

Revised Fall 2012 Bachelor of Computer Applications

Semester - III

BCA3010 - Computer Oriented Numerical Methods- 4 Credits

(Book ID: B1643)

Assignment Set – 1 (60 Marks)

Answer All Questions

6 X 10 = 60 Marks

- 1. If $\frac{2}{3}$ is approximated by 0.667, find the absolute and relative errors.
- 2. Find the maximum error in y where $y = \frac{FL^4}{8EI}$ where $F = 50, L = 30, E = 1.5 \times 10^8, I = 0.06, \Delta F = 2, \Delta L = 0.1, \Delta E = 0.01 \times 10^8, \Delta I = 0.0006$
- 3. Given $u_0 = 1$, $u_1 = 11$, $u_2 = 21$, $u_3 = 28$, $u_4 = 29$ find $\Delta^4 u_0$ without forming difference table.
- 4. Using Newton–Raphson method, establish the formula $x_{n+1} = \frac{1}{2} (x_n + \frac{N}{x_n})$ to calculate the

square root of N. Hence find the square root of 5 correct to four places of decimals.

5. Solve by LU decomposition method, the following system of equations

6. Using power method find the largest eigen value and the corresponding eigen vector of



²x + y + 4z = 124x + 11y - z = 338x - 3y + 2z = 20.



the matrix
$$A = \begin{bmatrix} 25 & 1 & 2 \\ 1 & 3 & 0 \\ 2 & 0 & -4 \end{bmatrix}$$
, carry out 5 iterations by taking $X^{(0)} = (1, 0, 0)^{t}$





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Assignment Set – II (60 Marks)

Answer All Questions

6 X 10 = 60 Marks

1. Given the following data

Х	0	1	2	3	4
У	1	5	10	22	38
Find the straight line and the neuropeles of heat fit					

Find the straight line and the parabola of best fit.

- 2. Find the value of f(15) using Bessel's formula if f(10) = 2845, f(14) = 3162, f(18) = 3544, f(22) = 3992
- 3. By Newton's divided difference formula find the equation of the cubic curve which passes through the points (4, -43), (7, 83), (9, 327) and (12, 1053). Hence find f(10).
- 4. Find f'(0.6) & f''(0.6) from the following table:

x	0.4	0.5	0.6	0.7	0.8
f(x)	1.5836	1.7974	2.0442	2.3275	2.6510
	2		4 1		

5. Use Simpson's $\frac{3}{8}$ rule to evaluate $\int_{1}^{1} e^{x} dx$ by taking n = 3.

6. Use Picard's method to solve $y' = \frac{dy}{dx} = 2y - 2x^2 - 3$ given that y = 2 when x = 0.





Bachelor of Computer Application Semester III BCA3020 – Data Base Management System– 4 Credits (Book ID: B1479) Assignment Set – 1 (60 Marks)

Answer all the questions.

1.	What are the applications of data base system?	[10 marks]
2.	Explain the functions of the following.	[10 marks]
	a) Storage Manager	
	b) Buffer Manager	
	c) Transaction Manager	
3.	Explain Network Data Model.	[10 marks]
4.	Write a note on storage devices.	[10 marks]
5.	Discuss about system catalog in a relational DBMS.	[10 marks]
6.	Explain Embedding SQL Statements	[10 marks]





Revised Fall 2012 Bachelor of Computer Application Semester III BCA3020 – Data Base Management System– 4 Credits (Book ID: B1479) Assignment Set – 2 (60 Marks)

Answer all the questions:

1. Discuss about Domain Relational Calculus.	[10 Marks]
2. Discuss on Anomalies in a Database	[10Marks]
3. Explain Project and set operations?	[10 Marks]
4. List and explain the advantages of Data Distribution	[10 Marks]
5. Explain the Alternative Object-Oriented Database Strategies.	[10 Marks]
6. What are the reasons for Object-relational impedance mismatch?	[05 Marks]
7. Write a note on SUBSET Mapping.	[05 Marks]





Bachelor of Computer Application Semester - III BCA3040 – Data Communication – 4 Credits (Book ID: B1416) Assignment Set – 1 (60 Marks)

Answer all Questions. Each Question carries 10 Marks

- 1. Draw the basic block diagram of communication system and briefly explain about each block.
- 2. What is modulation? Explain why is modulation required?





Revised Fall 2012 Bachelor of Computer Application Semester - III BCA3030 – Data Communication – 4 Credits (Book ID: B1416) Assignment Set – 2 (60 Marks)

Answer all Questions

Each Question carries 10 Marks

- 1. Discuss the concepts need to be concentrated while selecting and installing a memory.
- 2. Explain the following ISA versions of bus
 - a) 8-Bit
 - b) 16-Bit
- 3. Discuss the general procedure of Booting process.
- 4. What is Blu-ray disk? Explain the types of Blu-ray disk.
- 5 Describe the construction and operation of a modem with a neat diagram
- 6. Discuss various issues involved in 3D graphics accelerator





Bachelor of Computer Application Semester - III BCA3040 – Data Communication – 4 Credits (Book ID: B1644) Assignment Set – 1 (60 Marks)

Answer all Questions. Each Question carries 10 Marks

- 1. Draw the basic block diagram of communication system and briefly explain about each block.
- 2. What is modulation? Explain why is modulation required?
- 3. Write short notes on :
 - i. Ground wave propagation
 - ii. Sky wave propagation
 - iii. Line of sight propagation
- 4. Briefly explain about ASK, FSK and PSK.
- 5. Explain about the Nyquist Bandwidth and Nyquist Theorem.
- 6. List and explain the different types of errors that occur during data transmission.





Bachelor of Computer Application Semester - III BCA3030 – Data Communication – 4 Credits (Book ID: B1644) Assignment Set – 2 (60 Marks)

Answer all Questions. Each question carries 10 Marks

- 1. Explain the concept of multiplexing. Explain about Frequency-division multiplexing.
- 2. Explain Code-Division Multiple Access (CDMA).
- 3. Explain the working of Packet switching.
- 4. Explain the least-cost algorithms in routing decisions.
- 5. What is a topology? Explain the types of LAN topologies.
- 6. Briefly write short notes on IEEE 802.1Q VLAN standard.





Revised Fall 2012 Bachelor of Computer Application Semester - III BCA3050 – Soft Skill-Personally Development - 2 credits (Book ID: B0726) Assignment - 1 (30 marks)

Answer the following questions:

How to beat a Bad Mood

Moods, say the experts, are emotions that tend fixed, influencing one's outlook for hours, days or even weeks. That's great if your mood in a pleasant one, but a problem if you are sad, anxious, angry or simply lethargic. Perhaps the best way to deal with such moods is to talk them out; sometimes, though, there is no one to listen. Modern pharmacology offers an abundance of tranquillizers anti-depressants and anti-anxiety drugs. What many people don't realize, however, is that scientists have discovered the effectiveness of several no-drugs approaches to pry you loose from an unwanted mood. These can be as good as prescription drugs and have the added benefit of being non-toxic and non-addictive. So, in moments of bad Moods try one of these antidotes instead of rushing to the chemists. Of all self-help techniques, aerobic exercises seem to be the most effective cure for a bad mood. Aerobic exercises such as running, cycling, brisk walking, swimming or other repetitive activates that boost the heart beat rate, increase circulation of blood and improve the body's utilization of oxygen. Just for 20 minutes, three to five times a week are just that you need.

"Colour can be a nutrient for the mind as vitamins are for the body," says Patricia, a New York Colour psychologist. She suggests to keep away from red to defuse irritability and anger. Avoid wearing colours that make you feel down-black or dark black or dark blue. Go for warm, bright and active colours that lighten your mood. Neutral colours such as soft shades of blue have soothing, calming effect and alleviate anxiety and tension.

There is reported basic link between food and mood. Carbohydrates eaten alone stimulate the brain's production of serotonin responsible for making us feel calm and relaxed. It is a sort of







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comfort food with a tranquillizing effect. Eating proteins tends to sustain alertness and mental energy. The best proteins are shell-fish, fish, chicken etc.

A strong connection has been found between high caffeine intake and increased depression, irritability and anxiety. People are often depressed when their thoughts are negative and distorted. If you avoid being critical of yourself and think positive thoughts, you're actually more likely to feel happy. It is important to lift oneself out of one's own self-defeating mood and to take an interest in someone else.

A. Complete the following sentences

[5 marks]

i) Most people beat a bad mood either by talking it out with friends or by

ii) Aerobic exercise have been recommended to beat a bad mood because

iii) Colours that add to gloom are (i)_____ (ii) _____

iv) If you would choose between carbohydrates and caffeine for a good mood you would

choose ______ because _____

v) Pick up a word from passage that means 'bad temper'

B. Fill in the empty boxes in the table given below with appropriate words or phrases chosen from the passage. [5 marks]

Self-help techniques	Specific Effects
Brisk Walking	i)
ii)	
iii)	Lessens anxiety and tension
	iv)
Eating fish, chicken, etc.	
Depression among most people is	v)
because they are	

C. Here is the summary of the passage given above. Fill in the blanks with relevant information/conclusions Following non-drug approaches help people fight their bad mood: [5 marks]

i) ___

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ii)

- iii) _____
- iv) .

 v) All these measures would lead to happy mood. Besides the above it is important to______ to feel happy in the real sense.

2. Which are the different ego states described by Freud? Explain any one. [5 marks]

3. Read the caselet given below and answer the questions:

[10 marks]

Yummy Flavors CC, Inc. is a family owned company now in its fourth generation. The company began in 1889 making only one standard sugar cookie. Over the years it has prospered, and now it produces over 50 flavors of cookies. The company's motto is "cookies for any occasion." Rising sales revenues have brought in a lot of income, so now money can be allocated to increasing line personnel and managerial staff. Manjunath, who is addressed as "Mr. Flavors" by employees, has finally added an HR specialist (you) to help with personnel and organizational behavior problems.

He has asked you to help with what he feels is a problem of worker morale in the operations division. Bhaskar Shetty, VP of operations, has complained to Manjunath that most of his workers have bad attitudes and don't seem to want to work. He says he's prepared to fire them all if they don't shape up. Bhaskar has informed Manjunath of his intentions, and believes he (Bhaskar) needs to "clean house" to show them who's boss. Besides, he thinks a lot of them have become complacent and don't care about quality. Bhaskar also pays little attention to the mid-level managers' opinions stating that, "I'm ultimately responsible, so I'll make the decisions."

Manjunath knows that Bhaskar can be heavy-handed in his management style and that he believes workers come to work either motivated or not. Bhaskar has told him "there's nothing you can do to make them work if they don't want to." Knowing everything about cookies, but nothing about people, Manjunath isn't sure whether it's the workers or Bhaskar that's creating the problem. He wants to know that if it is Bhaskar, can he be changed? Or is it hopeless? He wants you to tell him if you think Bhaskar or the workers should go. If you think neither should, then what are the ingredients needed to cook up a solution? This thing's getting on his nerves. He wants to get it behind him and get back to asks his cookies. Therefore. Manjunath you to analyze the situation using your knowledge of leadership theories, and recommend at least two possible solutions so he can decide what to do.

Your assignment:

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- 1. Decide if either the workers or Bhaskar should go.
- 2. Analyze Bhaskar's management style and compare it to others that might be better.
- 3. Consider whether the workers or Bhaskar can be changed and if so, how to do it.
- 4. Back up your analysis and recommendations for two solutions with sound theory.
- 5. Provide evidence to support why your proposal will work





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Bachelor of Computer Application Semester - III BCA3050 – Soft Skill- Personally Development - 2 credits (Book ID: B0726)

Assignment - 2 (30 marks)

Answer the following questions:

1.	Explain any two personality characteristics in an organization.	[5 marks]
2.	Explain the POSEC method of time management	[5 marks]
3.	Why are goals important? Why should they be SMART?	[10 marks]
4.	How does Jung explain the traits of personality?	[5 marks]
5.	What is self-image? How is it created?	[5 marks]





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