Vidya Vikas Mandal's

Shree Damodar College of Commerce & Economics, Margao-Goa

FY BCA, Semester II, Supplementary Examination, May/June 2019

Cost Accounting (BCA203)

Duration: 2 hrs **Max Marks: 50 mks**

Instructions:

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

Q1) Write short notes on: **(Any 5)** **(5x2=10)**

a) Cost accounting
b) Standard Costing
c) Maximum Level
d) Weighted Average Method
e) Variable Cost
f) Labour Turnover
g) Reorder Level
h) Time Rate System

Q2) A) Prepare a cost sheet from the following information for the year ended 31st March 2018 showing: **(10 Mks)**

a) Prime Cost b) Factory Cost c) Cost of Production d) Total Cost e) Profit

Particulars	Amount
Direct Materials	33,000
Factory Rent and Rates	7,500
Factory Heating and Lighting	1,000
Direct Wages	35,000
Office Rent and Rates	4,000
Power Expenses	1,500
Direct Expenses	15,000
Factory Managers Remuneration	14,000
Depreciation on Plant and Machinery	1,500
Depreciation on Office Furniture	500
Legal Charges	500
Salesman Salary	5,000
Office Insurance	2,000
Warehouse Rent	4,000
Advertisement Expenses	3,000
Travelling Expenses of Salesman	1,000
Office Managers Remuneration	8,000
Bad Debts Written off	1,000
Sales	1,51,000

OR

Q2) B) a) Write short note on Simple Average Method. **(2 Mks)**

b) From the following transactions prepare Stores Ledger Account using Weighted Average Method. **(8 Mks)**

Apr 1	Opening Stock	300 units @ Rs. 2 each
Apr 2	Purchases	200 units @ Rs. 2.20 each
Apr 4	Issue	150 units
Apr 6	Purchases	200 units @ Rs. 2.30 each
Apr 11	Issue	150 units
Apr 19	Issue	200 units
Apr 22	Purchases	200 units @ Rs. 2.40 each
Apr 27	Issue	150 units

Q3) A) i) Explain Material Issue procedure. **(3 Mks)**

ii) From the following transactions prepare Stores Ledger Account using FIFO Method. **(7 Mks)**

Nov 1	Opening Stock	500 units @ Rs.10 each
Nov 3	Purchased	100 units @ Rs.11 each
Nov 5	Issued	500 units
Nov 9	Purchased	700 units @ Rs.12 each
Nov 11	Issued	500 units
Nov 15	Purchased	400 units @ Rs.13 each
Nov 22	Issued	500 units

OR

Q3) B) a) Write a short note on Danger Level. **(2 Mks)**

b) M/s.Sai Enterprises, Goa manufacturers of Air coolers gives the following information with respect to Component A in the manufacturing process for the year ending 31st March 2017. **(8 Mks)**

Normal usage 200 units per week
Maximum usage 300 units per week
Minimum usage 100 units per week
Reorder period of materials: Maximum--- 4 weeks, Minimum--- 2 weeks
Reorder quantity: 1600 units
You are required to calculate:-

1) Reorder Level
2) Minimum Level
3) Maximum Level
4) Average Stock Level

Q4) A) a) Write short notes on the following: **(6 Mks)**

1) Halsey Premium Plan
2) Piece Rate System
3) Rowan Plan

b) Calculate the total earnings of a worker under Halsey Premium Plan and also find out effective rate of earnings per hour from the following information. **(4 Mks)**

Standard time allowed= 48 hours
Hourly rate of wages = Rs 10
Actual time taken = 40 hours
Percentage of bonus = 50%

OR

Q4) B) a) Write a short note on Taylor's Differential Piece Rate System. **(2 Mks)**

b) Calculate the earnings of worker A and Worker B under Piece Rate System and under Taylor's Differential Piece Rate System from the following particulars: **(8 Mks)**

Normal rate per hour – Rs 4
Standard time per unit – 60 seconds
Workers work for 9 hours per day.
Differentials to be applied as follows:
1) 80% of piece rate below standard
2) 120% of piece rate above standard
Worker A produces 500 units per day and Worker B produces 600 units per day.

Q5) A) Following expenses were incurred by a contractor on contract which he started on 1st January 2017. **(10 Mks)**

Particulars	Amount
Materials	45,000
Wages	60,000
Plant at cost	50,000
Work Certified	1,20,000
Work Uncertified	60,000
Materials in Hand	11,000
Plant on Hand	43,000
Cash Received from Contractee	1,00,000
Material returned to stores	2,000
Creditors	5,000
Share Capital	50,000

Prepare Contract account and balance sheet assuming the contract price Rs. 3,50,000.

OR

Q5) B) A product passes through 3 processes. The following information is collected for January 2016. **(10 Mks)**

Particulars	Process 1	Process 2	Process 3
	Amount	Amount	Amount
Direct Material	5,200	3,960	5,924
Direct Wages	4,000	6,000	8,000
Output in Units during the month	950	840	750
Normal Loss	5%	10%	15%
Value of Scrap per unit	4	8	10

1000 units @ Rs.6 were introduced in Process 1. There was no stock of materials or Work- in - Progress at the beginning or at the end of that month. The production overhead was Rs. 18,000 for that month and was allocated on the basis of direct wages.
Prepare Process account indicating Normal loss, Abnormal Loss and Abnormal Gain.

V.V.M'S Shree Damodar College Of Commerce & Economics,
Margao-Goa

F.Y.B.C.A, SEM II, Supplementary Examination, May/June 2019

DATA STRUCTURES , BCA-201

Duration: 2 Hours **Total Marks:** 50

Instructions: **1) All Questions are Compulsory.**
2) Figures to the right indicate Full Marks.
3) Start Each New Question on New Page.
4) Total number of printed pages :02

Q.1 Answer the following. **(2 x 5 mks = 10 mks)**

a) Name the following.

i) Function Calling itself.

ii) data sorting technique using tree data structure.

iii) Data Structure based on First In First Out principle

iv) Linked list with 2 pointers.

b) Explain how simple queue is different from Circular queue.

c) Tree traversal methods can't be used for Graph traversal. Justify the statement.

d) For given data construct tree and give depth of the tree.

A	B	D	C	E	F	null	null	I

e) For above constructed tree give preorder traversal.

Q2) Answer the following. **(10 mks)**

a) Name & Explain sorting technique used for the following. **(2mks)**

Input stored in array : **25 , 4 , 3 , 9**

Output at 1st Iteration is : **4 , 3 , 9, 25**

b) Explain with diagram how Bubble sorting differs from Insertion sorting. **(3mks)**

c) Name and Write the Efficient Algorithm used for data searching in an array which is in sorted order. **(5 mks)**

Q3) Answer the following. **(10 mks)**

a) Write the algorithm for implementing Push operation on Stack Data Structure. **(2 mks)**

b) "Queue implementation using Linked List is efficient as compared to Array implementation " .Give your opinion with Justification. **(3 mks)**

c) **Write Algorithm for the following.** **(5 mks)**

i) Add node at front to the Linked List.
ii) Delete node at End of Linked List.

Q4) Answer the following. **(10 mks)**

a) How is Complete Binary tree different from Strictly Binary tree. **(2 mks)**

b) Draw Expression Tree for given expression below and name the right subtree nodes and the leaf nodes . **(3 mks)**

10 + 2 * 8 * 3

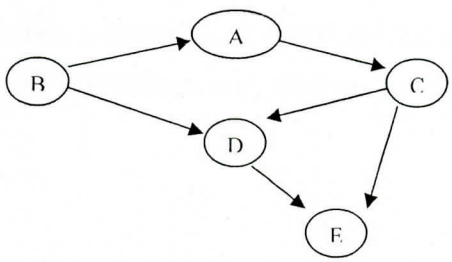
c) For the given set of data Construct Binary Search Tree. **(5 mks)**
8 ,3 ,10 ,14 ,1 ,6 ,4 ,7 ,8
Is the tree constructed an AVL Tree. Justify your answer.

Q5) Answer the following. **(10 mks)**

a) Tree traversal methods can't be applied for Graph traversal. Justify the statement **(2 mks)**

b) Explain the following terms. **(3 mks)**
i) Cyclic Graph iii) Adjacency Matrix iii) Weighted Graph

c) For the graph given below explain the **depth first Search** traversal starting with Node B and draw the DFS Spanning tree . **(5 mks)**



********* ********** ALL THE BEST ********** *********

Vidhya Vikas Mandal's

Shree Damodar College of Commerce & Economics Margao Goa

F.Y.BCA, Semester II, Supplementary Examination, May/June 2019

BCA 204 : **DISCRETE MATHEMATICS**

Duration: 2 Hours **Total Marks: 50**

INSTRUCTIONS:

I. **Figures to the right indicate maximum marks**
II. **Start each answer on a fresh page.**
III. **Non scientific, non programmable calculator allowed.**
IV. **Graph paper will be provided on request**

1. **Answer the following**
   - **A.** Define the following **[4 Marks]**
     - i. Partial order relation
     - ii. Regular expression
   - **B.** Perform the following operations on binary numbers **[6 Marks]**
     - i. 1100011+111011
     - ii. 10001-1111
     - iii. 1010x100

2. **Answer the following** **[5x2=10 Marks]**
   - a. State any two basic theorems of Boolean Algebra
   - b. Let A={1,2,3} and a relation on A be R={(1,1), (1,2), (2,1), (2,2), (2,3), (3,3)}. Verify whether R is
     - i. Reflexive
     - ii. Not transitive
   - c. Find the inverse of f(x)=2x-3
   - d. Convert $(6592)_{10}$ to hexadecimal form
   - e. Construct the truth table for $(p \wedge q) \rightarrow p$

3. **Answer <u>any two</u> of the following** **[10 Marks]**
   - **A.** State the De'Morgan's laws in set theory and verify one of them for X={1,2,3,4,5} , A={1,2} and B={2,3,4}
   - **B.** Write a short note on NOR and NAND gate
   - **C.** How many 5 digit numbers can be formed using the digits 1,2,3,4,5,6 such that
     - i. No digit is repeated
     - ii. Repetition of digits is allowed
     - iii. Number formed is even
     - iv. Number formed ends with 3.

Vidya Vikas Mandal's

Shree Damodar College of Commerce & Economics Margao-Goa

F.Y.BCA Semester II Supplementary Examination, May/June 2019

ENVIRONMENTAL STUDIES BCA 207

Duration: 1.00 Hour Max. Marks: 25

Instructions: Figures to the right indicate maximum marks.
Start each question on a fresh page
All questions are compulsory

Q.I Answer **Any Five** of the following: **(1X5=5)**

a) Non-point source of water pollution
b) Solid waste management
c) Watershed management
d) Wasteland
e) Population explosion
f) Child welfare

QII.A) State and explain effects of thermal pollution. **(5)**

OR

QII.X) Elaborate in detail mitigation methods of cyclone management. **(5)**

QIII.A) State and explain need of sustainable development. **(5)**

OR

QIII.X) Write a note on sanitary land-filling. **(5)**

Q.IV.A) Discuss in detail effects of acid rain. **(4)**

OR

Q.IV.X) Explain in detail factors affecting for formation of wasteland. **(4)**

QV.A) State and explain any two factors affecting for population explosion. **(3)**

OR

QV.X) Write short note on family welfare. **(3)**

QVI.A) Write a note on HIV/AIDS. **(3)**

OR

QVI.X) Explain in detail any one scheme of child welfare in India. **(3)**

Vidya Vikas Mandals

Shree Damodar College of Commerce & Economics, Margao, Goa

F.Y.B.C.A SEM II, Supplementary Examination, May/June 2019

OPERATING SYSTEM CONCEPTS (BCA-202)

Duration: 2 Hours **Total Marks: 50**

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

Q.1 Define the following: **(2 X 5 = 10) Marks**

i) Resident Monitor.

ii) Fragmentation.

iii) Best fit and worst fit.

iv) File attributes(any four).

v) Time sharing system.

Q2) Answer the following questions: **(10 Marks)**

A) Explain any two services provided by operating system. 2 Marks

B) What are the measures taken to recover from deadlock? 3 Marks

C) For the following set of processes, draw the Gantt chart and calculate average waiting time using FCFS and Round Robin (with quantum=4) scheduling algorithms. 5 Marks

Processes	Arrival Time	Burst Time
P1	0	24
P2	1	3
P3	2	3

Q3) Answer the following questions: **(10 Marks)**

A) What is Thrashing? 2 Marks

B) Explain SSTF disk scheduling algorithm in brief. Also write its advantages and disadvantages. 3 Marks

C) With a neat diagram, explain Page replacement. What are the steps in handling Page fault? 5 Marks

Q4) Answer the following questions: **(10 Marks)**

1) Explain symmetric encryption. 2 Marks
2) Explain any three types of Program threats in detail. 3 Marks
3) With neat diagram, explain Segmentation. Also explain the structure of Segment table. 5 Marks

Q5) Answer the following questions: **(10 Marks)**

1) Explain basic instruction cycle with diagram. 2 Marks
2) What is a Distributed operating system? Explain any two design issues of Distributed operating system. 3 Marks
3) Explain any two types of Web based operating system highlighting its features. Also write advantages of Web based operating system. 5 Marks