

**ADITYA DEGREE & PG COLLEGE (A)**  
**Autonomous and NAAC Accredited with A++ Grade (3.66/4 CGPA)**  
**KAKINADA**  
**Department of Computer Applications**  
**B.C.A (Honours)**

**Course Structure**

<b>I SEMESTER</b>				
<b>S.No.</b>		<b>Name of the Course</b>	<b>Hr</b>	<b>Credits</b>
1	<b>Major</b>	Fundamentals of Commerce	3+2	4
2		Business Organization	3+2	4
3	<b>Language</b>	English	4	3
4		Telugu/Hindi	4	3
5	<b>Multi.Dis</b>	Introduction to Social Work	2	2
6	<b>Skill Enhancement courses</b>	Analytical Skills	2	2
7		Communication Skills	2	2
		<b>Total</b>	<b>24</b>	<b>20</b>
<b>II Semester</b>				
1	<b>Major</b>	Office Automation Tools	3	3
		Office Automation Tools Lab	2	1
2		Programming in C	3	3
		Programming in C Lab	2	1
3	<b>Minor</b>	Computer Networks (T)	3	3
		Computer Networks (P)	2	1
4	<b>Language</b>	English	4	3
5		Telugu/Hindi	4	3
6	<b>Skill Enhancement courses</b>	Digital Literacy	2	2
7		Business Writing	2	2
		<b>Total</b>	<b>27</b>	<b>22</b>

**Community service Project of 180 Hrs with 4 credits**

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		<b>Total</b>	<b>24</b>	<b>20</b>

# ADITYA DEGREE & PG COLLEGE (A):: KAKINADA

## Department of Computer Applications

### B.C.A.(HONOURS) SINGLE MAJOR

#### (SYLLABUS-CURRICULUM)

#### SEMESTER-I

Semester	Course Number	Course Name	No. of Hrs/week	No.of Credits
Semester I	1	Fundamentals of Commerce	5	4
	2	Business Organization	5	4

#### COURSE 1: FUNDAMENTALS OF COMMERCE

Theory Credits: 4 5 hrs/week

#### Learning Objectives:

- The objective of this paper is to help students to acquire conceptual knowledge of the Commerce, Economy and Role of Commerce in Economic Development.
- To acquire Knowledge on Accounting and Taxation.

**Learning Outcomes:** At the end of the course, the student will able to identify the role commerce in Economic Development and Societal Development. Equip with the knowledge of imports and exports and Balance of Payments. Develop the skill of accounting and accounting principles. They acquire knowledge on micro and micro economics and factors determine demand and supply. An idea of Indian Tax system and various taxes levied on in India. They will acquire skills on web design and DATA SCIENCE.

**UNIT 1:** Introduction: Definition of Commerce – Role of Commerce in Economic Development - Role Commerce in Societal Development. Imports and Exports, Balance of Payments. World Trade Organization.

**UNIT 2:** Economic Theory: Macro Economics – Meaning, Definition, Measurements of National Income, Concepts of National Income. Micro Economics – Demand and Supply. Elasticity of Demand and Supply. Classification of Markets -Perfect Competition – Characteristics – Equilibrium Price, Marginal Utility. .

**UNIT 3:** Accounting Principles: Meaning and Objectives Accounting, Accounting Cycle - Branches of Accounting - Financial Accounting, Cost Accounting, Management Accounting. Concepts and Conventions of Accounting – GAAP.

**UNIT 4:** Taxation: Meaning of Tax, Taxation - Types of Tax- Income Tax, Corporate Taxation, GST, Customs & Exercise. Differences between Direct and Indirect Tax –

Objectives of Tax concerned authorities – Central Board of Direct Taxes (CBDT) and Central Board of Excise and Customs (CBIC).

**UNIT 5:** Computer Essentials: Web Design - Word Press Basics, Developing a Simple Website. DATA SCIENCE - Social Media Marketing, Content Marketing, Search Engine Optimization (SEO), E-mail Marketing. Data Analytics- Prediction of customer behavior, customized suggestions.

**Lab Exercise:** Provide wide publicity for your product over social media and e-mail. Estimate the customer behavior and provide necessary suggestions regarding the pr

- Build a sample website to display product information.
- Provide wide publicity for your product over social media and e-mail
- Estimate the customer behavior and provide necessary suggestions regarding the products of his interest.

**Activities:**

- Assignment on GAAP
- Group Activates on Problem solving.
- Collect date and report the role of Commerce in Economic Development.
- Analyze the demand and supply of a product and make a scheduled based on your Analysis, problems on elasticity of demand.
- Identify the Tax and distinguish between Direct Tax and Indirect Tax
- Assignments and students seminars on Demand function and demand curves
- Quiz Programs
- Assignment on different types of taxes which generate revenue to the Government of India.
- Invited lectures on GST and Taxation system
- Problem Solving Exercises on current economy situation.
- Co-operative learning on Accounting Principles.
- Group Discussions on problems relating to topics covered by syllabus
- Examinations (Scheduled and surprise tests)
- Any similar activities with imaginative thinking beyond the prescribed syllabus

**Reference Books:**

1. S.P. Jain & K.L Narang, Accountancy - I Kalyani Publishers.
2. R.L. Gupta & V.K. Gupta, Principles and Practice of Accounting, Sultan Chand
3. Business Economics -S.Sankaran, Margham Publications, Chennai.
4. Business Economics - Kalyani Publications.
5. Dr. Vinod K. Singhania: Direct Taxes – Law and Practice, Taxmann Publications.
6. Dr. Mehrotra and Dr. Goyal: Direct Taxes – Law and Practice, SahityaBhavan publications

**ADITYA DEGREE & PG COLLEGE (A):: KAKINADA**

**B.C.A.(HONOURS) Computer Applications**

**SEMESTER-I**

**COURSE 1: FUNDAMENTALS OF COMMERCE**

**Hours/Week: 5**

**Credits: 4**

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*Course – I & II Model Paper Time:3Hrs (70 Marks)*

**SECTION A (Multiple Choice Questions) 30 x 1 = 30 M**

*30 Multiple Choice Questions (Each Unit 6 Questions)*

**SECTION B (Fill in the blanks)**

*10 x 1 = 10 M*

*10 Fill in the Blanks (Each Unit 2 Questions)*

**SECTION C (Very short answer questions)**

*10 x 1 = 10 M*

*10 Very short answer questions (Each Unit 2 Questions)*

**SECTION D (Matching) (From 5 Units)**

*2 x 5 = 10 M*

*1*

*A*

*B*

*C*

*D*

*E*

*2*

*A*

*B*

*C*

*D*

*E*

**SECTION E (True or False)**

*10 x 1 = 10 M*

*10 True or False (Each Unit 2 Questions)*

# ADITYA DEGREE & PG COLLEGE (A):: KAKINADA

## B.C.A.(HONOURS) Computer Applications

### Single Major : SEMESTER-I

#### COURSE – 1 FUNDAMENTALS OF COMMERCE

**Time:3hrs**

**MAX MARKS: 70 M**

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#### **I Multiple Choice Questions**

**3x10=30M**

1. Commerce is concerned with \_\_\_\_\_ \_\_\_\_.
  - a. Production of goods.
  - b. Transportation of goods.
  - c. Buying and selling of goods and services.
  - d. Advertising of goods.
  
2. Which of the following is not a function of commerce?
  - a. Hindrance of Time.
  - b. Hindrance of place.
  - c. Hindrance of finance.
  - d. Hindrance of knowledge.
  
3. The World Trade Organization (WTO) was established in?
  - a. 1985
  - b. 1995
  - c. 2005
  - d. 2015
  
4. Aids to trade are like.
  - a. Middlemen
  - b. Obstacles.
  - c. Helpers.
  - d. Barriers.
  
5. The main objective of commerce is to:
  - a. Make a profit.
  - b. Satisfy consumer needs.
  - c. Reduce competition
  - d. Control prices.
  
6. Which aid to trade ensures that goods are stored safely until they are ready to be sold?
  - a. Transportation.
  - b. Warehousing.
  - c. Packaging.
  - d. Insurance.
  
7. Microeconomics deals with the study of economic entities:
  - a. Aggregate
  - b. Individual.

- c. Macro.
- d. Socio.

8. Alfred Marshall introduced approach of \_\_\_\_\_ utility.

- a. Cardinal
- b. Ordinal
- c. Form
- d. Time

9 \_\_\_\_\_ is the base of demand.

- a. Price
- b. Income
- c. Utility
- d. Quality

10. As per law of demand, demand and price of good are \_\_\_\_\_ related.

- a. Positively
- b. Negatively
- c. Inversely
- d. ot

11. When the demand is perfectly is elastic, the demand curve is?

- a. Steeper.
- b. Linear.
- c. Horizontal.
- d. Vertical.

12. Cross elasticity demand is \_\_\_\_\_ for unrelated goods.

- a. Positive
- b. Negative
- c. Zero
- d. Greater than one

13. The limitations of financial accounting includes its inability to:

- a. Calculate total manufacturing costs
- b. Report only historical data
- c. Comply with tax regulations
- d. Record non-monetary transactions

14. Financial accounting is primarily concerned with:

- a. Internal decision-making
- b. Measuring and recording business transactions
- c. Predicting future market trends
- d. Evaluating employee performance

15. Cost accounting is primarily concerned with

- (a) Preparing financial statements for external stakeholders
- (b) Evaluating the overall performance of a company
- (C) Recording all expenses incurred by a business
- (d) Determining the cost of production of goods or services

16. Management accounting focuses on providing information to:
- (a) Tax authorities for compliance purposes
  - (b) External investors and creditors
  - (c) Internal management for decision-making
  - (d) Auditors for financial statement verification
17. Accounting concepts and conventions are guidelines that:
- (a) Ensure compliance with local laws and regulations
  - (b) Define the ethical behavior of accountants
  - (c) Govern the measurement and presentation of financial data
  - (d) Determine the salary structure of accounting professionals
18. GAAP stands for
- (a) Generally Acknowledged Accounting Procedures
  - (b) Generally Accepted Auditing Principles
  - (c) Generally Accepted Accounting Policies
  - (d) Generally Accepted Accounting Principles
19. What is the primary objective of taxation?
- (a) Reducing income inequality
  - (b) Promoting economic growth
  - (c) Providing public goods and services
  - (d) All of the above
20. Which tax is levied on the income earned by individuals and businesses?
- (a) Goods and Services Tax (GST)
  - (b) Income Tax
  - (c) Corporate Tax
  - (d) Excise Tax
21. What type of tax is levied on the profits earned by corporations?
- (a) Excise Tax
  - (b) Sales Tax
  - (c) Corporate Tax
  - (d) Property Tax
22. GST is a
- (a) Direct Tax
  - (b) Indirect Tax
  - (c) Both Direct and Indirect Tax
  - (d) None of the above
23. Customs duties are levied on
- (a) Imported goods
  - (b) Exported goods
  - (c) Domestic goods
  - (d) All of the above
24. Which authority is responsible for the administration of indirect taxes in India?
- (a) CBDT



- (b) CBIC
  - (c) SEBI
  - (d) RBI
25. What is WordPress?
- (a) A popular web hosting service
  - (b) A content management system (CMS)
  - (c) A domain registrar
  - (d) An online graphic design tool
26. Which of the following is NOT a component of web design?
- (a) HTML
  - (b) CSS
  - (c) JavaScript
  - (d) PHP
27. Social media Marketing primarily focuses on:
- (a) Improving website design
  - (b) Ranking higher in search engine results
  - (c) Increasing organic traffic
  - (d) Promoting products and services on social media platforms
28. Which marketing strategy aims to attract and retain customers through creating valuable and relevant content?
- (a) Social Media Marketing
  - (b) Search Engine Optimization (SEO)
  - (c) Content Marketing
  - (d) E-mail Marketing
29. What is the main purpose of Search Engine Optimization (SEO)?
- (a) Paid promotion of websites on search engines
  - (b) Improving the visual appeal of a website
  - (c) Enhancing user experience on a website
  - (d) Increasing website visibility and organic traffic through search engines
30. Which of the following is a form of direct marketing that involves sending commercial messages to a group of people via email?
- (a) Social Media Marketing
  - (b) Content Marketing
  - (c) Search Engine Optimization (SEO)
  - (d) E-mail Marketing

## **SECTION – B**

### **II Fill in the Blanks**

**10x1=10M**

31. \_\_\_ \_\_\_ is a trade aid designed to stimulate and support a country's exports.
32. Trade surplus occurs when a country's total \_\_\_ exceed its total imports.
33. The recording of financial transactions in chronological order is known as \_\_\_ .
34. As per law of demand, demand and price of goods are \_\_\_ related.
35. The first step in the accounting cycle is the \_\_\_ of financial transactions.
36. A ledger is called a book of \_\_\_\_\_

37. Excises duty is a tax on specific goods at the point of\_\_\_\_\_
38. The total of Sales Book is posted to \_\_\_\_\_ Ledger account.
39. Data cleaning involves cleaning and pre-processing data to ensure\_\_\_\_\_
40. IP addresses are identified by\_\_\_\_\_

### **SECTION – C**

#### **III Answer the following Short Questions**

**10x1=10M**

41. What is balance of payments?
42. Define World Trade Organization?
43. What is Macro Economics?
44. What is the primary purpose of financial accounting?
45. What does GDP stands for?
46. What is the primary goal of GAAP?
47. What is the primary purpose of tax?
48. What does CDBT stand for?
49. What is the primary goal of email marketing?
50. What is the primary focus of content marketing?

### **SECTION – D**

#### **III Match the following** **10x1=10M**

- |                        |     |  |
|------------------------|-----|--|
| 51. Transparency       | [ ] | a. Datasets into a unified format          |
| 52. MFN                | [ ] | b. Search Engine Optimization              |
| 53. Monopoly           | [ ] | c. Indirect tax                            |
| 54. GNI                | [ ] | d. Transfer of assets through inheritance  |
| 55. GAAP               | [ ] | e. Most Favored Nation                     |
| 56. Historical cost    | [ ] | f. Provide access to trade policies        |
| 57. Inheritance tax    | [ ] | g. Generally Accepted Accounting Principle |
| 58. Transport consumer | [ ] | h. Single seller                           |
| 59. SEO                | [ ] | i. Original acquisition cost               |
| 60. Data integration   | [ ] | j. Gross National Income                   |

### **SECTION – E**

#### **IV True (or) False**

**10x1=10M**

61. Profit motive is a significant aspect of commerce.
62. Commerce discourages cultural exchange and diversity.
63. Micro Economics is also called as Price Theory
64. Journal is a ledger account.
65. A Cheque is a kind of bill of exchange
66. GAAP promotes reliability in financial reporting
67. Indirect taxes are collected directly from tax payers by government authorities
68. Data analytics helps business make informed decisions by analyzing customer data
69. Understanding customer demographics is essentials for predicting customer behavior.
70. Video marketing is not an engaging or shareable from of content

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**B.C.A.(HONOURS) Computer Applications**

**SEMESTER-I**

**COURSE 1: FUNDAMENTALS OF COMMERCE**

**Hours/Week: 5**

**Credits: 4**

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<b>QUESTION PAPER TAXONOMY</b>										
Level of Bloom's Taxonomy	Type of Question & m Assigned									
	MCQs		FIB		VSQ		MC		T/F	
	CIA	SEE	CIA	SEE	CIA	SEE	CIA	SEE	CIA	SEE
Remembering	3 m	10 m								
Understanding	3 m	10 m								
Applying	4 m	10 m								
Analyzing					5 m	10 m				
Evaluating							5 m	10 m	5 m	10 m
Creating			5 m	10 m						

**B.C.A.(HONOURS) Computer Applications  
SEMESTER-I**

**COURSE 2: BUSINESS ORGANIZATION**

**Theory**

**Credits: 4**

**5 hrs/week**

**Learning Objectives:**

- The course aims to acquire conceptual knowledge of business, formation various business organizations.
- To provide the knowledge on deciding plant location, plan layout and business combinations.

**Learning outcomes:** After completing this course a student will have:

- Ability to understand the concept of Business Organization along with the basic laws and norms of Business Organization.
- The ability to understand the terminologies associated with the field of Business Organization along with their relevance and to identify the appropriate types and functioning of Business Organization for solving different problems.
- The application of Business Organization principles to solve business and industry related problems and to understand the concept of Sole Proprietorship, Partnership and Joint Stock Company etc

**UNIT 1:** Business: Concept, Meaning, Features, Stages of development of business and importance of business. Classification of Business Activities. Meaning, Characteristics, Importance and Objectives of Business Organization. Difference between Industry & Commerce and Business & Profession, Modern Business and their Characteristics.

**UNIT 2:** Promotion of Business: Considerations in Establishing New Business. Qualities of a Successful Businessman. Forms of Business Organization - Sole Proprietorship, Partnership, Joint Stock Companies & Co-operatives and their Characteristics, relative merits and demerits, Difference between Private and Public Company, Concept of One Person Company.

**UNIT 3:** Plant Location and Layout: Meaning, Importance, Factors affecting Plant Location. Plant Layout - Meaning, Objectives, Importance, Types of Layouts. Factors affecting Layout. Size of Business Unit - Criteria for Measuring the Size and Factors affecting the Size. Optimum Size and factors determining the Optimum Size.

**UNIT 4:** Business Combination: Meaning, Characteristics, Objectives, Causes, Forms and Kinds of Business Combination. Rationalization: Meaning, Characteristics, Objectives, Principles, Merits and demerits, Difference between Rationalization and Nationalization.

**UNIT 5: Computer Essentials: Milestones of Computer Evolution – Computer, Block diagram, generations of computer. Internet Basics - Internet, history, Internet Service Providers Types of Networks, IP, Domain Name Services, applications. Ethical and Social Implications - Network and security concepts- Information Assurance Fundamentals, Cryptography - Symmetric and Asymmetric, Malware, Firewalls, Fraud Techniques, privacy and data protection**

**Activities:**

- Assignment on business organizations and modern business
- Group Discussion on factors that influence plan location
- Seminars on different topics related to Business organization
- Case study could be given to present business plan of students' choice.
- Identifying the attributes of network (Topology, service provider, IP address and bandwidth of your college network) and prepare a report covering network architecture. Identify the types of malwares and required firewalls to provide security.
- Latest Fraud techniques used by hackers.

**Reference Books:**

1. Gupta, C.B., “Business Organisation”, Mayur Publication, (2014).
2. Singh, B.P., Chhabra, T.N., “An Introduction to Business Organisation & Management”, Kitab Mahal, (2014).
3. Sherlekar, S.A. & Sherlekar, V.S, “Modern Business Organization & Management Systems Approach Mumbai”, Himalaya Publishing House, (2000).
4. Bhusan Y. K., “Business Organization”, Sultan Chand & Sons.
5. Prakash, Jagdish, “Business Organistaton and Management”, Kitab Mahal Publishers (Hindi and English)
6. Fundamentals of Computers by V. Raja Raman
7. Cyber Security Essentials by James Graham, Richard Howard, Ryan Olson

**ADITYA DEGREE & PG COLLEGE (A):: KAKINADA**

**B.C.A.(HONOURS) Computer Applications**

**I SEMESTER**

**COURSE 2 : BUSINESS ORGANIZATION**

**Hours/Week: 5**

**Credits: 4**

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*Course – 2 Model Paper Time:3Hrs*

*(70 Marks)*

**SECTION A (Multiple Choice Questions) 30 x 1 = 30 M**

*30 Multiple Choice Questions (Each Unit 6 Questions)*

**SECTION B (Fill in the blanks)**

*10 x 1 = 10 M*

*10 Fill in the Blanks (Each Unit 2 Questions)*

**SECTION C (Very short answer questions)**

*10 x 1 = 10 M*

*10 Very short answer questions (Each Unit 2 Questions)*

**SECTION D (Matching) (From 5 Units)**

*2 x 5 = 10 M*

*1*

*A*

*B*

*C*

*D*

*E*

*2*

*A*

*B*

*C*

*D*

*E*

**SECTION E (True or False)**

*10 x 1 = 10 M*

*10 True or False (Each Unit 2 Questions)*

**ADITYA DEGREE & PG COLLEGE (A):: KAKINADA**

**B.C.A.(HONOURS) Computer Applications**

**Single Major - SEMESTER-I**

**COURSE – 2 BUSINESS ORGANIZATION**

**Time:3hrs**

**MAX MARKS: 70**

**I Multiple Choice Questions**

**3x10=30M**

**SECTION A**

1. What is one of the key considerations when establishing a new business?
  - (a) Market research
  - (b) Sole proprietorship
  - (c) Franchising
  - (d) Government regulations
  
- 2 Which legal structure allows a single individual to own and manage a business?
  - (a) Partnership
  - (b) Joint Stock Company
  - (c) Sole Proprietorship
  - (d) Co-operative
  
- 3 Which business organization involves sharing profits, losses, and decision-making among two or more individuals?
  - (a) Joint Stock Company
  - (b) Co-operative
  - (c) Partnership
  - (d) One Person Company
  
- 4 A Joint Stock Company is characterized by:
  - (a) Unlimited liability for shareholders
  - (b) Limited liability for shareholders
  - (c) Single ownership
  - (d) No legal identity
  
- 5 What is a key characteristic of a Co-operative business organization?
  - (a) It is owned by a single person
  - (b) It issues shares to the public
  - (c) It is formed to serve the common interests of its members
  - (d) It cannot enter into contracts
  
6. Which form of business organization has perpetual succession?
  - (a) Partnership
  - (b) Sole Proprietorship
  - (c) Co-operative
  - (d) Joint Stock Company
  
7. The main objective of business is
  - (a) To earn profits
  - (b) To Provide Services
  - (c) a and b
  - (d) Only a

8. Commerce includes

- (a) Trade
- (b) Aids to Trade
- (c) a and b
- (d) Only a

9. What is the concept of business?

- (a) The exchange of goods and services for personal use
- (b) The organized effort to earn a profit through commercial activities
- (c) The process of manufacturing raw materials into finished products
- (d) The provision of services to consumers and businesses

10. Which of the following is a feature of business?

- (a) Non-profit motive
- (b) Limited risk and uncertainty
- (c) Single-stage development
- (d) Buyer-seller relationship

11. Which of the following is a tertiary activity in business classification?

- (a) Agriculture
- (b) Manufacturing
- (c) Retail
- (d) Mining

12. What is a characteristic of a business organization?

- (a) Limited liability for all members
- (b) No legal existence
- (c) Separate entity from owners
- (d) Perpetual succession not allowed

13. The objective of plant layout is to

- (a) Minimize productivity
- (b) Increase safety hazards
- (c) Maximize material movement
- (d) Improve workflow and productivity

14. Which factor is NOT considered when measuring the size of a business unit?

- (a) Market demand
- (b) Government policies
- (c) Labour availability
- (d) Weather conditions

15. Optimum size of a business unit is the size at which:

- (a) Maximum profits are achieved
- (b) Maximum number of employees is hired
- (c) Maximum number of products is produced
- (d) Maximum market share is obtained

16. Which factor does NOT determine the optimum size of a business unit?



- (a) Production capacity
- (b) Economies of scale
- (c) Technology used
- (d) Competitors' sizes

17. The primary objective of a plant layout is to:

- (a) Reduce productivity
- (b) Maximize material movement
- (c) Minimize safety measures
- (d) Improve efficiency and workflow

18. Which of the following is NOT a type of plant layout?

- (a) Process layout
- (b) Product layout
- (c) Fixed layout
- (d) Random layout

19. What is a business combination?

- (a) The process of streamlining business operations
- (b) The strategic restructuring of a company
- (c) A transaction where two or more businesses merge or are acquired
- (d) The process of nationalizing a business

20. Which of the following is a characteristic of a business combination?

- (a) Fostering competition among businesses
- (b) Diversification of risk
- (c) Maximizing inefficiencies
- (d) Reducing market share

21. What is the primary objective of a business combination?

- (a) Eliminating competition
- (b) Achieving sustained growth and profits
- (c) Reducing market share
- (d) Increasing inefficiencies

22. What is one of the causes of a business combination?

- (a) Encouragement of competition
- (b) Desire for small-scale operations
- (c) Wasteful competition
- (d) Decreased market share

23. Which form of business combination involves the integration of different types of inefficient units for economies of scale?

- (a) Merger
- (b) Acquisition
- (c) Joint Venture
- (d) Combination

24. What is the objective of simplification in rationalization?

- (a) Increase production complexity

- (b) Reduce operational efficiency
- (c) Increase sales variety
- (d) Higher production with lesser costs

25. What is the primary purpose of a firewall in network security?

- (a) Encrypt data transmission
- (b) Prevent unauthorized access
- (c) Monitor website traffic
- (d) Provide internet connectivity

26. Which generation of computers used vacuum tubes as the primary electronic component?

- (a) First generation
- (b) Second generation
- (c) Third generation
- (d) Fourth generation

27. What does IP stand for in the context of networking?

- (a) Internet Provider
- (b) Internet Protocol
- (c) International Protocol
- (d) Internal Processing

28. Which encryption method uses a single secret key for both encryption and decryption?

- (a) Asymmetric encryption
- (b) Public-key encryption
- (c) Symmetric encryption
- (d) Private-key encryption

29. What does ISP stand for in the context of the internet?

- (a) Internet Security Protocol
- (b) Internet Service Provider
- (c) Internet Sharing Protocol
- (d) Internet Secure Provider

30. What type of network is used to connect devices within a limited geographical area, such as a home or office?

- (a) Wide Area Network (WAN)
- (b) Local Area Network (LAN)
- (c) Metropolitan Area Network (MAN)
- (d) Personal Area Network (PAN)

### **SECTION – B**

#### **II Fill in the Blanks**

**10x1=10M**

31. The factors affecting plant layout include space \_\_\_\_\_ and future Expansion requirements
32. Process layout, product layout and fixed layout are layout of \_\_\_\_\_ layouts
33. Plant location directly impacts the efficiency and layouts of \_\_\_\_\_ the business.
34. Optimum size is the point at which a business unit achieves maximum \_\_\_\_\_
35. The night type of plant location Can lead to cost \_\_\_\_\_ and better market access.
36. A \_\_\_\_\_ involves the amalgamation of two or more companies.
37. \_\_\_\_\_ involve companies at different stages of the supply chain merging.

38. The process of restructuring a business to improve operational efficiency is called \_\_\_\_\_
39. One of the causes for business combination is \_\_\_\_\_
40. \_\_\_\_\_ is a collaboration between two or more companies to undertake a specific project.

### **SECTION – C**

#### **III Answer the following Short Questions**

**10x1=10M**

41. What is business combination?
42. What is meant by take over?
43. What do you mean by horizontal combination?
44. Write any 3 principles of nationalization?
45. Any two dis-advantages of nationalization?
46. What is business?
47. What is the primary objective of a business?
48. What is the legal form of a business owned by a single person?
49. What is a business entity formed by a group of individuals or entities?
50. What type of business organization is a separate legal entity from its owners ?

### **SECTION – D**

#### **IV Match the following**

**10x1=10M**

- |                      |     |   |
|----------------------|-----|---|
| 51. Customers        | [ ] | a) Provide goods and services           |
| 52. Shareholders     | [ ] | b) Generate revenue                     |
| 53. Suppliers        | [ ] | c) Determine market demands             |
| 54. Employees        | [ ] | d) Own portion of the business          |
| 55. Planning         | [ ] | e) Identifying market opportunities.    |
| 56. Advertising      | [ ] | f) Building a positive image            |
| 57. Sales Promotion  | [ ] | g) Personalized message and emails      |
| 58. Content creation | [ ] | h) Creating valuable & relevant content |
| 59. Direct Marketing | [ ] | i) Generating immediate sales           |
| 60. Public relations | [ ] | j) Utilizing various media channels     |

### **SECTION – E**

#### **V True (or) False**

**10x1=10M**

61. Sales promotions primarily focus on building a positive image of the business.
62. Digital marketing encompasses activities such as SEO and content marketing.
63. Direct marketing involves reaching out to potential customers through social media platforms.
64. Trade shows and exhibitions are not effective for business promotion.
65. Word-of-mouth marketing relies on negative customer experiences and referrals.
66. The solution of a plant location or facility is a easy decision for any organization
67. Kimball and Kimball define plant location is the function where the plant should be located for maximum operating economy and effeteness
68. Certain industries are sensitive to climatic conditions
69. Arrangement of machine, work areas and service areas with a factory is called plant Location
70. Determining the optional location for the plant become crucial

**ADITYA DEGREE & PG COLLEGE (A) :: KAKINADA**  
**B.C.A.(HONOURS) Computer Applications**  
**I SEMESTER**

**COURSE 2 : BUSINESS ORGANIZATION**

**Hours/Week: 5**

**Credits: 4**

<b>QUESTION PAPER TAXONOMY</b>										
Level of Bloom's Taxonomy	Type of Question & m Assigned									
	MCQs		FIB		VSQ		MC		T/F	
	CIA	SEE	CIA	SEE	CIA	SEE	CIA	SEE	CIA	SEE
Remembering	3 m	10 m								
Understanding	3 m	10 m								
Applying	4 m	10 m								
Analyzing					5 m	10 m				
Evaluating							5 m	10 m	5 m	10 m
Creating			5 m	10 m						

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**KAKINADA**  
**Department of Computer Applications**  
**B.C.A (Honours)**

**Course Structure**

			<b>II Semester</b>		
<b>S.No.</b>	<b>Type</b>	<b>Course No.</b>	<b>Name of the Course</b>	<b>Hr</b>	<b>Credits</b>
1	<b>Major</b>	Course 3	Office Automation Tools	3	3
			Office Automation Tools Lab	2	1
2		Course 4	Programming in C	3	3
			Programming in C Lab	2	1
3	<b>Minor</b>	Course 1	Computer Networks (T)	3	3
			Computer Networks (P)	2	1
4	<b>Language</b>		English	4	3
5			Telugu/Hindi	4	3
6	<b>Skill Enhancement courses</b>		Digital Literacy	2	2
7			Business Writing	2	2
<b>Total</b>				<b>27</b>	<b>22</b>

**Community service Project of 180 Hrs with 4 credits**

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**Department of Computer Applications**

**B.C.A (Honours)**

**SEMESTER-II**

**COURSE 3: OFFICE AUTOMATION TOOLS**

**Theory**

**Credits: 3**

**3 hrs/week**

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**Course Objectives:**

- ✓ To introduce the environment of GUI in Ms-Word and its features.
- ✓ To introduce the fundamental concepts using Ms-Word and its features to make it more useful.
- ✓ To provide hands-on use of Word, Excel and PowerPoint.

**Course Outcomes:**

The students will be able:

- ✓ To understand concept of Word Processor and use its features.
- ✓ To use the advanced features of Ms-Word to make day to day usage easier.
- ✓ To work comfortably with Ms-Excel Environment.
- ✓ To Create worksheets and use advanced features of Excel.
- ✓ To create presentations and inserting multimedia items in them.

**Syllabus**

**UNIT-I:**

**Introduction to MS-Office & MS-Word**

MS-Word: Features of MS-Word, MS-Word Window components, working with formatted text, Shortcut keys, Formatting documents: Selecting text, Copying & moving data, formatting characters, changing cases, Paragraph formatting, Indents, Drop Caps, using format painter, Page formatting, Header & footer, Bullets & numbering, Tabs, Forming tables. Finding & replacing text, go to(F5) command, proofing text (Spell check, Auto correct),

**Case Study:**

1. Create a document to write a letter to the DM&HO of the district complaining about Hygienic conditions in your area.
2. Create a document to share your experience of your recent vacation with family.

**UNIT-II:**

**MS -Word Advanced Features**

Difference between Wizard and Template - Customize the Quick Access Tool Bar – Macros: Purpose – Creating Macro – Using Macro – Storing Macro - Inserting pictures: From Computer, Online Pictures – Insert 3d Models -

Insert Shapes – Insert Text Box – Insert Equation, Hyperlinks- Tables: Insert tables - Mail merge, Printing documents, Tables: Insert tables, Mathematical calculations on tables data. InsertText Box etc.

**Case Study:**

1. Create a document to send a holiday intimation to all the parents attime about Dasara Vacation.
2. Create a document to create Time Table of your class using tables.

**UNIT–III:**

**Introduction to MS-Excel & Its Features**

MS-Excel: Excel Features, Spreadsheets, workbooks, creating, saving & editing a workbook, renaming sheet, cell entries (numbers, labels, and formulas), spell check, find and replace, Adding and deleting rows and columns Filling series, fill with drag, data sort, Formatting worksheet, Functions and its types, some useful Functions in excel (SUM, AVERAGE, COUNT, MAX, MIN, IF),

**Case Study:**

1. Create a worksheet with you class marks displaying total, average, topmarks in the class and least marks in the class.
2. Create a Worksheet with employee no, name, job, salaries of 10 employees calculate DA, TA, HRA, Gross Salary and Net Salary.
  1. Find the sum of HRA's of Total employees.
  2. Find the average DA
  3. Display the Maximum salary of the employee.

**UNIT-IV:**

**Ms-Excel Advanced Features**

Cell referencing (Relative, Absolute, Mixed), What-if analysis, Introduction to charts: types of charts, creation of charts, printing a chart, printing worksheet – Sort – Filters – View Menu- Goal Seek – Scenarios.

**Case Study:**

1. Prepare a chart with height and weights of you class mates in at least 3 types of charts.
2. Demonstrate the use of Filter with the attendance data of your class.

**Introduction to MS-Access :** Creating a Simple Database and Tables: Features of Ms-Access, Creating a Database, Parts of Access, Data Types and properties, adding, deleting fields, renaming the fields in a table. Tables: table creation using design view, table wizard, data sheet view, import table, link table. Forms: The Form Wizard, design view, columnar, tabular, data sheet, chart wizard.

**Case Study:**

1. Importing/Exporting data from an already existing student data

excel sheet to Access and vice versa.

2. Demonstrate the use of Form Wizard with the attendance data of your class.

### **UNIT-V: Ms-PowerPoint and its Applications**

MS-PowerPoint: Features of Power Point, Uses, components of slide, templates and wizards, using template, choosing an auto layout, using outlines, adding subheadings, editing text, formatting text, using master slide, adding slides, changing color scheme, changing background and shading, adding header and footer, adding clip arts and auto shapes. Various presentation, working with slide sorter view (deleting, duplicating, rearranging slides), adding transition and animations to slide show, inserting music or sound on a slide, viewing slideshow, Printing slides.

#### **Case Study:**

1. Prepare a presentation with your achievements and experiences in college.
2. Create a Presentation of your organization with pictures, clip arts and animations

#### **Text Books:**

1. Computer Fundamentals–Pradeep. K.Sinha: BPB Publications.
2. Fundamentals of Computers –Reema Thareja, Oxford University Press, India



**B.C.A (Honours) - SEMESTER-II**  
**COURSE 3: OFFICE AUTOMATION TOOLS LAB**

**Practical**

**Credits: 1**

**2 hrs/week**

List of Experiments

- 1) Design a visiting card for managing director of a company as per the specification below
  - o Name of the company with big font
  - o Phone number, Fax number and E-mail address with appropriate symbols.
  - o Office and Residence addresses separated by new line
- 2) Create a table with following columns and display the result in separate cells for the following
  - o Emp Name, Basic pay, DA, HRA, Total salary.
  - o Sort all the employees in ascending order with the name as the key
  - o Calculate the total salary of the employee
  - o Calculate the Grand total salary of the employee
  - o Find highest salary and
  - o Find lowest salary
- 3) Prepare an advertisement to company requiring software professional with the following
  - o Attractive page border
  - o Design the name of the company using WordArt
  - o Use at least one clipart.
  - o Give details of the company (use bullets etc.)
  - o Give details of the Vacancies in each category of employee's (Business manager, Software engineers, System administrators, Programmers, Data entry operators) qualification required.
- 4) Create a letter head of a company with the following specifications
  - o Name of the company on the top of the page 2 with big font and good style
  - o Phone no, Faxno and E-mail address with symbols.
  - o Main products manufactured by the company
  - o Slogans if any should be specified in bold at the bottom
- 5) Create two pages of curriculum vitae of a graduate with the following specifications
  - o Table to show qualifications with proper headings
  - o Appropriate left and right margins
  - o Format ½ page using two-column approach about yourself
  - o Name on each page at the top right side
  - o Page no. in the footer on the right side.
- 6) Write a macro format document as below
  - o Line spacing "2" (double)

- Paragraph indent of 0.1
- Justification formatting style
- Arial font and Bold of 14pt-size

7) Create a letter as the main document and create 10 records for the 10 persons. Use mail merge to create letter for selected persons among 10.

8) Create an electronic spread sheet in which you enter the following decimal numbers and convert the number to octal, Hexadecimal and binary numbers and vice-versa.

Decimal Numbers: 35, 68, 95, 78, 165, 225, 355, 375, 465

Binary Numbers: 101, 1101, 11101, 11111, 10001, 11101111

9) Calculate the net pay of the employees following the conditions below.

	A	B	C	D	E	F	G	H	I
1	Employee Number	Employee Name	Basic pay	DA	HRA	GPF	Gross Pay	Income tax	Net pay
2									

- DA:- 16% of the basic pay if Basic pay is greater than 20000 or else 44%.
- HRA:- 15 % of the Basic pay subject to maximum of Rs.4000.
- GPF: -10% of the basic pay.
- INCOMETAX:-10% of basic If Basic pay is greater than 20000.
- Find who is getting highest salary & who is getting lowest salary?

10) The ABC Company shows the sales of different products for 5 years. Create BAR Graph, 3D and Pie chart for the following.

A	B	C	D	E	F
S.No.	Year	Pro1	Pro2	Pro3	Pro4
1	1989	1000	800	900	1000
2	1990	800	80	500	900
3	1991	1200	190	400	800
4	1992	400	200	300	1000
5	1993	1800	400	400	1200

11) Create a suitable examination database and find the sum of the marks (total) of each student and respective class secured by the student.

- ✓ Pass – if marks in each subject  $\geq 35$
- ✓ Distinction- if average  $\geq 75$

- ✓ First class - if average  $\geq 60$  but  $< 75$
- ✓ Second class – if average  $\geq 50$  but  $< 60$
- ✓ Third class – if average  $\geq 35$  but  $< 50$
- ✓ Fail: if marks in any subject  $< 35$

12) Enter the following data in to the sheet.

Name	Department	Salary
Anusha	Accounts	12000
Rani	Engineering	24000
Lakshmi	Accounts	9000
Purnima	Marketing	20000
Bindu	Accounts	4500
Tejaswi	Accounts	11000
Swetha	Engineering	15000
Saroja	Marketing	45000
Sunitha	Accounts	5600
Sandhya	Engineering	24000
Harika	Marketing	8000

- Extract records for department in Accounts and Salary  $> 10000$
- Sort the data by salary with the department using “sort commands”.
- Calculate total salary for each department using Subtotals

13) Create a database file, which will require you to create one table and one form

Create table: **CUSTOMERS**

Create the field names and their properties as you need them to store your specific data for customers. You will have at least five customers with their information included in your customer table.

**CUSTOMERS** Table Field Names:

Customer ID (Primary Key: CID)

First Name (FNAME)

Last Name (LNAME)

City (CITY)

State (STATE)

Number of Purchases (PNUMBER)

Total Amount of Purchases (PTOTAL)

Date of Last of Purchase (PLAST)

**Create form:** New Customers

Create a form for the Customers table. Include all fields in the form. Use the **Form Wizard** to create a form. Using the New Customers form, enter two additional

customers:

Marion Morrison New Paltz NY 3 \$150.00 March 12, 2023

Adam Jones Kingston RI 2 \$250.00 March 17, 2023

14) Enter the following data into the sheet.

	Raju	Rani	Mark	Rosy	Ismail	Reshma
English	76	89	43	51	76	87
2ndLang	55	85	78	61	47	33
Maths	65	82	34	58	52	65
Computers	45	91	56	72	49	56
Human Values	51	84	54	64	32	64

Apply the conditional formatting for marks

- 35 below Red
- 35 to 50 Blue
- 51 to 70 Green
- 71 to 100 Yellow

15) Create a presentation using templates.

16) Create a Custom layout or Slide Master for professional presentation.

17) Create a presentation with slide transitions and animation effects.

18) Create a table in PPT and apply graphical representation

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**Department of Computer Applications**  
**B.C.A (Honours)**  
**SEMESTER-II**  
**COURSE 3: OFFICE AUTOMATION TOOLS**  
**credits :3**

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**BLUE PRINT**

<b>Unit</b>	<b>Essays</b>	<b>Shorts</b>
Unit 1	2	2
Unit 2	2	2
Unit 3	2	1
Unit 4	2	1
Unit 5	2	2
<b>Total</b>	<b>10</b> <b>Out of 10, 5 questions should be answered</b> <b>5x10=50 Marks</b>	<b>8</b> <b>Out of 8, 5 questions should be answered</b> <b>5x4=20 Marks</b>

**ADITYA DEGREE & PG COLLEGE (A):: KAKINADA**

**Single Major Model Question Paper**

**SEMESTER-II**

**B.C.A. (Honours) Computer Applications**

**Course: 3 OFFICE AUTOMATION TOOLS**

*Time:3hrs*

*MAX MARKS: 70 M*

**SECTION – A**

**Answer any 5 questions. Each question carries 4 marks**

**(5 X 4 = 20M)**

1. Explain Finding & replacing text in MS-Word.
2. Explain how to insert pictures from Computer in MS-Word.
3. Explain how to insert and delete rows in Excel.
4. Explain about sorting and filtering in MS-Excel.
5. Explain various features of Power Point.
6. Explain how to insert header and footer in MS-Word.
7. Explain how to insert tables in MS-Word.
8. Explain various features of MS-Excel.

**SECTION – B**

**Answer all the questions. Each question carries 10 marks.**

**(5 X 10 = 50M)**

9. Explain MS-Word window components with neat diagram.

**(OR)**

Explain about formatting document in MS-Word.

10. Explain how to insert text box, hyperlinks and shapes in MS-Word.

**(OR)**

Explain about Mail Merge in MS-Word.

11. Explain various statistical functions used in MS-Excel.

**(OR)**

Explain how to Create, Save, and Edit a workbook in MS-Excel.

12. What is chart? Explain different types of charts available in Excel.

**(OR)**

Explain Relative, Absolute and Mixed Cell referencing MS-Excel.

13. Explain Components of slide.

**(OR)**

Explain adding transition and animations to slide show.

**SEMESTER-II**  
**B.C.A. (Honours) Computer Applications**  
**COURSE 4: PROGRAMMING IN C**

**Theory**

**Credits: 3**

**3 hrs/week**

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**Course Objectives:**

- Provides knowledge on Algorithms, Flow chart and basic programming language.
- Provides complete knowledge of C language.
- Helps to develop logics which will help them to create program and applications in C.
- Learning the basic programming constructs, they can easily switch over to any other language in future.

**Course Outcomes:**

Upon successful completion of this course, students will be able to-

- Understand the basic terminology used in computer programming.
- Write, compile and debug programs in C language.
- Use different data types in a computer program.
- Design programs involving decision structures, loops and functions.
- Understand the dynamics of memory by the use of pointers and Structures.
- Apply different operations in File handling.

**Syllabus**

**UNIT - I: Introduction to Algorithms and Programming Languages:**

Algorithm - Key features of Algorithms - examples of Algorithms, Flow Charts- Pseudo code, Programming Languages – Generations of Programming Languages – Structured Programming Language.

**Introduction to C:** Introduction – Structure of C Program, Writing the first C Program, File used in C Program – Compiling and Executing C Programs, Using Comments – Keywords – Identifiers, Basic Data Types in C, Variables – Constants, I/O Statements in C, Operators in C, Programming Examples, Type Conversion and Type Casting.

**Case Study:** Enter any alphabet and display whether it is vowel or a consonant.

**UNIT - II: Control Structures and Functions:** Decision Control and Looping Statements: Introduction to Decision Control Statements, Conditional Branching Statements, Iterative Statements, Nested Loops, Break and Continue Statement – Go to Statement. Functions: Introduction, Using functions – Function declaration/ prototype – Function definition, Function call – Return statement – Passing parameters, Scope of variables, Storage Classes, Recursive functions.

**Case Study:** Print first 10 natural numbers. (using while, do-while, for loop,

break, continue.)

**UNIT - III: Arrays:** Introduction, Declaration of Arrays, accessing elements of the Array – Storing Values in Array, Calculating the length of the Array, Operations that can be performed on Array, Passing one dimensional array to function.

Two dimensional Arrays, accessing two dimensional arrays, Passing two dimensional arrays to functions.

Strings: Introduction, String Operations using String functions.

**Case Study:** Searching an element in an array. Disadvantages of an array.

**UNIT - IV:**

**Pointers, Structures and Unions:** Pointers: Understanding Computer Memory – Introduction to Pointers, Declaring Pointer Variable, Pointer Expressions and Pointer Arithmetic – Null Pointers, Passing Arguments to Functions using Pointer, Pointer and Arrays – Passing Array to Function, Memory Allocation in C Programs, Memory Usage – Dynamic Memory Allocation, Drawbacks of Pointers, Preprocessor directives. Structures: Introduction to structures, Nested Structures. Union, and Enumerated Data Types: Introduction to Union – accessing union elements, Enumerated Data Types.

**Case Study:**

Difference between Arrays, structures & unions

**UNIT – V: File Handling:** Files: Introduction to Files, Using Files in C, Reading Data from Files, Writing Data from Files, Detecting the End-of-file, Error Handling during File Operations, Command line arguments

**Case Study:** Write a program to read a text file, convert all the lowercase characters into upper case and rewrite the uppercase characters in the file.

### **PRESCRIBED TEXT BOOKS:**

Computer Fundamentals and Programming in C by REEMA THAREJA from OXFORD UNIVERSITY PRESS

### **REFERENCE BOOKS:**

1. E Balagurusamy, COMPUTING FUNDAMENTALS & C PROGRAMMING– TataMcGraw-Hill, Second Edition 2017, ISBN-10. 9352604164 · ISBN-13. 978-9352604166
2. Ashok Kamthane, Programming with ANSI and Turbo C ; Publisher, Pearson Education India, 2006 ; ISBN, 8131704378, 9788131704370.
3. Henry Mullish & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.
4. Teach your C Skills-Kanithker



## SEMESTER-II

### COURSE 4: PROGRAMMING IN C LAB

**Practical**

**Credits: 1**

**2 hrs/week**

#### List of Experiments

1. Write a C program to calculate the expression:  $((a*b)/c)+(a+b-c)$  .
2. Write a C program to calculate  $(a+b+c)/3$ .
3. Write a C program to check whether the given number is Prime or Not.
4. Write a C program to find the sum of individual digits of a given number.
5. Program to convert Hours into seconds.
6. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.
7. Write a program to check whether the given number is Palindrome or Not.
8. Write a C program to check whether a given 3-digit number is an Armstrong number or not.
9. Write a C program to print the numbers in triangular form.  
1  
1 2  
1 2 3  
1 2 3 4
10. Program to display the number of days in given month using Switch – Case.
11. Write a C program to perform the following:
  - I. Addition of two matrices.
  - II. Multiplication of two matrices.
12. Write a C program to determine if the given string is a palindrome or not.
13. Write C program to find the factorial of a given integer using a recursive function.
14. Write a C program to concatenate two strings using pointers.
15. Write a C program to find the length of a string using pointers.
16. Program to display Student Details using Structures.
17. Write a C program to
  - I. Write data into a File.
  - II. Read data from a File.

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**Department of Computer Applications**

**B.C.A (Honours)**

**SEMESTER-II**

**COURSE 4 : PROGRAMMING IN C**

**credits :3**

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**BLUE PRINT**

<b>Unit</b>	<b>Essays</b>	<b>Shorts</b>
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**ADITYA DEGREE & PG COLLEGE (A) :: KAKINADA**

**Single Major Model Question Paper**

**SEMESTER-II**

**B.C.A.(Honours) Computer Applications**

**Course 4 - PROGRAMMING IN C**

*Time:3hrs*

*MAX MARKS: 70 M*

**SECTION – A**

**Answer any 5 questions. Each question carries 4 marks**

**(5 X 4 = 20M)**

1. Define Algorithm and List out various features of algorithm.
2. Demonstrate break and continue statements.
3. Write a program to calculate length of an array.
4. Explain differences between Structure and Union.
5. Explain how to detect end of the file in C programming.
6. What is variable? What are the rules to construct variable?
7. What is Recursion? Demonstrate with an example.
8. Define string. How string is declared and initialized?

**SECTION – B**

**Answer all the questions. Each question carries 10 marks.**

**(5 X 10 = 50M)**

9. What is an operator? List and explain various types of operators

**(OR)**

What are basic data types available in 'C'? Write the significance of each data type with example.

10. Explain various Decision-making statements supported by 'C' language with example.

**(OR)**

Explain different loops used in 'C' with syntax.

11. Define array. Explain with suitable example how to declare and initialize 1D array.

**(OR)**

Define a string. Explain String Operations using String functions.

12. Explain dynamic memory allocation functions with example.

**(OR)**

What is structure? Write a C program to store and print name, USN, subject and IA marks of students using structure

13. Explain Error Handling during File Operations.

**(OR)**

Explain reading and writing data into file in C programming.

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