BC-1876

BCA (SEMESTER-II) Exam-2015

Programming C

Time : Three Hours
Maximum Marks : **75**

Note :- Attempt questions from all the sections.

SECTION - A

(Short Answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10×3=30

1. Write a C program to replace all even numbers by zero (0) and odd numbers by one (1) of a single dimensional array.

2. What is structure? How it declear?

3. Each element of an array A[-20, 20, 10, 35] require one byte of storage if the array is column major implementation and beginning of the array is at location 500, determine the address of element A [0, 30].

[P. T. O.

4. Write a C program to sort the given array.

5. Define memory allocation in C?

6. What is call by reference? Explain with suitable example.

7. Write a C program to count total number of upper case letter in the string.

8. Write a C program to input 3 sides of triangle and check triangle formation is possible or not?

9. What is recursion? Explain with example.

10. What is identifier? Write the rules to create the identifier.

11. Define heated loop with example.

12. What is file inclusion directives? Explain with example.

13. Explain relational and conditional operator with example.

14. Write any three string function with syntax.

15. Write a menu driven program to input a temperature in centigrade degrees and convert it into

(i) fahrenheit degree (^{o}F)

(ii) Kelwin (k)

SECTION - B

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15×3=45

1. Write a C program to print sum of the following series

$$1+\frac{x^3}{2!}+\frac{x^6}{4!}+\frac{x^9}{6!}+\frac{x^{12}}{8!}+\text{------ n terms}$$

Where x and n are input by user and ! represent factorial.

2. What is union? Explain working of union with example.

3. Write a program to point the following pattern :

```
        *
      * * *
    * * *  * *
  * * * * *  * *
    * * * * *
      * * *
        *
```

[P. T. O.

4. Write the short note on the following :

   (i) fseek()

   (ii) fgetc()

   (iii) fclose()

5. (a) Write a program to input two numbers through keyboard and print all the perfect number between these number. A number is called perfect if sum of the factor of number (excluding the number itself) equal to the number. For example 6 = 1 + 2 + 3.

   (b) Write a C program that will lead the line count all occurrence of the word 'the' in it for example if input : the india is the beautiful country then output : 2.

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BC-1877

B.C.A. (SEMESTER-II) Exam-2015

Digital Electronics & Comp. Organization

Time : Three Hours
Maximum Marks : **75**

60

Note :- Attempt questions from all the sections.

SECTION - A

(Short Answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10×3=30

1. Convert the following numbers :-

   (i) $(725.63)_8$ to binary

   (ii) $(214)_{10}$ to octal

   (iii) $(0.8125)_{10}$ to binary.

2. Give the statement of De Morgan's theorem.

3. Prove the following boolean expression :

   $$(A+B)\ (A+C) = A + BC$$

[P. T. O.

4. Simplify the following boolean expression :

$$Y = \overline{(\overline{AB} + \overline{A} + AB)}$$

5. Convert the expression $Y = AB + A\overline{C} + BC$ into the standard SOP form.

6. Simplify the following three variable boolean expression :

$$Y = \Sigma m\,(2, 4, 6)$$

7. Describe universal logic gates with truth table and logic diagram.

8. Construct AND gate using NOR gates.

9. Discuss half subtractor circuit.

10. Discuss Demultiplexer circuit.

11. Describe decoder circuit.

12. Differentiate synchronous and asynchronous sequential circuits.

13. Classify the memories.

14. Describe Ripple Counter.

15. What is cache memory?

SECTION - B

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15×3=45

1. Describe the working and logic circuit of
   (a) positive edge Triggered SR flip flop
   (b) negative edge Triggered SR flip flop

2. (a) Explain the working of a shift right register
   (b) Minimize the following expression using k-map and realize using basic gates.

   $Y = \Sigma m (1, 2, 9, 10, 11, 14, 15)$

3 (a) Describe the working of a 3 bit asynchronous down counter using JK flip flop.

(b) Implement the following boolean function using only NOR gates

$$F = (\bar{A} + B + C)(A + B)$$

4. (a) Describe T-flip flop.

(b) Describe 8 : 1 multiplexer.

5. (a) Describe full substractor circuit. Also draw full substractor using half substractor.

(b) Describe half adder circuit. Also draw half adder circuit using NAND gates only.

6. (a) Describe octal to binary encoder circuit.

(b) Explain MOS static RAM cell.

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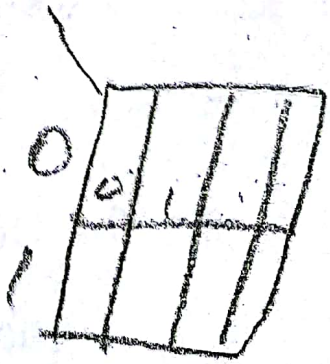

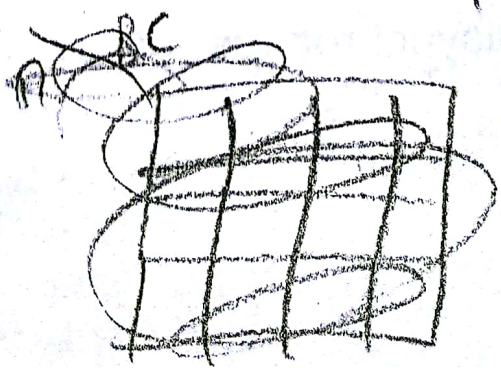

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BC-1878

BCA (Semester-II) Exam.–2015

Organization Behaviour

Time : Three Hours
Maximum Marks : **75**

Note :- Attempt questions from all the sections.

SECTION - A

(Short Answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 3×10=30

1. Write short notes on :

(a) Supportive model of OB.

(b) Cognitive component of attitude.

(c) Maslous heirarchy of needs.

(d) Group Norms and how do they develop.

(e) Stress and its effects.

[P. T. O.

(f) Types of grievances.

(g) Employee councelling.

(h) Leadership styles.

(i) importance of teams.

(j) Conflict process.

(k) Effect of Conflict on employes.

(l) Ways of discovering grievances

(m) Types of values.

(n) How to improve perception.

(o) Factors affecting job satisfaction.

SECTION - B

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15×3=45

1. (a) Explain type A and type B assessment of personality.

   (b) Type approach to personality development.

2. (a) What factor affect group cohesivenss.

   (b) How do Group Norms develop.

3. What is a grievance? Why and how is it settled?

4. Define perception. Identify the factors which affect the process of perception.

5. What is the importance of teams in organisation? Identify the types of teams.

6. Explain Mc Gregor's theory X and Y.

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BC-1879

BCA (Semester-I) Exam.–2015

Financial Accounting & Management

Time : Three Hours

Maximum Marks : **75**

Note :- Attempt questions from all the sections.

SECTION - A

(Short Answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 3×10=30

1. Explain Nature & Objectives of Financial Management.

2. Define Capital Structures with Illustration.

3. What are the application of Computer used in accounting double entry system?

[P. T. O.

4. Explain break-even analysis.

5. Discuss in short accounting concept and convention.

6. Differentiate between funds flow and cash flow statement.

7. What do you understand by Journal and Ledger? Explain with example.

8. What are the factor influencing the composition of wokring capital?

9. Distinguish between explicit and implicit cost.

10. Explain the cash management.

11. Company X and Company Y are in the same

risk class and are identical in every respect except that Company X uses debt while Company Y does not. The levelled firm has Rs. 18,00,000 debentures, Carrying 10% rate of interest, both the firm earn 20% operating profit on this total assets of Rs. 30 Lakhs. Assuming corporate tax at 35% and equity capitalisation rate of 15% for an all equity company. Calculate the value of two firms using :.

(i) Net income approaches and

(ii) Net operating income (NOI) approach.

12. A company has 9% Irredeemable debt of Rs. 5,00,000. The tax rate is 35%. Determine the

cost of capital (Before tax as well as after tax) assuming the debt is issued at

(i) Par

(ii) Discount of 5%

13. Prepare accounting equation from the following and give the clarification :

Cash capital of business	Rs. 2,00,000
Furniture purchased for cash	Rs. 20,000
Machine purchased for cash	Rs. 60,000
Loan taken	Rs. 40,000
Goods purchased on Credit	Rs. 80,000.

14. Journalize the following transactions :

(a) Started business with cash Rs. 60,000

(b) Dividend received Rs. 5,000

(c) Purchase goods on credit from Shyam Rs. 20,000

(d) Paid Rent Rs. 3,000

15. Explain explicit and implicit cost?

SECTION - B

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15×3=45

1. What do you understand by Financial Management. Explain with its scope and objectives?

2. What do you understand by cash, inventory and receiveable management?

[P. T. O.

3. Define Accounting. What are the main objectives and branches of accounting?

4. Discuss in detail cost of capital.

5. Prepare a Trial Balance from the following information :

Capital Account	6,000
Furniture Account	850
Commission Account	(Cr) 350
Octroi Account	115
Tranning Expenses A/c	460
Purchase A/c	9650
Sales A/c	12,870
Purchase Return A/c	350
Sales Return A/c	620

Creditors A/c	2,720
Debtors A/c	4,960
Cash A/c	3,240
Bills receivable A/c	1,200
Travelling Expenses A/c	320
Discount A/c	165
Salaries A/c	720

6. Expin in detail cash flow statement.

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BC-1880

BCA (Semester-I) Examination–2015

Mathematics-II

Time : Three Hours
Maximum Marks : **75**

Note : Attempt all the sections.

SECTION – A

(Short Answer Type Questions)

Note : Attempt **any 10 (Ten)** questions. Each question carries three marks. 3×10=30

1. Define set formation and family of sets with suitable examples.

2. Prove that the null set ϕ is a subset of every set.

3. Define symmetric difference of sets and cardinality of sets.

[P. T. O.

4. Define Inverse of a relation with suitable examples.

5. What are logrithmic function.

6. What are exponential function.

7. Show that complements of an element a in boolean algebra B is unique.

8. If $(L, \leq)$ be a lattice and $a, b, c \in L$ then show that $(a \wedge b) \wedge c = a \wedge (b \wedge c)$

$(a \wedge b)\ AC = a \wedge (6 \wedge C)$

9. For maximum and minimum value examine the $f(x, y) = xy + \frac{a^3}{x} + \frac{a^3}{y}$

10. What is equation of sphere, define with suitable example.

11. What are the conditions for two lines to be a coplanar.

12. Define the Cartesian coordinates with triple integral to find volume of simple shapes.

13. What are domain and range.

14. What is equivalance relation.

15. What is change of order of Integration, define with suitable example.

SECTION – B

(Long Answer Type Questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15×3=45

1. In a box there are 900 balls, 700 balls are black and 450 balls are white, find

(1) How many can both black and white.

(2) How many can white only.

(3) How many can black only.

2. Find the shortest distance between the lines

$$\frac{x-3}{3} = \frac{y-8}{-1} = \frac{z-3}{1} \quad \&$$

$$\frac{x+3}{-3} = \frac{y+7}{2} = \frac{z-6}{4}$$

find also its equation & the points as which it meets the given lines.

3. Describe partial differentiation with chain rule and suitable examples.

4. Describe partial order sets with its representation by a suitable example.

5. Describe lattice with distributed and complemented lattices.

6. Describe 3D coordinate geometry with equation of Plane, straight line with conditions.

BC-1876

BCA (SEMESTER-II) EXAM. - 2016

Programming C

Time : Three Hours
Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any Ten** questions. Each question carries 3 marks. 10×3=30

1. Describe the general structure of a C program.

2. Differentiate between = and == operator.

3. Write a program in C language which converts 25°C into Fahrenheit.

[P. T. O.

4. Write at least two advantages and disadvantages of using C language.

5. Describe the usage of getchar function, taking a suitable example.

6. Give an example of if-else statement.

7. What is the format of while command? Write its general format.

8. Write a program to print the all the even numbers starting from 1 to 100.

9. Write a statement to define a character array of 5 elements.

10. Which function will you use to print elements of character array.

11. How many elements will be there in A[10] [20] array ? What [20] represents in the given array?

12. Are array passed to the function by value? Explain.

13. If S1 is a structure then write a statement to create a variable V1 of this type.

14. If a=100 and pa= &a then what will be the value of * pa ?

15. How will you define an array X[10][5] of integer elements, using pointers.

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. (3x15=45)

1. Write a program to swap the values of two variables making use of pointers. Differentiate between calling function by reference and calling function by value.

2. What are text? How are they different from variable length files? Write a program to append text in an already existing text file.

3. Explain the term, source program, Translation unit and object module in relation to C preprocessor

4. What do you understand by command line arguments? How do you handle them using preprocessor directives in your program.

5. How do you pass one function to another function in C language? What are the advantages of this?

6. Differentiate between structure and union. Define a union named 'an' with three members a,b and c which are of integers, float and char type respectively.

– 0 –

struct s1
{
}

BC-1877

BCA (SEMESTER-II) EXAM.-2016

Digital Electronics & Comp. Organization

Time : Three Hours
Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any Ten** questions. Each question carries 3 marks. 10×3=30

1. (i) Convert $(0.95)_{10}$ to binary

   (ii) Convert $(25B)_H$ to octal

   (iii) Convert $(615)_8$ to hexadecimal

2. What is DeMorgan's Law ?

$\overline{A}.\overline{B} = A + B$

$\overline{A+B} = \overline{A}+\overline{B}$

P. T. O.

3. Explain complementary relationship between minterms and maxterms.

4. What is a truth table?

5. Way NAND-NAND realization is preferred over AND-OR realization.

6. Draw half subtractor using NAND gates only

7. Write two characteristics of combinational circuits.

8. How can you classify register ? Explain.

9. How many flip-flops are required to construct the following modulus counter? why?

   (a) 5 (b) 83 (c) 99 (d) 10

10. What is non-volatile memory?

11. Classify the memories.

12. Write the salient features of ROM.

13. Explain Ripple counter.

14. What is the difference between binary codes and BCD codes ?

15. What is (a) Octal system

(b) Hexadecimal system

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15marks. (3x15=45)

1. (a) Describe the combinational of logic and sequential logic.

(b) Using K-map realize the following expression using minimum number of gates.

$Y = \Sigma (1,2,3,4,5,7,9,11,13,15)$

2. Explain MoS static RAM cell

3. (a) Explain construction of a full subtractor using half subtractors.

(b) Explain in detail about S-R Latch

4. (a) Implement the following between expression using 8:1 multiplexer

$$f(A,B,C,D) = \overline{A}\,\overline{B}\,\overline{D} + ABC + \overline{B}CD + \overline{A}CD$$

(b) Explain in detail about floppy Disk and CD-ROM.

5. (a) Explain cache memory organization and virtual memory organization.

(b) For a 4-bit asynchronous counter evaluate the maximum clock frequency at which the counter can operate reliably. Assume the propagation delay of each flip flop to be 40 ns and width of strobe pulse to be 20 ns.

BC-23/1878

BCA (SEMESTER-II) EXAM.-2016

Organization Behaviour

Time : Three Hours
Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any Ten** questions. Each question carries 3 marks. 10×3=30

1. Explain type approach to personality development.

2. What are the methods of improving an individual perception.

3. Define attitude and state the process of attitude formation.

[P. T. O.

4. State the reasons of individual stress.

5. Explain the Skinne's reinforcement theory.

6. State the process of communication.

7. What are informal groups? Give examples.

8. Define leader..What role does he play?

9. What are the reasons for organisational politics?

10. Maintaining QWL in organisations is important, Why.

11. Explain the goal attainment approach to organisational effectiveness.

12. Why is organisational structure needed in an organisation?

13. What are proactive and reactive changes?

14. State the reasons behind employess grievances.

15. Explain the types of transaction under transaction analysis.

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. (3x15=45)

1. State the major OD intervention. According to you which OD intervention is the most effective and why

2. Define grievances. Explain the grievances settlement process.

3. Explain F.W. Taylor's contribution to organisational theory

4. Explain-
   (i) Span of controrl
   (ii) Delegation of authority

5. What is motivation?. Explain any two theories of employees motivation.

6. What is intergroup conflict? State its reasons and how can it be resolved.

BC-24/1879

BCA (SEMESTER-II) EXAM.-2016

Financial Accounting and Management

Time : Three Hours
Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any Ten** questions. Each question carries 3 marks. 10×3=30

1. Examine the relationship between solvency and profitability ?

2. Write a brief note on comparative statements?

3. Explain the importance of application of a computer in accounting ?

4. What are the Accounting principles? Describe their nature and limitations.

[P. T. O.

5. Pass journal entries for the following .
   1. Goods valued Rs.5,000 were purchused on credit, received and taken into store but were not recorded in the books.
   2. Sold old machinery to Ashok for Rs..20,000 the book value being Rs.18,000
   3. Paid outstanding wages Rs.8,000.
   4. Sold to AVI at a Trade discount of 10% and cash discount of 5% goods of the list price of Rs.30,000. He paid 40% in cash.
   5. Purchased from Babita goods at a list price of Rs.10,000 at 20% Trade discount and 5% cash discount. Cash were paid upto 60% of the amount.

6. Describe the method of preparation of trial balance ?

7. Compare Horizontal and Vertical Analysis ?

8. Give any three managerial uses of fund flow management.

9. From the following information calculate net profit and cash from operations by using actual concept.

	Rs
Gross Profit	30,000
Expenses paid (office and selling exps)	10,000
Interest received	2,000

Expenses paid includes Rs1000 paid for the next year while interest of Rs. 500 has become due but it has not been received so far.

10. Discuss in brief Long term sources of Finance.

11. What do you understand by Ledger. Explain with example .

12. Explain cost of capital.

13. Write short note on capital structure.

14. Write a short note on current ratio.

15. Discuss the Financial Accounts with Adjustments.

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. (3x15=45)

[P. T. O.

1. Calculate cash from operations from the following information.

	₹
Net Profit for the year 2013	50,000
Accrued Income on Jan1, 2013	2,000
Prepaid Expenses on Jan 1, 2013	3,000
Accrued (outstanding) income on Dec 31, 2013	4,000
Prepaid Expenses on Dec 31, 2013	5,000

2. Prepare an imaginary Journal, Trial Balance and Ledgers.

3. Discuss the determinants of working capital.

4. Discuss the financial statements in details.

5. Explain Ratio analysis with any five Ratio.

6. Discuss any ten accounting standards with their advantages.

BC-1876

BCA (Semester-II) Examination–2017

Programming C

Time : Three Hours
Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10x3=10

1. Write the guideline to use printf() function in C-program.

2. Explain the two way selection (if, if-else, nested if else) in C-language with syntax.

3. What is function parameter? Explain different types of parameters in C-functions.

4. What is a pointer? Explain how the pointer variable declared and initialized?

[P. T. O.

5. What are the preprocessor directives?

6. What are keywords? List the rules for naming a variable in C.

7. What is the output of the following program

```
int M = 1, n=2;
for (j=1; j<=2; j++)
{
M = M+1;
n = n * j;
printf ("%d\t%d\t;M,n);
}
```

8. Determine the value of following expression -

```
int i = 8, j = 5;
(3 * 9 - 2 *j) % (2 * i - j);
```

9. Write a C-program to display the largest element in the matrix.

10. Write a C-program to swap two numbers using pointer and function.

11. What is logical error?

12. What is the use of typedef?

13. What is unary operator?

14. Enlist different formate specifiers in C.

15. What is the purpose of keyword void?

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15x3=45

1. (i) Explain in detail bitwise operator with example.

   (ii) Explain in detail call by value and call by reference with example.

2. (i) Explain dynamic memory allocation and releasing dynamically allocated memory.

   (ii) State and explain various modes of file opening and file closing.

3. Explain any three of the following with example :

   (a) fprintf ()

   (b) fscan f ()

   (c) get c ()

   (d) feof ()

[P. T. O.

(ii) What is the advantages of union in C.

4. Design and devlop a C program to reverse of an integer number and check whether it is PALENDROME OR NOT.

5. Write a C function is prime (num) that accept and integer argument and return 1 if the argument is prime, a 0 otherwise-write a C programm that invokes this function to generate prime numbers between the given range.

6. Write a C program to maintain a record of n students details using an array of structures with four fields (Roll number, marks, and Grade) each field is of an appropriate data type, print the marks of students given name as input.

BC-1877

BCA (Semester-II) Examination–2017

Digital Electronics & Comp. Organization

Time : Three Hours

Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10x3=10

1. Convert the following numbers :

   (i) convert $(54)_{10}$ to radix 4.

   (ii) $(22.64)_{10}$ to hexa decimal.

   (iii) $(110.1)_2$ to decimal.

2. What is meant by radix (or base) of a number system?

3. What is the speciality of NAND and NOR gates?

[P. T. O.

4. Prove the following Boolean expression

$$A + \bar{A}B = A + B$$

5. Convert the expression

Y = (A+B) (A+C) (B+$\bar{C}$) into standard Po5 form.

6. What is a truth table?

7. What is multiplexing?

8. What is full adder?

9. Explain modes of operation of a shift register.

10. Differentiate synchronous and asynchronous sequential circuits.

11. What is the volatile memory?

12. Write the classification of ROM.

13. Explain about memory size.

14. Explain cache memory.

15. Explain encoder circuit.

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15x3=45

1. (a) For the logical expression given below, draw the K-map and obtain the simplified logical expression.

$$Y = \sum mc\ (1,5,7,9,11,13,15).$$

(b) Implement the following boolean function using 8:1 multiplexer.

$$f(A,B,C,D) = \sum m\ (2,4,5,7,10,14)$$

2. (a) Draw a neat diagram of master slave J-K. Flip flop. Explain how race around condition is avoided using master slave J-K flip flop?

(b) Give reason why D-flip-flop is called as data latch.

3. (a) Simplify the following three variable logic expression

$$Y = \Pi M\ (1, 3, 5).$$

[P. T. O.

(b) Differentiate between ROM and RAM.

4. (a) Draw full adder with the help of two half adder.

(b) Design of a 3-b bit synchronous counter using T-flip-flop.

5. (a) Explain PROM and EPROM in detail.

(b) Explain registers and shift registers in detail.

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BC-23/1878

BCA (Semester-II) Examination–2017

Organisational Behaviour

Time : Three Hours *Maximum Marks :* **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10x3=30

Write short notes on any ~~seven~~ ten. of the following :

1. Attitude.
2. Personality
3. Causes of Conflict
4. Perception
5. Empowerment
6. Need for Groups

[P. T. O.

7. Maslow's theory of Need Hierarchy.

8. Difference between group and Team.

9. Different type of powers

10. Cross cultural communication

11. Delegation of authority.

12. Locus of Control.

13. Type A and Type B Personality

14. Theory X and Y.

15. Difference between grievance and complaint.

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15x3=45

1. Describe the leadership, its importance and leadership styles. Does the personality type affect the leadership style?

2. Describe Motivation with illustrations. Describe any two theories of motivation.

3. Define Stress. What are the causes of stress? Describe in detail the stress management methods.

4. (a) Define Organisational Behaviour. State its importance and scope.

   (b) Define Organisation Culture. How leaders can shape organization culture?

5. Define Conflict. What are the causes of Conflict? Also describe various type of conflicts and various strategies and techniques to manage conflicts.

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BC-24/1879

BCA (Semester-II) Exam. – 2017

Financial Accounting and Management

Time : Three Hours

Maximum Marks : **75**

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10x3=30

1. What are the accounting concept? Explain any two concept in short.

2. What is a funds flow statement? Examine its Managerial uses.

3. What is meant by final Accounts? Explain its features in brief.

[P. T. O.

4. What is proper journal? What records are made in it?

5. Define application of computer in accounting.

6. What are objectives of Financial Management?

7. From the following information find out the Economic Order Quantity (EOQ) and the number of orders placed in the year.

Annual Consumption	120 unit
Buying Cost per order	Rs. 20
Price per unit	Rs. 100

Storage and carrieng cost as a percentage average inventory 12%.

8. Prepare the specimen of cash flow statement by indirect method. Give the suitable example in figure with adjustment.

9. Explain the concept of cost of Capital.

10. Discuss double entry system with suitable example.

11. Prepare a two-column cash book from following transactions.

2016		
Jan. 1	Cash in hand	4,000
Jan. 6	Cash prepare	2,000
Jan. 7	Wages paid	400
Jan. 10	Cash sales	6,000
Jan. 11	Received cash from Suresh	1,980
	Discount allowed	20
Jan. 19	Cash paid to Mani	2,470
	Discount Received	30
Jan. 25	paid to Radhey	450

12. Indian plastic make plastic buckets. An analysis of their accounting records

Variable cost per bucket	Rs. 25
Fixed Cost	Rs. 60,000 for the year
Capacity	2500 buckets per year
Selling prices per bucket	Rs. 75

Find out the break even point

13. Differentiate between explicit & implicit cost.

14. With the following ratio and further information given below prepare a Trading Account. Profit and loss account and a balance sheet of Shri 'N'

(i) Gross profit ratio 25 percent

(ii) Net profit/Sales 20 percent

(iii) Stock turnover ratio 10

(iv) Net profit/Capital 1/5.

(v) Capital to total liabilities 1/2.

15. Prepare the journal entry in the book of Mohan from the following transactions :

(i) He started business with cash at Rs. 40,000, building at Rs. 30,000 and creditors at Rs. 15,000. (being mohan started business)

(ii) He sold goods of Rs. 50,000 at 10% trade discount. being mohan sold at 6

(iii) He sold good of Rs. 50,000 for Rs. 55,000. Being mot

(iv) Rent paid in advance is Rs. 500. Be mohan paying rent

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15x3=45

1. Give a specimen of balance sheet of a company as per company Act 1986.

2. What do you understand by accounting? Explain different accounting principles.

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Comment on "Every debit has got a credit and vice versa".

3. From the following balance sheet of ABC Ltd. prepare schedule of change in working capital and a funds flow statement.

Liabilities	2013 (₹)	2014 (₹)	Assets	2013 (₹)	2014 (₹)
Capital	63,000	1,00,000	Cash	15,000	20,000
Long term borrowings	50,000	60,000	Debtors	30,000	28,000
			Stock in Trade	55,000	72,000
Trade Creditors	42,000	39,000			
Bank overdraft	35,000	28,000	Land & Building	80,000	1,00,000
Outstand Expenses	5,000	6,000	Furniture	15,000	10,000
	1,95,000	2,30,000		1,95,000	2,30,000

4. Differentiate between fund flow statement and cash flow statement.

5. Describe the concept of Trade Balance, Final Account.

6. From the data, calculate :

(i) Gross Profit Ratio

(ii) Net profit Ratio

(iii) Return on total Assets

(iv) Inventory turnover

(v) Working Capital turnover

(vi) Net worth to debt

Sales	25,20,000	Other Current Assets	7,60,000
Cost of Sale	19,20,000	Fixed Assets	14,40,000
Net Profit	3,60,000	Net Assets	15,00,000
Inventory	8,00,000	Debt	9,00,000

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BC - 25/1880

BCA (IInd Semester) Examination–2017

Mathematics-II

Time : Three Hours *Maximum Marks : 75*

Note : Attempt questions from all sections.

SECTION - A

(Short-answer Type Questions)

Note : Attempt **any ten** questions. Each question carries 3 marks. 10x3=30

1. Prove that if (X, R) is a poset then $(X, \overline{R})$ is also poset.

2. Prove that

$$A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$$

3. Find the range of the function

$$f(x) = \frac{1}{2 - Cos\,3x}$$

4. Draw the graph of $f(x) = x^2$.

5. Define complete Lattice.

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6. If $u = e^{xyz}$ then

$$\frac{\partial^3 u}{\partial x \partial y \partial z} = \left(1 + 3xyz + x^2y^2z^2\right)e^{xyz}$$

7. Discuss the maximum & minimum of

$$u = x^2 + y^2 + 6x + 12$$

8. Find the coordinates of the point where the line joining the points (2, –3, 1) & (3, –4, –5) meets the plane 2x + y + z = 7.

9. Prove that the equation of the sphere which touches $4\left(x^2 + y^2 + z^2\right) + 10x - 25y - 4z = 0$ at (1, 2, –2) and passes through the point (1, 0, 0) is $\left(x^2 + y^2 + z^2 + 2x - 6y + 1 = 0\right)$.

10. Evaluate $\int_0^3 \int^2 xy\,(1 + x + y)\,dx\,dy$.

11. Find the equation of the sphere whose centre is (2, –3, 4) & which passes through the point (1, 2, –1).

12. Prove that A' – B' = B – A.

13. Change the order of integration in the double integral $\int_0^\infty \int_x^\infty e^{-y}/y\,dx\,dy$.

14. If A & B are two sets such that
$n(A) = 27, n(B) = 35$
& $n(A \cup B) = 50$ *find* $n(A \cap B)$

15. If $u = \log\left(\frac{x^4 + y^4}{x + y}\right)$ prove that

$$x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = 3.$$

SECTION - B

(Long Answer type questions)

Note : Attempt **any three** questions. Each question carries 15 marks. 15x3=45

1. Evaluate

$$\int_c \int_b \int_a (x^2 + y^2 + z^2)\, dx\, dy\, dz$$

2. Show that the lines

$$\frac{x+1}{-3} = \frac{y-3}{2} = \frac{z+2}{1} \;\&$$

$$\frac{x}{1} = \frac{y-7}{-3} = \frac{z+7}{2}$$

intersect. Find the co-ordinantes of the point of intersection & the equation to the plane containing them.

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3. If $u = \log\left(x^3 + y^3 + z^3 - 3xyz\right)$, show that

$$\left(\frac{\partial}{\partial x} + \frac{\partial}{\partial y} + \frac{\partial}{\partial z}\right)^2 u = \frac{-9}{(x + y + z)^2}$$

4. Define distributive Lattice & Prove that Homomorphism image of a distributive Lattice, is distributive.

5. If $f : X \to Y$ and A, B are two subset of Y then Prove that

$$f^{-1}(A \cup B) = f^{-1}(A) \cup f^{-1}(B)$$

6. Out of 880 students, 224 play cricket, 240 play hockey, 336 play basket ball, 64 play both basketball & hocky, 80 play cricket & basketball, 40 play hockey & Cricket, 24 play all the three games. How many donot play any game.