

Total No. of Questions : 5]

SEAT No. :

**PB1460**

**[6226]-301**

[Total No. of Pages : 2

**S.Y.B.B.A.**

**COMPUTER APPLICATION**

**CA - 301 : Digital Marketing**

**(CBCS 2019 Pattern) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Neat diagrams must be drawn wherever necessary.*

**Q1)** Attempt any Eight of the following:

**[8×2=16]**

- a) Explain On Pages SEO and Off Page SEO.
- b) Write any two advantage of CRM model.
- c) What is Cost Control?
- d) Write any two advantages fo Social Media.
- e) Define MS Expression Web.
- f) What is Facebook Ads?
- g) What is Content Management.
- h) Define Digital Display Marketing.
- i) What is Mobile Marketing?
- j) Explain Website.

**Q2)** Attempt any four of the following.

**[4×4=16]**

- a) What is social media marketing? Give its advantages and disadvantages.
- b) What is MS Expression web? Write the features of MS Expression?
- c) Explain type of E-Commerce in detail.
- d) Write the process of SEO.
- e) Explain Target group analysis.

**P.T.O.**

**Q3)** Attempt any four of the following.

**[4×4=16]**

- a) Write down the steps to create a Facebook Page.
- b) Explain type of E-Mail Marketing.
- c) Define resource planning and its type.
- d) Write down the benefits SEO.
- e) Elaborate various strategies to optimize websites.

**Q4)** Attempt any four of the following.

**[4×4=16]**

- a) Write difference between traditional SEO and SEM.
- b) Explain Pay-per-click advertising.
- c) Define CMS and its type.
- d) What is websites design. Write down the steps to design website.
- e) Define CRM and its components.

**Q5)** Write a short notes any two of the following.

**[2×3=6]**

- a) SWOT Analysis.
- b) Instagram.
- c) Twitter.



Total No. of Questions : 5]

SEAT No. :

PB-1461

[Total No. of Pages : 2

[6226]-302

**S.Y. B.B.A. (Computer Application)**

**CA - 302: DATA STRUCTURE**

**(2019 Pattern) (CBCS) (Semester-III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

**Q1) Attempt any Eight of the following: (Out of Ten)**

**[8 × 2 = 16]**

- a) What are the different types of graph?
- b) How to measure performance of an algorithm?
- c) What is a circular queue?
- d) List out different types of data structures
- e) What is the level of a node?
- f) What is meant by tree traversal?
- g) What is sorting? State its techniques
- h) What is DFS?
- i) What are the advantages of a linked list over an array?
- j) What is a binary tree? List its types.

**Q2) Attempt any FOUR of the following: (Out of Five)**

**[4 × 4 = 16]**

- a) What is a height-balanced tree? Explain RR and RL rotations with an example.
- b) Explain bubble sort technique with an example
- c) Explain BFS with example.
- d) What is the queue? Explain different operations performed on queue.
- e) Explain Binary search method with an example.

**P.T.O.**

**Q3) Attempt any FOUR of the following: [Out of Five]**

**[4 × 4 = 16]**

- Write a function for preorder traversal of the tree.
- Write a C program for static Implementation of stack.
- Write a function to delete the first node from a singly linked list.
- Write a function to create a doubly circular linked list.
- Write a program to dynamically allocate memory for an array of integers and then print the elements of the array.

**Q4) Attempt any FOUR of the following: [Out of Five]**

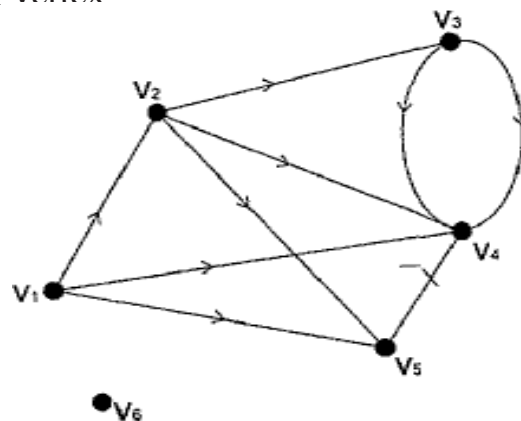
**[4 × 4 = 16]**

- What is the priority queue? Explain it with an example.
- Construct an AVL tree for given data: WED, TUE, MON, SAT, THUR, FRI
- Sort the following data by using quick sort. 10, 5, 75, 62, 49, 58
- Construct Binary search tree of following data 10, 12, 5, 4, 20, 8, 7, 15, 13
- Write a 'C' program for dynamic implementation of stack.

**Q5) Write any two of the following: (Out of three)**

**[2 × 3 = 6]**

- Convert the following expressions into prefix
  - $(A+B)*(C-D)$
  - $P + (Q*R)(S-T)$
- Define the following terms
  - Directed graph
  - Parent node
  - Complete binary tree
- What is degree of vertex? Find in degree & out degree of following graph for each Vertex



Total No. of Questions : 5]

SEAT No. :

**PB-1462**

[Total No. of Pages : 2

**[6226]-303**

**S.Y. B.B.A.(C.A.)**

**CA-303 : SOFTWARE ENGINEERING**

**(2019 Pattern) (CBCS) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*

**Q1) Attempt any EIGHT of the following :**

**[8 × 2 = 16]**

- a) What is system?
- b) What are the types of system testing?
- c) Define data dictionary.
- d) What is SRS?
- e) Define an Entity.
- f) What is process?
- g) What are the advantages of Prototyping?
- h) What is feasibility study?
- i) What is Software Maintenance?
- j) What is module?

**Q2) Attempt any Four of the following :**

**[4 × 4 = 16]**

- a) Differentiate between forward Engineering and Reverse Engineering.
- b) Explain Functional and non-functional testing.
- c) Explain the various components of system.
- d) Explain in brief about Software Engineering.
- e) Explain fact finding methods in brief.

**P.T.O.**

**Q3) Attempt any Four of the following :**

**[4 × 4 = 16]**

- a) Draw decision table and decision tree for following case: A college has following categories if the employees :
  - i) Teaching staff
  - ii) Non-teaching staff
  - iii) Research staff
  - I) In -case of teaching staff, if staff has experience of 7 or more years, then he or she gets the bonus of Rs. 10000 every year.
  - II) If staff has experience of  $\geq 5$  and  $< 7$  years then he or she gets the bonus of Rs. 7000 every year.
  - III) Rs. 5000 otherwise.

Non-teaching staff gets the bonus of Rs. 5000 per year,  
research staff gets the bonus of Rs. 10000 per year.
- b) What is coupling? Give the types of coupling.
- c) Draw ER-Diagram for “Customer order system”.
- d) Explain elements of Data flow diagrams.
- e) Explain Requirement elaboration in detail.

**Q4) Attempt any Four of the following :**

**[4 × 4 = 16]**

- a) Draw FDD for employee self-service system.
- b) State various quality factors stated by Mc-Call.
- c) What is SDLC Describe its phases
- d) Explain spiral model in detail with neat diagram.
- e) Design a screen O/P layout for Student’s Profile.

**Q5) Write a short note on any Two of the following :**

**[2 × 3 = 6]**

- a) Interview
- b) RAD
- c) Software Maintenance.



Total No. of Questions : 5]

SEAT No. :

**PB-1463**

[Total No. of Pages : 2

**[6226]-304**  
**S.Y. B.B.A. (C.A.)**  
**CA - 304 : ANGULAR JS**  
**(2019 Pattern) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*

**Q1) Answer the following (Any EIGHT) :**

**[8 × 2 = 16]**

- a) What is AngularJS?
- b) Explain ng-app directives.
- c) What is SPA.
- d) Explain Two-way data binding.
- e) What is controller?
- f) Explain \$http Services.
- g) What is AJAX?
- h) Write name of any two Editors used for AngularJS.
- i) Explain \$timeout service.
- j) Explain ng-repeat directives with example.

**Q2) Attempt any FOUR of the following :**

**[4 × 4 = 16]**

- a) Explain MVC architecture in detail.
- b) Write angularJs program for multiplication of two numbers.
- c) Explain scope hierarchy in detail.
- d) Write an AngularJS program to display the 4 students details in table format(using ng-repeat directives use array to store data).
- e) Explain Custom filters with example.

**P.T.O**

**Q3) Attempt any FOUR of the following :**

**[4 × 4 = 16]**

- a) What is Module? Write advantages of Module?
- b) Explain lowercase and uppercase filter with example.
- c) Write a program to demonstrate use of ng-controller.
- d) Explain \$document service, \$log service and \$root service in brief.
- e) Give the difference between AngularJS and Javascript.

**Q4) Attempt any FOUR of the following :**

**[4 × 4 = 16]**

- a) Write a program to display name, qualification and address using MVC architecture.
- b) What are the most common directives used in AngularJS applications.
- c) What is Module life cycle?
- d) Explain AngularJS Data binding.
- e) Write a AngularJS program to create service for finding factorial of a number.

**Q5) Attempt any TWO of the following :**

**[2 × 3 = 6]**

- a) Dependency Injection.
- b) Event Handling.
- c) Custom Directives.





Total No. of Questions : 5]

SEAT No. :

**PB-4382**

[Total No. of Pages : 2

**[6226]-305**

**B.B.A. (Computer Application)**

**CA - 304 : PHP**

**(2019 Pattern) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer all questions.*
- 2) Figures to the right indicate full marks.*

**Q1) Attempt any Eight (out of Ten) :**

**[8 × 2 = 16]**

- a) Describe echo statement in PHP.
- b) How to concatenate two strings in PHP?
- c) How to declare variable in PHP?
- d) Which are the methods to submit form?
- e) What is the purpose of break statement?
- f) Explain \$ - SERVER?
- g) Explain split ( ) function in PHP.
- h) What is validation?
- i) What is the use of print\_r ( )?
- j) Explain difference between static and dynamic website.

**Q2) Attempt any Four (out of Five) :**

**[4 × 4 = 16]**

- a) What is the difference between for and for each in PHP?
- b) What is a session in PHP? Explain it.
- c) Write a PHP Script to display the total and percentage of Marks of Subjects (Out of 100) Data Structure, Digital Marketing, PHP, SE and Big data.
- d) Explain cookies in PHP.
- e) Write a PHP Program to check whether Enter age from user is allowed for vote or not.

**P.T.O.**

**Q3) Attempt any Four (out of Five) :**

**[4 × 4 = 16]**

- a) What is the difference between GET and POST method?
- b) Explain if \_\_\_\_\_ then \_\_\_\_\_ else in PHP.
- c) What are data types of MySQL? Explain with example.
- d) Write a PHP function to calculate factorial of a number using recursion.
- e) Write a PHP Script to create a class Fruit that contains data members as Name, Color and Price. Write a member function to accept and display details of Fruit.

**Q4) Attempt any Four of the following. (out of Five)**

**[4 × 4 = 16]**

- a) What is function in PHP? Explain with example.
- b) What is inheritance in PHP? Explain using example.
- c) Write a menu driven program in PHP to display arithmetic operations.
- d) Write a program to illustrate sending email through PHP.
- e) Write a PHP program to print greatest number among given 3 numbers.

**Q5) Write a short note on any Two (out of Three) :**

**[2 × 3 = 6]**

- a) Class and object
- b) Radio button and checkbox
- c) Explain Structured Query Language



Total No. of Questions : 5]

SEAT No. :

**PB-1464**

[Total No. of Pages : 2

**[6226]-306**  
**S.Y. B.B.A. (C.A.)**  
**CA - 305 : BIG DATA**  
**(2019 Pattern) (CBCS) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

**Q1) Attempt any EIGHT of the following.**

**[8 × 2 = 16]**

- a) What is big data?
- b) What is supervised learning?
- c) What is population?
- d) Define sample.
- e) What is WEKA?
- f) What is KNN?
- g) Define SVM.
- h) What is the use of histogram?
- i) What is EM algorithm?
- j) What is R?

**Q2) Attempt any FOUR of the following.**

**[4 × 4 = 16]**

- a) Explain the types of Data Analytics.
- b) What is probability? Explain its types.
- c) Explain Association rule mining.
- d) Explain applications of Apriori algorithm.
- e) Explain types of cluster analysis.

**P.T.O**

**Q3) Attempt any FOUR of the following.**

**[4 × 4 = 16]**

- a) Explain types of regression models.
- b) What is digital data? Explain its types.
- c) Explain five applications of Machine Learning.
- d) State advantages and disadvantages of SVM.
- e) Explain Decision tree with example.

**Q4) Attempt any FOUR of the following.**

**[4 × 4 = 16]**

- a) Explain Naive Bayes with the help of example.
- b) Explain applications of big data.
- c) Write an R program to sort vector in ascending and descending order.
- d) Write an R program to create a simple bar plot of five subject's marks.
- e) Write an R program accept any year is input and check whether the year is leap or not.

**Q5) Write a short note on any TWO of the following.**

**[2 × 3 = 6]**

- a) Data Science.
- b) Data Visualization.
- c) Data Frames.



Total No. of Questions : 5]

SEAT No. :

**PB-1465**

[Total No. of Pages : 2

**[6226]-307**

**S.Y. B.B.A. (C.A.)**

**CA - 305 : BLOCK CHAIN  
(2019 Pattern) (Semester - III)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

**Q1) Attempt any eight of the following : (out of ten)**

**[8 × 2 = 16]**

- a) What is Smart Contract?
- b) What is Solidity?
- c) Explain Truffle in Ethereum.
- d) What is Ledger?
- e) Explain Digital Signature.
- f) Explain Cryptography.
- g) What is Hashing?
- h) What is Genesis Block?
- i) What is Mist in Blockchain?
- j) What is Digital Token?

**Q2) Attempt any Four of the following : (out of five)**

**[4 × 4 = 16]**

- a) Explain components of Blockchain.
- b) What is EVM? Explain Ethereum network.
- c) Differentiate between DBMS and Blockchain.
- d) Explain working of hash function.
- e) Explain lifecycle of Blockchain.

**P.T.O**

**Q3) Attempt any Four of the following : (out of five)**

**[4 × 4 = 16]**

- a) Explain structure of Blockchain.
- b) Explain Byzantine Fault Tolerance (BFT) in detail.
- c) Explain Hyperledger Fabric in detail.
- d) Write an Ethereum application in JavaScript for HELLO World contract.
- e) Write a blockchain application in JavaScript for the creation of Transaction block for the account holder.

**Q4) Attempt any Four of the following : (out of five)**

**[4 × 4 = 16]**

- a) Explain DApps in details.
- b) Explain P2P Payment Gateway in brief.
- c) Explain types of network
- d) Write an Ethereum application in JavaScript for smart contracts.
- e) Write a JavaScript code for the implementation of block chain technology.  
(At least two block)

**Q5) Attempt any Two of the following : (out of three)**

**[2 × 3 = 6]**

- a) Explain advantages of Blockchain.
- b) What is Web3?
- c) Define following term :
  - i) Public Key
  - ii) Private Key

