

Database Management Systems (BCA-302)

Duration: 2 hours

Max. Marks: 50

Instructions:

- 1) Figures to the right indicate maximum marks.
- 2) All questions are compulsory

Q 1. Define the following:

(5*2=10)

- a) Foreign key
- b) Join dependency
- c) ODBC
- d) Merge-purge operation
- e) Referential integrity constraint

Q 2. Answer the following:

(10 marks)

- a) Briefly explain any two DBMS functions. **(2)**
- b) Compare two-tier and three tier architecture. **(3)**
- c) Discuss the advantages and dis-advantages of a distributed database. **(5)**

Q 3. Answer the following:

(10 marks)

- a) What do you understand by Roles in an ER diagram. **(2)**
- b) Explain specialization with an example . **(3)**
- c) Model an E-R diagram for a hospital management system. Make assumptions wherever necessary. **(5)**

Q 4. Answer the following:

(10 marks)

- a) What do you understand by a good decomposition? **(2)**
- b) Explain the anomalies in database design. **(3)**
- c) Define 3NF and decompose the following relation upto 3NF. **(5)**

Supplier(supplier_no,item_no,consignment_num,quantity, status)

Key \rightarrow { supplier_no, item_no }

{ supplier_no, item_no } \rightarrow {quantity}

{ supplier_no } \rightarrow {status}

{ supplier_no } \rightarrow { consignment_num }

{ consignment_num } \rightarrow {status}

Q 5. Answer the following:

(10 marks)

- a) Briefly explain isolation and durability properties of a transaction. **(2)**
- b) Explain the different types of schedules based on recoverability. **(3)**
- c) Explain the features and challenges of mobile databases. **(5)**

*****Best of luck*****

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
S.Y B.C.A, Semester III, Supplementary Examination, May/June 2019
Management Accounting (BCA 303)

Duration: 2 hrs

Max Marks: 50

- Instructions :** 1. All questions are compulsory
 2. Start each new question on a fresh page
 3. Figures to the right indicate maximum marks

Q 1) Explain the meaning of the following terms in 2-3 sentences :- (Any 5) (10 mks)

- Management Accounting
- Contribution
- Cash Budget
- Standard Costing
- Margin of Safety
- Budgetary Control
- Special Reports

Q 2) A) A company is expecting to have Rs. 30,000 cash in hand on 1st April 2017 and it requires you to prepare cash budget for the three months from April to June 2017. The following information is supplied to you. (10 mks)

Month	Sales	Purchases	Wages	Expenses
February	88,000	21,500	5,000	2,000
March	90,000	22,000	5,500	3,500
April	92,000	29,000	6,000	3,800
May	94,000	32,500	6,500	3,900
June	1,00,000	35,000	7,000	4,000

- Period of credit allowed by suppliers is two months.
- 20% of sale is for cash and the period of credit allowed to customers is one month.
- Delay in payment of expenses by one month.
- Wages are paid after two months.
- Plant and Machinery worth Rs. 50,000 will be purchased and paid for in May 2017.

OR

Q 2) B) The expenses budgeted for production of 10,000 units in a factory is furnished below: (10 mks)

Particulars	Per Unit
Material	70
Labour	25
Variable Expenses (Direct)	20
Fixed Factory overhead (Rs 1,00,000)	10
Variable Factory overhead	5
Selling Expenses (10% fixed)	13
Distribution Expenses (20% fixed)	7
Administrative Expenses (Fixed Rs 50,000)	5
Total Cost of Sales per unit	155

You are required to prepare a flexible budget for the production of 6,000 units and 8,000 units.

Q 3) A) From the following information calculate:

(10 mks)

- 1) Contribution
- 2) Profit Volume Ratio
- 3) Break Even Point in Rupees
- 4) Margin of Safety
- 5) Profit

Particulars	Rs.
Sales	40,000
Variable Cost	24,000
Fixed Cost	12,000

OR

Q 3) B) i) From the following information calculate:

(10 mks)

- 1) Labour Cost Variance
- 2) Labour Efficiency Variance

Labour	Standard Hours	Standard Rate	Actual Hours	Actual Rate
Skilled Labour	80	25	120	22
Unskilled Labour	160	15	80	18

ii) From the following information calculate:

- 1) Material Cost Variance
- 2) Material Price Variance
- 3) Material Usage Variance

Raw Materials	Standard Quantity	Standard Price	Actual Quantity	Actual Price
X	750	20	550	21
Y	950	12	750	11

Q 4) A) i) State and Explain functions of Management Accounting.

(5 mks)

ii) Explain the limitations of Management Accounting.

(5 mks)

OR

Q 4) B) i) Explain the Break Even situation with the help of Chart.

(5 mks)

ii) State and Explain the advantages of Budgetary Control.

(5 mks)

Q 5) A) i) Explain the limitations of Marginal Costing.

(2 mks)

ii) Explain the advantages of Standard Costing.

(3 mks)

iii) State and Explain the limitations of Standard Costing.

(5 mks)

OR

Q 5) B) i) Explain Tabular and Graphical Reports.

(2 mks)

ii) Explain the steps in Management Reporting.

(3 mks)

iii) State and Explain the essentials of good management reporting.

(5 mks)

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
S.Y.B.C.A, Semester III, Supplementary Examination, May/June 2019
OBJECT ORIENTED CONCEPTS (BCA 301)

Duration: 02 Hours

Maximum Marks: 50

Instructions: 1) All questions are compulsory
2) Figures to the right indicate full marks
3) Start each new question on fresh page

Q.1. Explain the following terms with an example of each.

5 x 2 = 10 Marks

- | | | |
|-----------------------------|-----------------|-----------------|
| i) Unstructured Programming | ii) Inheritance | iii) Interfaces |
| iv) Method Overriding | v) Constructor | |

Q.2 Answer the following.

10 Marks

- A) Explain, how we achieve encapsulation in Object Oriented Programming? Give an example. (02)
- B) Explain any three limitations of Procedure Oriented Programming? (03)
- C) Based on the problem definition given below, identify objects/classes, its attributes and behaviors and represent it in the form of suitable class diagram. (05)
(Mention suitable assumptions, if any)

In an online booking system, a customer can book maximum 3 rooms at a time. There are two types of rooms, standard and suite. These rooms differ by their cost and capacity. System stores name, address, mobile no., email id, password and id related information of customer. It shows room no, floor no., room type, cost per room, capacity, description and status of rooms. While doing booking, it captures date of booking, no. of rooms booked, and total cost along with room no. and customer name. A customer can book, cancel, view, print, email and modify the booking and update data related to him/her.

Q.3 Answer the following.

10 Marks

- A) Explain the differences between aggregation and composition using suitable example? (02)
- B) What is the purpose/use of garbage collection, 'super' and 'new' in java? (03)
- C) Explain polymorphism and its types. Which type of polymorphism is achieved by overriding & overloading concepts? (05)

P. T. O.

Q.4 Answer the following.

10 Marks

- A) How reusability is achieved in object oriented programming? (02)
- B) What do you mean by generic class? Write syntax of generic class with respect to java programming language. (03)
- C) I. Mention different types of inheritances. (05)
II. Which inheritance type is not possible in java and how it can be achieved? (2+2+1)
III. What will happen, if a method of a super class is declared as final?

Q.5. Answer the following

10 Marks

- A) Whether the code block mentioned below will compile? Why or why not? (02)

```
try{  
    //operation code...  
}finally {  
    //operation code ...  
}
```

- B) Explain different types of exceptions? Which type of exception is necessary to be handled? (03)
- C) What are Stream Classes? Explain different type of stream classes along with its purposes? (05)

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