

## COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

### B.TECH. DEGREE II SEMESTER EXAMINATION IN MARINE ENGINEERING JUNE 2020

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

Time: 2hrs 30 Minutes [30 Minutes for Answering and Scanning/Uploading the page of the Answer Sheet per module]

Max. Marks: 10 per module

#### INSTRUCTIONS

1. You have to be available in Google Meet on demand by the faculty.
2. You have to share your 'live location' to the faculty before uploading the answer sheet.
3. You have to answer only one question per module.
4. Answer may not exceed one page of an A4 size paper in a standard handwriting, as far as possible.
5. If at all an answer goes beyond one page, (due to your handwriting) another page can also be used. In such a situation, the page number should be given as 1/2, 2/2.
6. You have to put dated signature along with Register Number, Subject Code, Module/Group Number (as given in the Question Paper) in each page.
7. You have to put the Question Number correctly.
8. After answering the question, you have to scan and upload the answer page.

#### MODULE - I

(Answer *ANY ONE* question)

- I(1). (a) What is ROM? What are the different types of ROM? (5)  
(b) What is cache memory? What kind of memory is used as cache? Where is it located? (5)

#### OR

- I(2). (a) What is Operating System? What are its functions? (5)  
(b) Draw and explain bus and star topology. What are their advantages and disadvantages? (5)

**MODULE - II**

(Answer **ANY ONE** question)

- II(1). (a) What is typecasting? What is implicit and explicit typecasting? (5)  
(b) Using typecasting, write a program to convert temperature in Fahrenheit to Celsius. [  $C = \frac{5}{9}(F - 32)$  ] (5)

**OR**

- II(2). (a) What are increment operators, relational operators and conditional operators? What are their precedence and associativity? (5)  
(b) Using a do-while loop find the LCM of two given numbers. (5)

**MODULE - III**

(Answer **ANY ONE** question)

- III(1). (a) Using a function, find the first 12 elements of the fibonacci series. (8)  
(b) What is recursive function? (2)

**OR**

- III(2). (a) What is static storage class? Write its features and an example. (5)  
(b) Write a program to find the transpose of a given matrix of order  $3 \times 5$ . (5)

**MODULE - IV**(Answer *ANY ONE* question)

- IV(1). Write the SQL query for the following based on the tables Sales and Products shown below: (10)

**Sales**

S#	SName	City
115	Kashyap	Lucknow
123	Nikhil	Chennai
134	Ahmed	Kochi
156	Jerin	Banglore
167	Kiran	Mumbai
170	Vishal	Hyderabad
187	Nirmal	Jaipur

**Products**

P#	PName	S#	Price
334	Running shoes	115	3499
345	Backpack	170	1600
327	Sleeping bag	156	3500
445	Tent	187	6999
553	Yoga mat	115	599
621	Mask	187	70
731	Mosquito repellent	115	275

- Display the P#, Product name and price of all the products sold by Kashyap.
- Display the details in the table Products in the ascending order of Product names.
- Change the price of sleeping bag to 4200.
- Add a new salesman in the table Sales with the information S#: 222, Sname: Michelle, City: Noida
- Display the names of all the sales persons who's name starts with 'N'.

**OR**

- IV(2). Describe any four features of OOP. (10)

**MODULE - V**(Answer *ANY ONE* question)

- V(1). (a) What is an array of structures? Create an array of structure to store the details: Customer No.(integer), Customer Name (string), Units Consumed (integer), Amount (Float) for 20 customers. (5)
- (b) Briefly describe enumerated data type and preprocessor directive. (5)

**OR**

- V(2). (a) Write a program to create a data file to store 10 random numbers stored in an array. (5)
- (b) Briefly describe fseek(). (5)

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