	2002	2003
S1	10000	12000	20000	50000
S2	15000	18000	50000	60000
S3	20000	22000	70000	70000
S4	30000	30000	100000	80000
S5	40000	45000	125000	90000

- Calculate total sale year wise.
 - Calculate the net sale made by each salesman
 - Calculate the maximum sale made by the salesman
 - Calculate the commission for each salesman under the condition.
 - If total sales >4,00,000 give 5% commission on total sale made by the salesman.
 - Otherwise give 2% commission.
 - Draw a bar graph representing the sale made by each salesman. (f)
 - Draw a pie graph representing the sale made by salesman in 2000.
8. Enter the following data in Excel Sheet

PERSONAL BUDGET FOR FIRST QUARTER

Monthly Income (Net): 1,475

EXPENSES	JAN	FEB	MARCH	QUARTER TOTAL	QUARTER AVERAGE
Rent	600.00	600.00			
Telephone	48.25	43.50	60.00		
Utilities	67.27	110.00	70.00		
Credit Card	200.00	110.00	70.00		
Oil	100.00	150.00	90.00		
AV to Insurance	150.00				
Cable TV	40.75	40.75	40.75		

Monthly Total

Calculate Quarter total and Quarter average.

- Calculate Monthly total.
- Surplus = Monthly income - Monthly total.
- What would be total surplus if monthly income is 1500.
- How much does telephone expense for March differ from quarter average.
- Create a 3D column graph for telephone and utilities.
- Create a pie chart for monthly expenses.

9. Enter the following data in Excel Sheet

TOTAL REVENUE EARNED FOR SAM'S BOOKSTALL

Publisher name	1997	1998	1999	2000	total
A	Rs. 1,000.00	Rs. 1100.00	Rs. 1,300.00	Rs. 800.00	
B	Rs. 1,500.00	Rs. 700.00	Rs. 1,000.00	Rs. 2,000.00	
C	Rs. 700.00	Rs. 900.00	Rs. 1,500.00	Rs. 600.00	
D	Rs. 1,200.00	Rs. 500.00	Rs. 200.00	Rs. 1,100.00	
E	Rs. 800.00	Rs. 1,000.00	Rs. 3,000.00	Rs. 560.00	

(a) Compute the total revenue earned.

(b) Plot the line chart to compare the revenue of all publisher for 4 years.

(b) Chart Title should be _Total Revenue of sam's Bookstall (1997-2000)_

(c) Give appropriate categories and value axis title.

10. Generate 25 random numbers between 0 & 100 and find their sum, average and count. How many no. are in range 50-60.