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B.Tech. Degree II Semester Regular/Supplementary Examination in Marine Engineering September 2021

19-208-0205- COMPUTER PROGRAMMING (2019 Scheme)

Time: 3 Hours

Maximum Marks: 60

(5×15=75)

- I. (a) What is an operating system? What are its functions? Name any two operating systems. (10)
- (b) What is a CPU? Briefly explain. (5)
- OR**
- II. (a) Briefly explain LAN, MAN and WAN. (8)
- (b) What is virtual memory? Explain its purpose and how it helps in improving the efficiency of the system. (7)
- III. (a) Explain the difference between break and continue using a suitable example. (7)
- (b) What are the various operators in C. Explain their precedence and associativity. (8)
- OR**
- IV. (a) Give one example each for entry controlled and exit controlled loop and explain the difference between the two. (8)
- (b) What is an if-else ladder? Explain with a suitable example. (7)
- V. (a) Explain the difference between static and auto storage class with a suitable example. (8)
- (b) Write a program to search for a given number using binary search method. Also explain the working of binary search method. (7)
- OR**
- VI. (a) What are the various parameter passing mechanisms? (8)
- (b) What is recursive function? Write a program to find the factorial of a given number using recursive function. (7)
- VII. Write the SQL queries for the following based on the tables Customer shown below.
- CUSTOMERS**
- | Customer ID | C Name | Country | Postal Code |
|-------------|--------|---------|-------------|
| | | | |
- (a) Display the customer ID and Customer Names of the customers from the country Sweden. (2)
- (b) Display the Customer Names and postal code of the customers whose postal code starts with 6. (data type of postal code is varchar) (2)
- (c) Display all the customer names of customers who are either from the country Brazil or Austria. (2)
- (d) Add a new customer with details: Customer ID: 6060, Customer Name: Harris Newton, Country: Austria, Postal Code: 8010. (2)
- (e) Change the country of customer with customer ID 8034 to 'India'. (2)
- (f) Delete the record with Customer ID 3552. (2)
- (g) Delete the column Postal Code from the table Customers. (2)
- (h) Delete the table customers. (1)

(P.T.O)

OR

- VIII. Explain the following terms in brief:
- (a) Polymorphism (5)
 - (b) Data encapsulation (5)
 - (c) Inheritance (5)
- IX. (a) What is a structure? How is it different from union. Write a suitable program to show the difference between the two. (8)
- (b) What is array of structure? Give an example. (7)
- OR
- X. (a) What is fseek? What is it used for? (7)
- (b) Briefly describe the steps for file reading with a suitable example. (8)
