Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur
Directorate of Distance Education
Professional / Technical 1st Semester January Session 2016-19
Subject:- BCA
Paper – I
Model Paper (Full Marks – 70)
<u>**Mathematical Foundation**</u>

1. Discuss and explain Leibnitz's Theorem.

2. Define Infinite Series. Discuss about Tapers Input Series.

3. If $f(x) = x^3 + 2x^2 - 5x + 11$, then find the value of (9/10)

    with the help of Taylor's series for $f(x+h)$.

4. What do you mean by Continuous and Differentiability?

5. Bore standard functions of different co-efficient

    (i) $d/dx\,(xn) = nx^{2-1}$ (ii) $d/dx\,(tanx) = sec^2x$

6. Define parametric differential

    Let $x = a\,(cot + log + a\,t/2)$ and $y = a\,sin\,t$ then find dy/dx

7. (i)   Find $\sqrt{1 + cos2x\,dx}$ (ii)

8. Discuss and explain Taylor's Theorem.

9. Evaluate (i) $\int logx\,dx$ (ii) $\int x^n\,logx\,dx$

10. Evaluate $\int_0^{\pi/2} dx/(4 + 5cos\,x^2)$

11. Define Fourier series. Write and explain in Dirichlet's
    Condition.

12. Solve $(a-x)\,p + (b-y)\,q = c - z$

13. State and prove Cayley Hamilton Theorem.

14. Solve by Cramer's Rule : $x + y + z = 1$, $2x + 3y + z = 4$, $4x + 9y + z = 16$.

15. Write short notes on any two of the following:

    a) Wave equations b) Define vector product c) define Rolle's
       Theorem.

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Paper – II
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<u>Computer Fundamentals</u>

1. Define computer and also discuss history of computer.

2. Discuss and explain different types of classification of computers.

3. Write and explain different generation of computer.

4. What do you mean by input devices? Explain briefly.

5. Write the name of output devices. Explain one of them.

6. Discuss about memory organization. Write about primary memory.

7. What is the different between primary memory and second memory?

8. Write about different number system.

9. Perform binary digits (i) 111011 + 110001   (ii) 10011 + 11001

10. What is the different between 01's and 2's completely.

11. Write and explain logic gates.

12. What do you mean by derived logic gates and also explain its types?

13. What is an operating system? Explain briefly with the help of examples.

14. Write and explain various functions of an operating system.

15. Write short notes on any two:

> (a)   De Morgan's Theorem (b)   Algorithm
>
> (c)   CRT Terminals   (d)   BCD (Binary Coded Decimal)

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Paper – III
Model Paper (Full Marks – 70)

Business Communication & Information System

Q1. What is the role of communication in Efficient Management of Business?

Q2. Differentiate between oral and written communication?

Q3. Explain the nature and importance of non-verbal communication?

Q4. Define letter writing? Also write a letter for settlement of claim by the insurance company.

Q5. Write and explain the about official letter with an example.

Q6. Write a letter to a director reminding him to attend a scheduled board meeting?

Q7. Write short note on any two:

(a) MIS   (b) DSS   (c) EDI

Q8. How can a manager demonstrate that he or she is a responsible end user of information system? Give example.

Q9. What are several trends of peripheral devises? How do these trends affect business uses of computers?

Q10. What is the role of Database Management System in a business information system?

Q11. Define EDI? Should every company become a customer focused business? Why?

Q12. Define and explain MIS and DSS? Also differentiate between both about their uses.

Q13. Write about Planning, Designing and Implementation of MIS?

Q14. Discuss and explain about role and importance of Management Information System?

Q15. Write short note on any two:

(a) Verbal communication   (b) Non-verbal communication

(c) Listening skills.

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Paper – IV
Model Paper (Full Marks – 70)
<u>**Fundamental Of Management**</u>

Q1. Explain the concept of management. Review in brief the main functions of Management.

Q2. Describe the benefits of good planning. What are the logical steps in planning?

Q3. What are the features of system approach?

Q4. Write short note on any two of the following :

  a) Functional organization   b) Matix organization
  c) Virtual organization

Q5. What is meant by staffing? Who is responsible for staffing?
What is meant by recruitment? Distinguish between recruitment and
Q6. selection.
Explain the benefits of training to the employees and to the
Q7. organization.

Q8. Define performance appraisal. What are its objectives?

Q9. Explain the nature of direction functions of management.

Q10. Explain the concept, nature and significance of motivation.

Q11. What are the functions of a leader? Explain.

Q12. What is communication? Explain the process of communication.

Q13. Describe the concept of managerial control.

Q14. Discuss the steps involved in controlling.

Q15. Write short note on any two of the following:

  a) Function of managers   b) Human Resource Planning
  c) Interpersonal communication.