

B.C.A. SEM-II (2014 COURSE) CBCS : SUMMER - 2018

SUBJECT : COMPUTER ORGANIZATION & ARCHITECTURE

Day : **Tuesday**
Date : **24/04/2018**

S-2018-1698

Time **10.00 AM TO 01.00 PM**
Max. Marks : 100

N.B.

- 1) Answer any **FOUR** questions from Section – I and any **TWO** questions from Section – II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer book.
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SECTION - I

- Q.1** Explain the functioning of binary counter with help of a circuit diagram. (15)
- Q.2** Explain the instruction cycle with help of a flowchart. (15)
- Q.3** Explain the concept of virtual memory in detail. With the help of example give the process of converting virtual address into physical address. (15)
- Q.4** Discuss various addressing modes with help of suitable examples of each. (15)
- Q.5** Differentiate between: (15)
- a) Digital computer and Analog computer
 - b) RISC and CISC
- Q.6** With a proper diagram explain Daisy chaining priority interrupt in detail. (15)
- Q.7** Write short note on any **TWO** of the following: (15)
- a) Program control
 - b) Decoders
 - c) Machine language

SECTION - II

- Q.8** Solve the following: (20)
- a) Find 2's complement : (01010101)₂
 - b) (10010₂ * (011)₂
 - c) Convert the expression in proper notation and solve it with stack:
[(3+4+5)*(2+3)]*(3-1)
 - d) Simplify using K map: $F(A,B,C) = \sum(1,2,3,6,7)$
 - e) Prove that : $AB+ABC+AB+ABC=B+AC$
- Q.9** A sequential circuit has two D flip-flops, A and B, one inputs x and one output z. The flip-flop input equations and circuit output is as follows: (20)
- $$D_A = x' + A$$
- $$D_B = B' + x A$$
- $$Z = x' + A' B'$$
- Draw the logic diagram, State table and state diagram.
- Q.10** Explain the functioning of 4 bit Arithmetic circuit with help of a circuit diagram in detail. (20)

Day : **Saturday**
Date : **28/04/2018**

S-2018-1699

Time : **10.00 AM TO 01.00 PM**
Max. Marks :100

N.B.

- 1) Attempt any **FOUR** questions from Section – I and any **TWO** questions from Section – II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer book.
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SECTION – I

- Q.1** What is RDBMS? Explain various features of RDBMS. (15)
- Q.2** What is SQL? Explain various DDL and DML commands of SQL. (15)
- Q.3** What is Data Constraint? Explain primary key and foreign key with example. (15)
- Q.4** Explain various Numeric and String functions available in SQL. (15)
- Q.5** Explain in brief various SET operations with example. (15)
- Q.6** Explain various advantages of PL/SQL also explain structure of PL-SQL block. (15)
- Q.7** Write short notes on any **THREE** of the following: (15)
- a) Trigger
 - b) Index
 - c) View
 - d) Pattern matching

SECTION – II

- Q.8** What is Join? Explain various types of joins with suitable example. (20)
- Q.9** Write a PL/SQL Block to: (20)
- a) Find greater among 3 numbers.
 - b) Accept 3 digit number and print it in reverse order.
- Q.10** Write SQL queries for the following: (08)
- i) Create following tables with proper constraints
Customer (cust id, customer name, city, contact, Email)
Invoice (Invoiceno., Invoicedate, Cust id, Invoice Amount)
Invoice Detail (Invoiceno, Product code, qty)
Product (Product code, product name, stockqty, price) (08)
 - ii) Display all customers from city "Delhi". (02)
 - iii) Display Invoiceno, Invoice date, customer name and Invoice Amount for customer 'Rajesh' (03)
 - iv) Display Product list in descending order of product name. (02)
 - v) Display Invoices in the Year 2017. (02)
 - vi) Display product names not sold in APR 2017. (03)

B.C.A. SEM–II (2014 COURSE) CBCS : SUMMER - 2018
SUBJECT : C PROGRAMMING - II

Day : **Wednesday**
Date : **02/05/2018**

S-2018-1700

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 100

N. B. :

- 1) Attempt **ANY FOUR** questions from Section – I and attempt **ANY TWO** questions from Section – II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer books.
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SECTION - I

- Q. 1** What is recursion? Explain its need with example. **(15)**
- Q. 2** Illustrate how we can make use of structure to define user defined types. **(15)**
- Q. 3** List and explain dynamic memory management functions. **(15)**
- Q. 4** What do you know about formatted input/output; how to write and read such data from file. **(15)**
- Q. 5** Explain use of command line argument with example. **(15)**
- Q. 6** List any five functions in graphics and describe use of it. **(15)**
- Q. 7** Write short notes on **ANY THREE** of the following: **(15)**
- a) Union
 - b) Preprocessors
 - c) Bitwise operators
 - d) Limits.h

SECTION - II

- Q. 8** Write a structure to represent book and use to create database of book. **(20)**
- Q. 9** Write a program to copy content one file into another; when coping copy only those lines containing word “how”. **(20)**
- Q.10** Write a C program to read n integers and print sum of all the numbers which are divisible by both 3 and 7. Make use of a function to check whether number is divisible by both 3 and 7. **(20)**

B.C.A. SEM-II (2014 COURSE) CBCS : SUMMER - 2018
SUBJECT: FINANCIAL MANAGEMENT & ACCOUNTING

Day: **Friday**
Date: **04/05/2018**

S-2018-1701

Time: **10.00 AM TO 01.00 PM**
Max. Marks: 100

N.B.:

- 1) Attempt any **FOUR** questions from Section –I and any **TWO** questions from Section –II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer book.
 - 4) Use of non-programmable **CALCULATOR** is allowed.
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SECTION-I

- Q.1** Elaborate various Accounting Concepts. (15)
- Q.2** Explain in detail concept and importance of Budgetary Control. (15)
- Q.3** What do you mean by Working Capital? Discuss factors affecting Working Capital. (15)
- Q.4** Explain the concept, nature and scope of Financial Management. (15)
- Q.5** Explain the following: (15)
i) Risk and Return
ii) Margin of safety
iii) Journal
- Q.6** Elaborate the concept and significance of Ratio Analysis. (15)
- Q.7** Write short note on any **THREE** of the following: (15)
a) Venture Capital
b) Inventory Management
c) Cash Budget
d) Standard Cost
e) Ledger

P. T. O.

SECTION-II

Q.8 For the Production of 9,000 units the following are the Budgeted Expenses: **(20)**

Particulars	Cost per unit (Rs.)
Direct Materials	80
Direct Labour	60
Variable factory overhead	30
Fixed factory overhead (100% fixed)	10
Variable expenses (Direct)	13
Selling expenses (10% fixed)	12
Administration expenses (20% Variable)	15
Distribution Expenses (10% fixed)	5

On the basis of above information, prepare a Flexible Budget for the production of 7,000 units.

Q.9 The following information is available for Product A and B. **(20)**

Particulars	Product A (Rs.)	Product B (Rs.)
Sales	12,00,000	16,00,000
Marginal Cost	7,00,000	10,00,000
Fixed Cost	3,00,000	2,00,000

You are required to calculate, following for product A and Product B.

- | | |
|-----------------------|----------------------|
| i) Profit | ii) P/V Ratio |
| iii) Break Even sales | iv) Margin of Safety |

Q.10 A firm whose cost of capital is 10% is considering to mutually exclusive proposals X and Y the details of which are as follows: **(20)**

Year	Projected Cash Inflows	
	Proposal X (Rs.)	Proposal Y (Rs.)
1	1,00,000	2,00,000
2	2,50,000	3,00,000
3	3,00,000	3,50,000
4	4,50,000	4,50,000
5	6,00,000	5,00,000
Total:	17,00,000	18,00,000

Initial Investment for Project X is Rs.10, 00,000 and for Project Y is Rs.10, 00,000.

Calculate:

- i) Simple Pay Back period
- ii) Net Present Value at 10% rate of discount
- iii) Profitability Index at 10 % rate of discount