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Subject : Programming in C

Time : 3 Hours

Course: MCA
Full Marks : 70
Pass Marks: 28

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts –A, B & C**
- **Part-A** is compulsory.
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PART A

Q.1)   All questions are compulsory   (10x2=20)

a)   What is a nested loop?
b)   What is the difference between functions getch ( ) and getche ( ) ?
c)   Does 'x' differ from "x"? Justify.
d)   Explain any two string functions.
e)   What is an array?
f)   Explain primary data types used in C?
g)   Write a syntax of while loop?
h)   What is the difference between the expression "++a" and "a++" ?
i)   State any two advantages of function.
j)   Write a program to find largest between two numbers.

PART B

Q.2)   Answer any four: (4x5=20)

i)   What is the difference between while and do-while statement? Explain with suitable example.
ii)   Explain different data types used in C language?.
iii)   Explain the different types of storage classes.
iv)   What is the syntax of conditional operation statement? What is its function? Write a suitable program to explain it.
v)   Write a program to input three numbers and print the highest.
vi)   Differentiate between local variable and global variable

PART C

Answer any three: (3x10=30)

Q.3) Write a program to input 10 numbers and a search number and find whether the search number exists in the array using binary search.

Q.4) Write a program to input a numbers in 3 x 3 matrix and count the prime numbers in the array

Q.5) Write a program to display the following pattern

```
 1
 2  3
 4  5  6
 7  8  9  10
11 12 13 14 15
```

Q.6) Write a program in C to create a structure Emp having empCd, empname, department and salary as its member. Read the details for 10 employees and then display them.

Q.7) Write a program in C to evaluate the sum of the first n terms of the following series:
$$S = 1! + 2! + 3! + 4! + \text{------} + n!$$

The value of n should be taken as input from the user.

Q.8) Write a program in C to input a string and count the number of vowels and number of blank spaces in the string.

ARKA JAIN University, Jharkhand
1st Semester Examination – 2018-19

Subject : Digital Logic

Time : 3 Hours

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Full Marks : 70
Pass Marks: 28

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PART A

Q.1) **All questions are compulsory**

(10x2=20)

a) Define Universal Gates.
b) Define Multipler
c) When is a flip-flop referred to as a latch?
d) Give two advantages of RAM
e) Simplify AB + A'C+ BC = AB + A'C
f) Name the different types of RAM.
g) Add (1FFE) + (123A) =
h) Design OR gate using universal NOR gate
i) Define NOR Gate
j) Define Latches

PART B

Q2.   **Answer any four:**

(4x5=20)

i)   State De Morgan's Theorem. Explain with suitable example.
ii)   Differentiate between Cache memory and virtual memory
iii)   Differentiate between magnetic disk and magnetic tape
iv)   Write a note on ROM.
v)   Explain VLSI Programmable Logic Device with suitable diagram.
vi)   What is half adder? Explain with diagram and truth table.

PART C

Answer any three:

(3x10=30)

Q3) What is decoder? Draw the logic diagram of 2-to-4 line decoder with an enabled input constructed with NAND gates and its truth table.

Q4) Which are the registers used in basic computer organization? Write function of each register.

Q5) Explain Demultiplexer with suitable example.

Q6) Simplify the following equation using K-Map

$F(A,B,C,D)=\sum(0,2,5,7,8,10,13,15)$

Subject : Web Technologies

Course: MCA
Full Marks : 70
Pass Marks: 28

Time : 3 Hours

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PART A

Q.1)   **All questions are compulsory**

   A] Multiple Choice Questions :   (10x1=10)

i. How can you open a link in a new browser window
   a. <a href="url" target="new">
   b. <a href="url" target="_blank">
   c. <a href="url".new>
   d. None of these

ii. Which of the tag is used to create a number list
   a.
   b.
   c.   and
   d.   None of these

iii. From which tag descriptive list starts
   a.   <tr>
   b.   <dd>
   c.   <dl>
   d.

iv. JavaScript statements are executed by ---
   a.   Server
   b.   Browser
   c.   Compiler
   d.   JVM

v. <script type="text/javascript">
   {
       document.write("<h1> This is heading1</h1>") ;
       }
   </script>
   What will be the Output
   a.   Will not print anything

b. None of these

c. "This is heading1" will be printed in h1 heading.

d. Just "This is heading1" will be printed because HTML tags are not allowed.

vi. ---- selectors, which are used to specify a rule to bind to a particular unique element.
   a. Id
   b. Class
   c. Tag
   d. Both (b) and(c)

vii. In Css what does " **color:red**" can be called as
   a. Selector
   b. Rule
   c. Declaration
   d. None of the above

viii. In Css what does "font-size" can be called as
   a. Selector
   b. Rule
   c. Property
   d. Property-name

ix. . JavaScript is ---- scripting language
   a. Server side
   b. Browser side
   c. Both a and b
   d. None of these

x. JavaScript can be written
   a. directly into HTML pages
   b. directly on the server script
   c. directly into JS file and included into HTML
   d. none of the above

B] Very Short question
   a) Define HTTP Protocol?   (5x2=10)
   b) What are the types of list supported by HTML?
   c) What is Magic Constant ?
   d) What are Style Sheets and their needs.
   e) < ?php
        $x=67;
      Print("variable is $x
");
      Print(" variable is $X
");

?> . Write the output.

PART B

Q.2)   **Answer any four:**   (4x5=20)

    i)   Differentiate between GET and POST method.
    ii)   What is property in Css.
    iii)   What is ISSET().
    iv)   Explain the types of Operators in JavaScript. Explain any one of the operators with example
    v)   Explain array in PHP? Give one simple example of Associative array
    vi)   Differentiate between HTTP and HTTPS?

PART C

Answer any three: (3x10=30)

Q.3) Describe PHP functions for sorting array in details.

Q.4) Write HTML code to show nested frame in the Web page..

Q.5) Write HTML list coding to display the following

Creating a Personal Information
Listing the name and address of Students
Sunita Saxena
    Flat bo.303, shipra Enclave, Gaziabad
Amitabh Acharya
  H.No-125, Kalkaji, Delhi
Rohit Jindal
 Flat no: 143, South Ext, Delhi

Q.6) Explain PHP String functions in details with proper examples.

Q.7) Write JavaScript Program to display even numbers from 1 to 30.

Q.8) Write HTML code to display the following.

Grouping of Controls

Personal Information: [_____]

Name   [_____]
Email   [_____]
Favorite Color:
Blue ○   Green ○   Yellow ○

Health Information:
~~Height~~ [___] ~~Weight~~ [___]

Subject : Statistics & Probability

Course: MCA
Full Marks : 70
Pass Marks: 28

Time : 3 Hours

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- **Part-D** is compulsory

PART A

Q1.)   **All questions are compulsory:-**

A] Objective Answer Type   (5x1=5)

i) Arithmetic mean of continuous series in short –cut method will be

   a) $\bar{x} = \frac{\Sigma x}{N}$

   b) $\bar{x} = A + \frac{\Sigma fd}{N}$

   c) $\bar{x} = \frac{\Sigma fm}{N}$

   d) None of these

ii) $p_r^n = ?$

   a) $\frac{n!}{(n-r)!}$

   b) $n!$

   c) $) \frac{n!}{r!(n-r)!}$

   d) None of these

iii) A and B be the two events are said to be mutually exclusive events if

   a) $A \cap B = \emptyset$

   b) $A \cap B \neq \emptyset$

   c) $A \cup B = \emptyset$

   d) None of these

iv) coefficient of range can be defined as

   a) $\frac{L-S}{L+S}$

   b) $\frac{L+S}{L-S}$

   c) $\frac{L+S}{2}$

   d) None of these

v)The limit of Karl Pearson's correlation coefficient is

a) ± 1
b) ± 2
c) ± 3
d) None of these

(5x2=10)

B] Short Answer Type

i) What is meant by correlation?
ii) Define multiplication theorem of probability?
iii) Let A and B be the two events such that P(A)=1/2 ,P(B)=1/3 and P(A∩ B) find P($\bar{A}$ ∩ $\bar{B}$)?
iv) What do you mean by frequency distribution?
v) Define random variable?

PART B

(4x5=20)

Q2.)   Answer any four:

i) A card is drawn at random from a well shuffled deck of 52 cards. Find the probability of its being a spade or a king?

ii) From the following data compute arithmetic mean by direct method

Marks:	0-10	10-20	20-30	30-40	40-50	50-60
No of students:	5	10	25	30	20	10

iii) Compute the coefficient of quartile deviation from the following data

Marks:	10	20	30	40	50	60
No of students:	4	7	15	8	7	2

iv) From the following data find the value of median

Income:-	15000	15500	16800	18000	18500	17800
No of persons:	24	26	16	20	6	30

v) Four coins are tossed 160 times. the probability of getting head or tail is p=q=1/2 find out expect frequencies?

vi)Find the mean and variance of the no obtained on a throw of an unbiased die?

PART C

(3x10=30)

Answer any Three:

Q3.) calculate the Karl Pearson's coefficient of skewness for the following data:

No of rejects per operator:	21-25	26-30	31-35	36-40	41-45	46-50	51-50
No of operator:	5	15	28	42	15	12	3

Q4.) Calculate the coefficient of correlation between birth rate and death rate from the following data:

Birth rate : 24   26   32   33   35   30

Death rate: 15   20   22   24   27   24

Q5.) from the following data calculate (i) two regression coefficient (ii) coefficient of correlation (iii) regression equations:

Age of Husbands: 18   19   20   21   22   23   24   25   26   27

Age of wives: 14   16   16   18   18   19   20   20   21   21

Q6.) Find regression coefficient on the basis of following data:

$\sum X=50$, $X=5$, $\sum Y=60$ $Y=6$, $\sum XY=350$, variance of X=4 Variance of Y=9

Q7.) if the probability that an individual suffer a bad reaction from a bad reaction from a certain injection is 0.001 determine the probability that out of 2000 individuals.

i)   Exactly 3 individuals
ii)   More than two individuals
iii)   None
iv)   More than 1 individuals will suffers a bad reaction.

Q8.)   Bag I contains 3 red and 4 black balls while another Bag II contains 5 red 6 red balls. One ball is drawn at random from one of the bags and it is found to be red. Find the probability that it was drawn from bag II.

PART D

Q9.) If a fair coin is tossed 10 times, find the probability of   (5x1=5)

(i)   Exactly six heads
(ii)   Atleast six heads
(iii)   At most six heads

Subject : Professional Comm.	Course: MCA
	Full Marks : 70
Time : 3 Hours	Pass Marks: 28

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- **Part-D** is compulsory

PART A

Q1.)   All questions are compulsory:-

A] Objective Answer Type   (5x1=5)

i)   Motivational function in communication refers to …
   a) Informing subordinates what work is to be done
   b) Achieving peak performance.
   c) Motivating employees
   d) Giving feedback on message received.

ii) What is faulty decoding?
   a) Element of non verbal communication
   b) Background noise
   c) Exchange of message
   d) Function of communication.

iii) Which of the following does not come under official correspondence writing?
   a) Mails
   b) Quotation
   c) Encyclopedia
   d) Purchase order

iv) Grapevine comm. is known as …..
   a) Formal comm
   b) Written comm
   c) Non verbal comm
   d) none of the above

v) Précis writing is an exercise in ….
   a) delegation.
   b) compression.
   c) elaboration
   d) None of the above

B] Short Answer Type   (5x2=10)

    i)   Give salutation example for formal and informal letters?

    ii) Describe précis writing.

    iii) What is a brain storming session?

    iv) What is audio visual communication? Give examples.

    v) Define quotation.

PART B

Q2.)   **Answer any four:**   (4x5=20)

    i)   What are the essential elements for a good communication?

    ii) You work as a manager for GoAir – write a short narration on the company's success and performance. (6-7 lines)

    iii) Write Job description for IT Manager with minimum 4-5 yrs of experience.

    iv) What are the various elements of communication?

    v) What is group discussion & mention its characteristics?

    vi) How to prepare for a presentation.

PART C

    Answer any Three: (3x10=30)

Q3.) You went to withdraw money from ATM, the cash was not dispended but amount got debited from account. Write a complain letter to the bank.

Q4.) What is a meeting? Mention the purpose & types of meeting with examples

Q5.) Write a letter to your friend inviting her/him to your birthday party. Give details regarding the day, time, venue, etc. Add interesting details like theme, dress code, etc.

Q6.). Write a resume for the post of Sr. Lecturer – Technology department.

Q7.) You work with Tata Motors Pvt Ltd. as Sr. Manager-Finance. Write a resignation letter to your Head.

Q8.) Write a formal letter on requesting your team to be present for a sales budget meeting in the office at 9 am, 2nd Feb., 2019.

PART D

Q9.) (5x1=5)

A drop of water fell out of the cloud into the sea, and finding itself lost in such an immensity of fluid matter, broke out into the following reflection: 'Alas! What an inconsiderable creature am I in this prodigious ocean of waters: My existence is of no concern in the universe; 'I am reduced to a kind of nothing, and am the least of the works of God'. It so happened that an oyster which lay in the neighborhood of this drop chanced to gape and swallow it up in the midst of this his soliloquy. The drop, say the fables, lay a great while hardening in the shell, until by degrees it was ripened into a pearl, falling into the hands of a diver, after a long series of adventures, is at present that famous pearl which is fixed on the top of the Persian diadem.

Write the above paragraph in précis format.

ARKA JAIN University, Jharkhand

1st Semester Final Examination – 2018-19

Subject : Introduction to Management Functions

Time : 3 Hours

Course: MCA
Full Marks : 70
Pass Marks: 28

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PART A

Q1.) All questions are compulsory:-

A] Objective Answer Type   (5x1=5)

a. The following is (are) concerned with developing a pool of candidates in line with the human resources plan
   i) Development
   ii) Training
   iii) Recruitment
   iv) All of the above

b. Basic approach in employee's performance compares with their current performance to
   i) set standards
   ii) performance in previous years
   iii) performance in last job
   iv) none of above

c. Which one of the following elements is not the marketing mix?
   i) Price
   ii) Product
   iii) Storage
   iv) Promotion

d. The purpose of promotion is to
   i) get the product to ultimate consumer
   ii) stimulate demand
   iii) create supply
   iv) increase employment

e. Financial Management is mainly concerned with:
   i) Arrangement of funds
   ii) All aspects of acquiring and utilizing means of financial resources for firm's activities
   iii) Efficient management of every business
   iv) None of the above

B] Short Answer Type (5x2=10)

  i)   Discuss any two internal sources of recruitment.
  ii) Define Market.
  iii) What is service marketing? Give example.
  iv) What is meant by financial ratios?
  v)   Name the major financial statements?

PART B

Q2.)   Answer any four: (4x5=20)

  i)   Explain any one off-the job training method.
  ii) Differentiate between Recruitment and selection.
  iii) What are the different Levels of Product?
  iv) What is Marketing Mix?
  v)   What is working capital?
  vi) What are the sources of funds for a business?

PART C

Answer any Three: (3x10=30)

Q3.) "Performance Appraisal is an effective tool to improve performance of employees". Comment.
       Discuss any two methods of performance appraisal.

Q4.) Discuss various types of employee movements and employee separations in detail.

Q5.) What is Marketing Plan?

Q6.) Describe Product Life Cycle.

Q7.) What Is The Difference Between Balance Sheet And Profit & Loss Account?

Q8.) What is cost of capital? Write its importance in financial decisions.

PART D   (5x1=5)

Q9.) Friends Stationery Products a little known copy manufacturing firm has been launched to provide Low Priced Good Quality Copies for students' community in India. The Company aims to be the "First Choice" of Target Community in the mindset of its customers.
But as soon as the Copies were sent in the market, it came under a cloud of controversies with widespread skepticism raised about its price and sustainability. The company soon became the rival to existing stationery supplier community and they questioned its unrealistic pricing and accusing it of perpetrating a fraud. However, the company vowed to keep its promise of continuing with the project and delivering the copies at the promised prices. Whether it could keep its word remained to be seen.

Suggest Your Marketing Plan to make the Project Success.