

**CENTRE FOR DISTANCE EDUCATIONS**  
**BHARATHIDASAN UNIVERSITY,**  
**TIRUCHIRAPPALLI -620 024.**

MCA CIA test SUBJECT : **301 Distributed Technologies**

TIME:2 hrs

MAX.MARKS : 50

**Answer ALL the questions**

1. A) Draw j2EE architecture. Explain it. (OR)  
B) Depict .net architecture. explain it.
  
2. A) Write the servlet structure and life cycle methods. (OR)  
B) Write the implicit JSP objects and scriptlets.
  
3. A) Explain session beans. (OR)  
B) Illustrate entity beans.
  
4. A) Exemplify ASP.Net Runtime. (OR)  
B) Explain the AdRator Control and properties.
  
5. A) Write the Classes and objects in ADO.NET. (OR)  
B) How the communicating with OLEDB Data source using ADO.NET.  
Explain

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**CENTRE FOR DISTANCE EDUCATIONS**  
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MCA CIA test SUBJECT : **302 Accounting and Financial Management**  
**Distributed Technologies**

TIME:2 hrs

MAX.MARKS : 50

**Answer All the Questions:**

1. a) Discuss briefly the basic concepts and conventions of accounting?

**(OR)**

b) . Explain the different types of accounting.

2. a) What is a Trial Balance? Explain its objectives.

**(OR)**

b) The following balances are extracted from the books of Kaviya & Co. on 31st March, 2019. You are required prepare the Trading and Profit and Loss Account and a Balance Sheet as on that date.

	Rs.		Rs.
Stock on April, 1	500	Commission (Cr.)	200
B/R	2,250	Returns Outwards	250
Purchases	19,500	Trade Expenses	100
Wages	1,400	Office Fixtures	500
Insurance	550	Cash in Hand	250
Sundry Debtors	15,000	Cash at Bank	2,375
Carriage Inwards	400	Rent & Taxes	550
Commission (Dr.)	400	Carriage Outwards	725
Interest on Capital	350	Sales	25,000
Stationary	225	Bills Payable	1,500
Returns Inwards	650	Creditors	9,825
		Capital	8,950

The closing stock was valued at Rs.12,500.

3. a) Raja Industries Ltd. Provides the following information. You are required to calculate the profit prior to and after incorporation. The ratios of time and sales between pre and post incorporation periods are:

Time ratio – 3.5 Sales Ratio – 2.3 Gross Profit Rs.5,00,000. The expenses are:

	<b>Rs.</b>		<b>Rs.</b>
Salaries	96,000	Preliminary	1,00,000
General Expenses	12,000	expenses	18,000
Discount	40,000	Director's fees	7,000
Advertisement	50,000	Selling expenses	2,000
Rent	15,000	Stationary	

Prepare a statement showing profit before and after incorporation.

**(OR)**

b) Give the format of statement of profit and loss as per Revised schedule VI.

4. a) Explain the objectives of cost accounting.

**(OR)**

b) a) From the following particulars, calculate

1. Maximum level 2. Minimum level 3. Re-order level

Normal usage 100 units per day

Minimum usage 60 units per day

Maximum usage 130 units per day

Economic order quantity 5000 units

Reorder period 25 to 30 days

5. a) Explain the advantages and limitations of budgetary control

**(OR)**

b) The expenses for budgeted production of 10000 units in a factory are furnished below:

<b>Particulars</b>	<b>Rs ( Per unit)</b>
Material	70
Labour	25
Variable Overheads	20
Fixed Overheads (100000)	10
Variable Expenses (Direct)	5
Selling Expenses (10% on Fixed)	13
Distribution Expenses (20% Fixed)	7
Administration Expenses	5
	155

Prepare a budget for production of:

a) 8000 units

b) 6000 units

c) Indicate cost per unit at both the levels.

Assume that administration expenses are fixed for all levels of production.

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MCA CIA test SUBJECT : **303 Discrete Mathematics**

TIME:2 hrs

MAX.MARKS : 50

**Answer all the questions**

1. a Let  $X = \{1,2,\dots,7\}$  and  $R = \{(x,y)/ x-y \text{ is divisible by } 7\}$ . Show that R is an equivalence

relation.

(or)

b. to prove that  $(g \circ f)^{-1} = f^{-1} \circ g^{-1}$

2. a. Construct the truth table for the following statements  $(P \rightarrow Q) \wedge (P \rightarrow R)$

(or)

b. Show that  $S \vee R$  tautologically implied by  $(P \vee R) \wedge (P \rightarrow R) \wedge (Q \rightarrow S)$

3. a. State and prove that Cayley's representation theorem.

(or)

b. Explain the Transition Diagram

4. a. Let  $(L, \leq)$  be a lattice with the binary operations  $*$  and  $\oplus$  denote the operations of meet and join respectively. Prove that for any  $a, b \in L$ .  $a \leq b \Leftrightarrow a * b = a \Leftrightarrow a \oplus b = b$ .

(or)

b. Describe Boolean expressions and functions

5. a. How many 2-digit and 3-digit numbers can be formed using the digits 1,3,4,5,6,8 and 9 if no repetition is allowed?

(or)

b. Solve the recurrence relation:  $4a_r - 20a_{r-1} + 17a_{r-2} - 4a_{r-3} = 0$  given that  $a_0 = 0$ ,  $a_1 = 1$ ,  $a_2 = 2$

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MCA CIA test SUBJECT : **304 Enterprise Resource planning**

TIME:2 hrs

MAX.MARKS : 50

Answer all the questions

1. A). Explain the design Process in Enterprise Resource Planning systems.

**(OR)**

B). Describe the Human Resource modules in Enterprise Resource Planning.

2. A). Discuss the factors in Successful Enterprise Resource Planning Projects.

**(OR)**

B). Explain the E-Business Supply Chain process.

3. A).Discuss the Supply Chain Management operations in details.

**(OR)**

B). Discuss the SCM Performance with suitable Examples.

4. A). Briefly discuss the forecasting demands in ERP systems.

**(OR)**

B). Describe the chain process design with suitable diagram.

5. A). What are the elements of CRM? Explain each in brief.

**(OR)**

B). Discuss the various modules of CRM applications.

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MCA CIA test SUBJECT : **305 Mobile Communication**

TIME:2 hrs

MAX.MARKS : 50

Answer all the questions

1. a) What are the different characteristics of the communication devices ? Explain

**(or)**

b) Explain in detail about the simplified reference model.

2. a) What is GSM? Explain

**(or)**

b) What is handover? Explain.

3. a) Explain in detail about IEEE 8.02.11.

**(or)**

b) Explain on frequency hopping spread spectrum.

4. a) Explain IP packet delivery in detail .

**(or)**

b) Brief note on Ad-hoc networks.

5. a) Explain in detail about the wireless application protocol

**(or)**

b) What is WAP gateway? Explain.

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MCA CIA Assignment cum Test. SUBJECT : **308 Professional Skills**

TIME:3 hrs

Answer any 15 questions

Marks: 100

1. How to present a Report?
2. Write a report about the Dengue Fever outbreak in your locality to the Corporation authorities,
3. What is the difference between oral and written presentation?
4. What are the characteristics of a Good Presentation?
- 5 .What is a mock presentation?
- 6 . Write down an interview for the post of computer analyst?
7. How to prepare for an interview?
- 8 . Write a note to your friend assessing your performance in an interviews and voice out your chances too.
9. Write down a speech presentation welcoming the chief cardiologist of a reputed hospital.
10. Write down how will you deliver a presentation about any project of yours?
11. What are the features of Team Presentation?
12. How will you report a business meeting on the change of timing and transport facility that was about to be implemented from the next calendar month?
13. Write a Covering Letter to a company responding to their advertisement 2 What do you mean by Business Communication? Explain with examples.
14. Prepare your own Curriculum Vitae.
15. What are the salient features of Writing Research papers?
16. Write a Circular of announcing the details and the orders to be followed for the Independence Day celebrations in your college.
17. Write a note on the methods of enhancing Writing Skills
18. Prepare a speech for the upcoming Republic day.