

Department of Higher Education
University of Computer Studies, Hinthada
Second Year (B.C.Sc./B.C.Tech.)
Mid Term Examination
English
March, 2018

Answer All Questions

Time Allowed: 3 Hours

Question I. Read the passage and answers the following questions.

(20-marks)

Easter Island was named by a Dutchman, Jacob Roggeveen, who arrived there on Easter day, 6 April 1722, but its native name is Rapa Nui, sometimes translated as 'centre of the earth'. Nearly 4,025km from the coast of Chile and 4,185km from Tahiti, this island is a triangular volcanic rock of just 17 square kilometres, and is one of the most isolated places on Earth. The top of the highest of its three volcanoes, which are now extinct, is 511m above sea level. Currently, the island has 3,000 inhabitants and a single town, Hanga Roa. Easter Island or Rapa Nui is now a nature reserve and is governed by Chile. The island is particularly known for the large statues or sculptures, called Moai, which are found there.

In 1989, the Chilean government invited Giuseppe Orifici, an Italian archaeologist, to visit the island. Impressed by the wealth of archaeological remains, Orifici arranged to begin digging the following year. He coordinated a team of experts, each a specialist in their own field, who visited the island for several weeks over the next ten years. These specialists ranged from archaeologists and anthropologists to botanists and sculpture experts.

Scientists once believed that the Rapa Nui people had originally come from South America around the 7th century. However, a few surviving traditions, as well as the shapes of some the sculptures, show that the people from Polynesia and probably arrived on the island in the 5th century. Recent research on bones and teeth strongly supports this theory. While anthropologists Dr Andrea Drusini and Professor Daris Swindler were carrying out research on teeth from various sites on the island, they found that something known as a 'genetic bottleneck' had occurred. On a small island, where people never marry outside their own clan, inbreeding is inevitable, and as a result, the gene pool for each group is narrow. A particular feature, such as large or missing teeth, then shows up within family members with much more regularity than would otherwise be expected and this enabled the scientists to prove where the people had originally come from.

Questions 1-6

I. (A) Complete the sentences with appropriate word from the passage by using **NO MORE THAN**

THREE WORDS.

1. Easter Island is situated between _____.
2. The Easter Island is famous for _____.
3. Giuseppe Orifici is _____.
4. According to research, Rapa Nui people originally come from _____.
5. A _____ means that the gene pool for each group is narrow.
6. A particular feature, such as large or missing teeth within family members is _____.

Questions 7-13

I. (B) Answer the questions in complete sentences.

7. Why was Easter Island called?
8. What does Rapa Nui mean?

9. When did Giuseppe Orifici arrange to begin digging?
10. Do Rapa Nui people actually come from South America around the 7th century?
11. What does the research on bones and teeth approve?
12. Why does genetic bottleneck occur on the people of the island?
13. What feature shows where Rapa Nui people had originally come from?

Question II.

(20-marks)

II. (A) Complete the sentences with **past simple, past perfect or past continuous tenses** using the verb in bracket.

1. When the USA (become) _____ independent?
2. The museum director accidentally (drop) _____ an ancient vase when he was putting it back on the shelf.
3. Before Europeans arrived on Easter Island, the people (build) _____ large sculptures called Moai.
4. The Berlin Wall (fall) _____ in 1989.
5. Scientists once believed that the Rapa Nui people (originally come) _____ from South America.
6. Howard Carter (spend) _____ many years looking for the burial place before he discovered the tomb of King Tutankhamen.
7. After Richard Brason (left) _____ school, he went to Oxford University.
8. At the age of 20, Richard Branson (found) _____ Virgin Records.
9. While we (look) _____ round the gallery, we heard a loud noise outside.
10. The Space Age (start) _____ in the 1950s.

II. (B) Complete the sentences. Choose the most suitable ending from the box and make it into a relative clause using who, which or that. You need to add 'comma' if it is necessary. **(You have to rewrite the given clause and make a full sentence.)**

1. I met the two actresses
2. Mr. Carter returned to work yesterday
3. Marine biologists are scientists
4. The man isn't perfect
5. The pictures won prizes

i married him
 he has been ill for a month
 We watched them on TV last night
 they study animals and plants that live in the sea
 they were shown at the exhibition

Question III.

(20-marks)

III. (A) Complete the sentences with **a verb** from the box in **the right form**.

change give invest leave lend
 make pay save spend waste

1. Don't _____ your money on buying a cheap office desk - it won't last very long.
2. My grandmother _____ me 10,000 when she died.
3. Claudia _____ all her money on presents for the family.
4. Don't _____ your money at the airport -- they don't give a good rate.
5. Every month I _____ a certain percentage of my salary into my pension scheme.
6. Can you _____ me 20 until the weekend?
7. The woman _____ 10 to the man playing the guitar in the market square.
8. If you _____ your money in stocks and shares, you might lose it.
9. Jon _____ over 100 by buying his books second hand.
10. Steve Rogers _____ his money selling insurance.

III. (B) Match the following meanings with the appropriate words from the box.

1. To get a general idea of what it is about
2. The ability to communicate using words
3. To search or examine with continued care
4. Work of art created by shaping malleable objects
5. A sugar, starch or cellulose that is a food source of energy for an animal or plant
6. Source of food energy abundant in animal-derived foods (ie: meat) and some vegetables, such as legumes
7. A specialized animal tissue with a high oil content, used for long-term storage of energy
8. To display or show something for others to see
9. To search for specific information
10. Something that one uses to achieve an objective

- | |
|-----------------|
| a. research |
| b. exhibit |
| c. sculpture |
| d. skim |
| e. language |
| f. resource |
| g. scan |
| h. fat |
| i. carbohydrate |
| j. protein |

Question IV.

(20-marks)

IV. (A) Answer the following questions **in complete sentences with meaningful sense.**

1. What kinds of drink do you like best?
2. Are there some foods which are better for you than others?
3. What is the staple food in your country?
4. What do you eat on special occasions?
5. How well do you cook?

IV. (B) You recently went on holiday with your family to an island resort. Upon your return home, you discovered that you had forgotten a very valuable item there.

Write a letter to the hotel manager to inform him/her of your problem. In your letter, you should:

- Describe the item
- Say why it is important that you get the item back
- Tell the manager what you would like him/her to do

Write at least 150 words.

Question V.

(20-marks)

V. In achieving personal happiness, our relationships with other people (family, friends, colleagues) are more important than anything else. Issues such as work and wealth take second place.

Do you agree or disagree?

*****END*****

Department of Higher Education
University of Computer Studies, Hinthada
Second Year (B.C.Sc. / B.C.Tech.)
Mid Term Examination
Java Programming (CST- 201)
March, 2018

Answer All Questions.

Time Allowed: 3 Hours

1. (a) Choose the correct answers. (7 marks)

- (i) What is byte code in Java?
 A. Code generated by a Java compiler B. Code generated by a Java Virtual Machine
 C. Name of Java source code file D. Block of code written inside a class
- (ii) Which of these have highest precedence?
 A. () B. ++ C. * D. >>
- (iii) Which variables are created when an object is created with the use of the keyword 'new' and destroyed when the object is destroyed?
 A. Local variables B. Instance variables C. Class Variables D. Static variables
- (iv) The default layout manager of JFrame is:
 A. FlowLayout B. BorderLayout C. GridLayout D. BoxLayout
- (v) In java control statements break, continue, return, try-catch-finally and assert belongs to?
 A. Selection statements B. Loop statements C. Transfer statements D. Pause statement
- (vi) What is garbage collection in the context of Java?
 A. Java deletes all unused java files on the system.
 B. Memory used by the object with no reference is automatically reclaimed.
 C. The JVM cleans output of Java program with error.
 D. Any unused package in a program automatically gets deleted.
- (vii) Which one is true about a constructor ?
 A. A constructor must have the same name as the class it is declared within.
 B. A constructor is used to create objects.
 C. A constructor may be declared private
 D. All of the above

1. (b) Indicate whether each of the statements (i) to (v) is valid or invalid. (5 marks)

(i) short x=80000;	(iv) int g=9/2;
(ii) double x=5+5;	(v) String t=true;
(iii) boolean double=false;	

2. What are the outputs of the following programs? (18 marks)

<pre>(a) public class output1 { static int fun1(int no) { int SU = 0; while (no != 0) { SU = SU + no % 10; no /= 10; } return SU; } public static void main(String[] args) { int S; for (int i = 15; i <= 20; i++) { S = fun1(i); System.out.println(S); } } }</pre>	<pre>(b) public class output2 { public static void main(String[] args) { for (int i = 1; i <= 2; i++) { for (int j = 1; j <= 3; j++) { for (int k = 0; k <= 2; k++) System.out.print(k+1); System.out.print(" "); } System.out.println(); } } }</pre>
---	--

```
(c) public class output3 {
    public static void main(String[] args) {
        int [][]arr={{1,2,3,4},{3,2},{4,6,1}};
        System.out.println(arr.length);
        System.out.println(arr[0].length);
        System.out.println(arr[1].length);
        System.out.println(arr[2].length);
        System.out.println(arr[arr[0][1]][2]);
        System.out.println(arr[2][1]++);
        System.out.println(arr[2][1]);
        System.out.println(arr[2][2]);
    }
}
```

3. Find and fix **all errors** in the following code segments.

(30 marks)

(a)

```
1. public class Factorial {
2. // Print factorial of n
3. public static void main(String args) { // Set an initial breakpoint at this
4. // statement
5. int n = 20.0;
6. factorial = 1;
7. // n! = 1*2*3...*n
8. for (int i = 1; i >= n; i++) {
9. factorial = factorial * j;
10. }
11. System.out.println("The Factorial of " + n + " is " + factorial);
12. }
13. }
```

(b)

```
1. int k = 6;
2. i = k * 1 / 3;
3. switch (i)
4. case 1; k= 0;
5. case 2: k= 1;
6. default: k= 2;
7. System.out.println (k),
```

(c)

```
1. public class ArrayCopy {
2. public static void main(String[] args) {
3. int sourceMark[]={78,88,94,56,70.0};
4. int targetMark=int[5];
5. System.out.println(Output Array is:);
6. for(int i=0;i<sourceMark.length();i++){
7. targetMark[i]==sourceMark[i];
8. System.out.println("targetMark["+i+"]="+targetMark[i]);
9. System.out.println();
10. }
11. }
12. }
```

3.(d) Complete the following Java code to compute the average of 10 random even numbers ranging from 1 to 10 (inclusive).

```
public class EvenAverage {
    public static void main(String[] args) {
        int total = 0;
        for (int count = 1; __ (a) __; count++) {
            int randomInt;
            do {
                randomInt = (int) ((__ (b) __ * 10) + 1);
            } while (__ (c) __);
            System.out.println(randomInt);
            total __ (d) __ randomInt;
        }
        double average=__ (e) __;
        System.out.println(average);
    }
}
```


3. (e) Complete the following Java code to check the palindrome number or not.

```
public class PalindromeNumber {
    public static void main(String[] args) {
        int numbers[]=new int[]{121,13,34,11,22,54};
        for(int i=0;i<__(a)__;i++){
            int number=numbers[i];
            int reversedNumber=0;
            int temp=__(b)__;
            while(__(c)__) {
                temp=number%10;
                number=__(d)__;
                reversedNumber=reversedNumber*10+temp;
            }
            if(numbers[i]==__(e)__)
                System.out.println(numbers[i]+" is a palindrome number");
            else
                System.out.println(numbers[i]+" is not a palindrome number");
        }
    }
}
```

3.(f) Write a program to print 15 fibonacci series.

4.(a) Given a text file named “studentsInfo.txt” that contains information of at most 100 students. Each line represents a student: rollno, Name, paper1 mark, paper2 mark and paper3 mark separated by *. Assume there exists a Student class with Student(int roll, String name, int mark1,int mark2, int mark3) constructor. Write a java program that reads the content of the text file and creates 100 students instances, storing them in an array of Students. (10 marks)

```
1*Ko Ko*77*90*45
2*Ma Ma*67*80*85
3*Hla Hla*75*56*40
4*Su Su*88*78*55
5*Aye Aye*34*56*79
```

4. (b) A Book store keeps track of its sales data daily as five attributes: CodeNo, Title, Price, Quantity and Cost. There are five records and their data are given in the following table:

CodeNo	Title	Price	Quantity	Cost
001	Novel	3000	1	3000
002	English	2500	2	5000
003	Dictionary	1000	4	4000
004	Essay	2000	3	6000
005	Poem	1500	1	1500

Develop an application to display the sorted lists of book sales based on the **decreasing** order of their cost in neat tabular format as below. Use Arrays class and **Comparator** interface for sorting sales data. (10 marks)

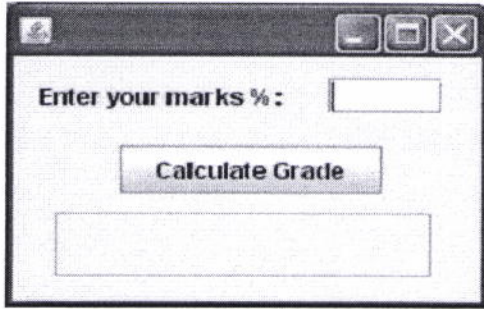
Before Sorting:

CodeNo	Title	Price	Quantity	Cost
001	Novel	3000.0	1	3000.0
002	English	2500.0	2	5000.0
003	Dictionary	1000.0	4	4000.0
004	Essay	2000.0	3	6000.0
005	Poem	1500.0	1	1500.0

After Sorting:

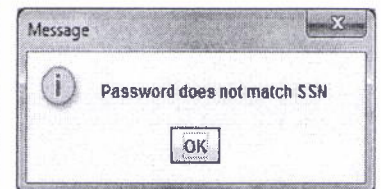
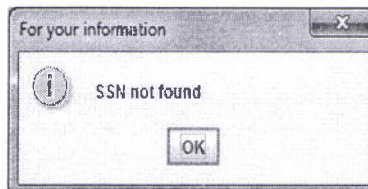
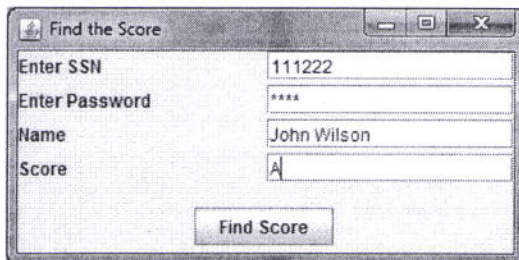
CodeNo	Title	Price	Quantity	Cost
004	Essay	2000.0	3	6000.0
002	English	2500.0	2	5000.0
003	Dictionary	1000.0	4	4000.0
001	Novel	3000.0	1	3000.0
005	Poem	1500.0	1	1500.0

- 5.(a) Write a Java program for the following GUI application. The percentage marks are to be entered in the TextField and upon clicking the Button, corresponding grade (as per following rules) should be displayed in the Label. **(10 marks)**



Marks Percentage	Grade
≥ 60	A
$\geq 45 < 60$	B
$\geq 33 < 45$	C
< 33	F

- 5.(b) Write a program that displays student exam grade. The user enters the SSN and the password, and then clicks the Find Score button to show the student name and the grade. If the SSN is incorrect, a message dialog box display “SSN not found” and if the password is incorrect, a message dialog box displays “Password does not match SSN. In either case, the user must click the OK button in the message dialog box to go back to the main frame. **(10 marks)**



*****END*****

Department of Higher Education
University of Computer Studies, Hinthada
Second Year (B.C.Sc./ B.C.Tech.)
Mid-Term Examination
Mathematics of Computing II (CST-202)
March, 2018

Answer All Questions.

Time Allowed: 3 Hours.

1. (a) (i) How many bit strings of length ten both begin and end with a 1?
(ii) How many strings are there of lowercase letters of length four or less, not counting the empty string?
- (b) The English alphabet contains 21 consonants and five vowels. How many strings of six lowercase letters of the English alphabet contain (i) exactly one vowel? (ii) exactly two vowels? (iii) at least one vowels (iv) at least two vowels?
2. (a) (i) How many different ways are there to seat four people around a circular table, where two seatings are considered the same when each person has the same left neighbor and the same right neighbor?
(ii) What is the coefficient of x^9 in the expansion of $(2 - x)^{19}$?

- (b) Let R be the relation represented by the matrix

$$M_R = \begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}.$$

Find the matrices that represent (i) R^2 (ii) R^3 (iii) R^4 .

3. (a) Test for exactness and solve the Differential Equation $\sin x \cos y dx + \cos x \sin y dy = 0$.
(b) Solve the initial value problem $xy' + 2y = 4x^2$, $y(1) = 2$.
4. (a) Verify that the functions $x^{3/2}$ and $x^{-1/2}$ are linearly independent and form a basis of solutions of the Ordinary Differential Equation $4x^2y'' - 3y = 0$, and solve the initial value problem using initial conditions $y(1) = -3$, $y'(1) = 0$ for that ODE.
(b) Solve the Euler-Cauchy differential equation $(x^2D^2 - xD - 15I)y = 0$, $y(1) = 0.1$, $y'(1) = -4.5$.
5. (a) (i) Find a second-order homogeneous linear ODE for which the functions $\cosh 1.8x$ and $\sinh 1.8x$ are solutions of it.
(ii) Show by the Wronskian that the solutions given in (i) are linear independence.
(iii) Solve the initial value problem for ODE in (i) with initial conditions $y(0) = 14.20$, $y'(0) = 16.38$
- (b) Find the general solution of nonhomogeneous ODE $y'' + 3y = 18x^2$, $y(0) = -3$, $y'(0) = 0$.

*****END*****

Department of Higher Education
University of Computer Studies, Hinthada
Second Year (B.C.Sc./B.C.Tech.)
Mid-Term Examination
Digital Logic Fundamentals II (CST-203)
March, 2018

Answer All Questions.

Time Allowed: 3 Hours

- 1.(a) Develop the f_{out} waveform for the circuit in Fig.1(a) when an 8 kHz square wave input is applied to the clock input of flip-flop A. How many flip flops are required to divide a frequency by thirty-two? **(8 marks)**

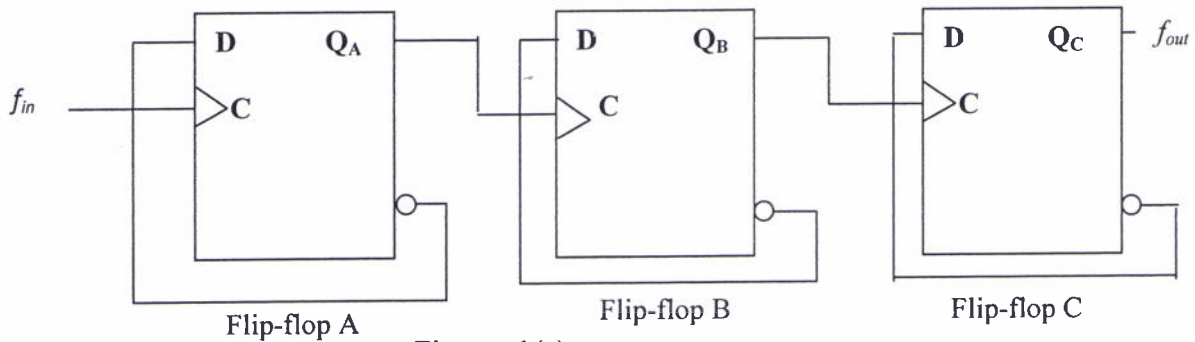


Figure -1(a)

- (b) The following serial data are applied to the flip-flop through the AND gates as indicated in Fig.1(b). Determine the resulting serial data that appear on the Q output. There is one clock pulse for each bit time. Assume that Q is initially 0 and that \overline{PRE} and \overline{CLR} are high. Right most bits are applied first. **(8 marks)**

J₁ : 1 0 1 0 0 1 1
 J₂ : 0 1 1 1 0 1 0
 K₁ : 0 0 0 1 1 1 0
 K₂ : 1 1 0 1 1 0 0

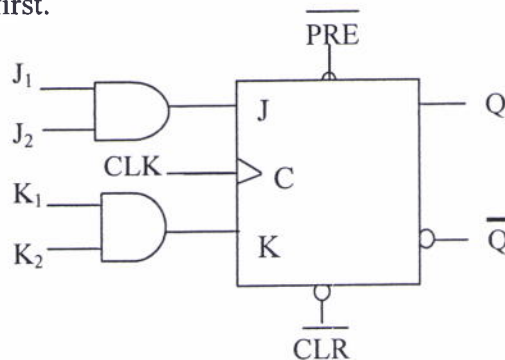


Figure - 1(b)

- 2.(a) Draw the logic diagram for a basic D flip-flop with active-LOW preset and clear inputs and the logic diagram for active-LOW input $\overline{S} - \overline{R}$ latch. **(8 marks)**
- (b) Show the connections and component values for a 74LS122 one-shot with an output pulse width of 5μs. Assume $C_{EXT} = 560$ pF. And then determine the value of R_{EXT} that will produce a pulse width of 1 μs when connected to a 74LS122. **(8 marks)**
- 3.(a) Design a logic diagram for 4- bits bidirectional shift register. **(10 marks)**
- (b) Determine the state of the bidirectional shift register after each clock pulse for the given control input waveform in Fig- 3 (b). Assume that $Q_0=1, Q_1=0, Q_2=0, Q_3=1$ and that the serial data input lines LOW.

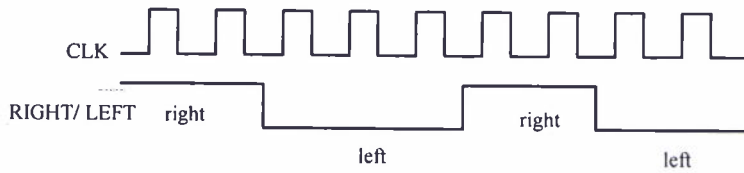


Figure - 3 (b)

(8marks)

4.(a) Draw the logic diagram for a modulus-18 Johnson counter. Show the timing diagram and write the sequence in tabular form. (8marks)

(b) Develop the Q_0 through Q_7 outputs for a 74HC164 shift register with the input waveform shown in Fig-4 (b).

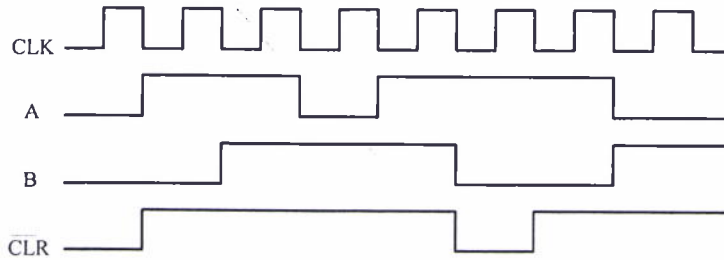


Figure - 4 (b)

(8marks)

5.(a) Design a 4-bit asynchronous binary counter using D flip-flops and each D flip-flop is negative edge-triggered and has a propagation delay for 12 nanoseconds(ns). Develop a timing diagram showing the Q output of each flip-flop and determine the total propagation delay time from the triggering edge of a clock pulse until a corresponding change can occur in the state of Q_3 . Also determine the maximum clock frequency at which the counter can be operated. (9 marks)

(b) Implement a 4 bit synchronous decade counter. Show the entire counter timing diagram and output waveforms of the decoding gates. How many flip-flops are require to implement 5 bit synchronous binary counter? (9 marks)

6.(a) Show the timing diagram and determine the sequence of a 3-bit synchronous binary up/down counter if the clock and UP/\overline{DOWN} control inputs have waveforms as shown in Fig.6(a). The counter starts in the all-0s state and is positive edge-triggered. (7 marks)

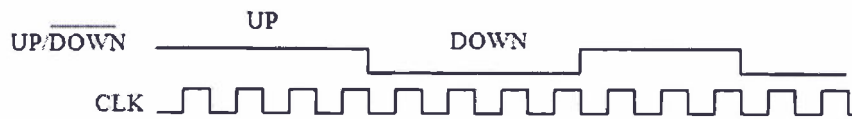


Figure -6(a)

6.(b) Design a counter with 3-bit Gray code sequence by using D Flip-Flops. (9 marks)

*****END*****

Every patient has a primary physician. Doctor prescribes drugs for patients. A doctor could prescribe one or more drugs for several patients, and a patient could obtain prescriptions from several doctors. "Date" and "quantity" is used to record prescription. Each pharmacy sells several drugs and has a price for each.

4. Suppose a relvar R with attributes A, B, C, D, E, F and given functional dependencies, FDs:

$A \rightarrow BC$, $E \rightarrow C$, $E \rightarrow EF$, $CD \rightarrow EF$

(i) Compute the irreducible set of FDs that is equivalent to this given set.

(ii) What are the candidate keys?

(iii) Compute the closure $\{AB\}^+$, $\{ABCD\}^+$, $\{CDE\}^+$ under given set of FDs. (15 marks)

5. (a) Why should a database be normalized? (5 marks)

5. (b) Consider the following relational schema: (15 marks)

Hotel Info (Hid, Hname, star_rate, Rno, Rname, Rtype, Amount)

The functional dependencies (FDs) are as following:

$\{Hid, Rno\} \rightarrow star_rate$,

$\{Hid\} \rightarrow Hname$, $\{Rtype\} \rightarrow Amount$,

$\{Rno\} \rightarrow Rname, Rtype, Amount$

(i) Explain in which normal form this relation is in.

(ii) Normalize this relation successively into 2NF and 3NF with FD diagrams. Clearly show intermediate relations and the primary key of each relation at each level of normalization.

*******END*******

3.(c) Create an html page with following:

Create a function to sort the array by ascending order. Create an array with given numbers (6,3,0,4,2).
Sort the array by ascending order and display items with alert. **(6 marks)**

4(a). Draw up the balance sheet to record the following items using the **Standard Layout**. **(5 marks)**

	\$		\$
Capital	59020	Debtors	8200
Building	45000	Cash at bank	2950
Furniture	2760	Loan	2900
Motor vehicle	6400	Cash in hand	100
Creditors	1250	Profit	8200
Stock	5360	Drawings	600

4(b) Draw up the **double entry** accounts to record the following transactions, balance off the accounts at the end of week and extract the Trial Balance. **(20 marks)**

1 Jan	A trader starts a business by investing \$ 15,000 in a business bank account.
4 Jan	Buys stock for \$ 1350, paying by cheque and \$ 600 on credit from Ava.Co.Ltd.
9 Jan	Sells \$ 700 of goods on credit to Sun & Moon Agency and further \$ 200 for cash.
11 Jan	Pays one month's rent by cash \$ 150.
15 Jan	Return goods \$ 200 from Sun & Moon Agency and \$ 80 worth of goods to Ava.Co.Ltd.
16 Jan	Receipts cash \$ 350 for Sun & Moon Agency and remaining would be bad debts.
18 Jan	Paid (Cheque)\$ 500 to Ava.Co.Ltd receive (\$20) as discount from Ava.Co.Ltd.

5. Solve the following problems.

(a) The following Trial balance has been drawn up by an inexperienced Account clerk, redraft the Trial balance to show the **correct entries**. **(5 marks)**

	<u>Dr</u>	<u>Cr</u>
Sales	50000	
Purchases		10000
Return Out		4200
Stock		31000
Return In	500	
Discount Allowed	340	
Commission Received	210	
Carriage Inwards	280	
Bank		350
Wages	710	
Advertising		1230
Light and Heat	230	
Motor Expense	170	
Stationery		4000
Insurance		5130
Rent	470	
	52910	55910

(b) The following Trial balance has been extracted at 28/Feb/1996. Prepare a Trading, Profit & Loss statement and balance sheet at that date. **(20 marks)**

	<u>Dr</u>	<u>Cr</u>
Capital		34927
Drawing	10465	
Bank	4196	
Cash	500	
Debtors	8500	
Creditors		4040
Wages	15500	
General Expenses	25850	
Carriage Inwards	650	
Carriage Outwards	1540	
Purchase Return(Return Out)		761
Sales Returns(Return In)	531	
Discount Allowed	1150	
Discount Received		2324
Sales		107266
Purchases	50754	
Motor Vehicles	38420	
Stock	5830	
Accumulated Depreciation (Motor Vehicles)		14568
	163886	163886

Adjustment:

- (1) Closing stock is \$ 6,200.
- (2) Wages still Owing amount to \$ 250.
- (3) General Expenses paid in advance \$ 180.
- (4) Motor Vehicles are to be depreciated at 20 % of cost.
- (5) A Provision for Bad Debts is to be created at 2% of Debtors.

*****END*****

Department of Higher Education
University of Computer Studies, Hinthada
Second Year (B.C.Sc.)
Mid-Term Examination

Software Development Concepts and Techniques (CS-206)

March, 2018

Answer All Questions.

Time Allowed: 3 Hours

1. Choose the correct answer(s) for following statements:

(20 marks)

- (1) Roughly ____ of costs are development costs, ____ are testing costs.
(A) 70% and 30% (B) 50% and 50% (C) 60% and 40% (D) 55% and 45%
- (2) ____ is concerned with all aspects of computer-based systems development, including hardware, software and processing engineering
(A) Software process (B) System Engineering (C) Computer Science (D) Software Engineering
- (3) Which is the challenge of the developing techniques for building dependable software?
(A) Heterogeneity challenge (B) Programming challenge (C) Trust challenge (D) Delivery challenge
- (4) Which includes a design process model, notations to represent the design, report, formats, rules and design guidelines?
(A) Structured design (B) Structure method (C) Structure model (D) Sequence model
- (5) A model where the system component and their aggregations are documented.
(A) data flow model (B) object model (C) structural model (D) Sequence model
- (6) Which is the final stage in the testing process before the system is accepted for operational use.
(A) Unit testing (B) Component testing (C) System testing (D) Acceptance testing
- (7) Which requirements specify product behavior?
(A) Domain (B) External (C) Organizational (D) Product
- (8) Which requirements are not essential and are written using "should"?
(A) Desirable (B) Mandatory (C) User (D) System
- (9) An irreducible part or an aggregation of parts.
(A) Component (B) Interrelated Component (C) System (D) Output
- (10) Dividing a system up into chunks of a relatively uniform size.
(A) Cohesion (B) Modularity (C) Coupling (D) Decomposition
- (11) What is the second phase of the SDLC?
(A) System Planning and Selection (B) System Analysis
(C) System Design (D) System Implementation and Operation
- (12) Provide a range of answers from which the interviewee may choose.
(A) Opened-ended questions (B) Closed-ended questions (C) Observation (D) interview
- (13) Useful document is a written work _____ for an individual or a work group.
(A) procedure (B) business form (C) report (D) order form
- (14) The person who makes detailed notes of the happenings at a joint application design session.
(A) JAD session leader (B) Scribe (C) System analysts (D) Sponsor
- (15) The way a system actually works.
(A) Formal System (B) Informal System (C) Actual System (D) Unusual System
- (16) Generic products are stand-alone systems that are produced by a development organization.
(True/False)
- (17) A dynamic perspective that shows the process activities that are enacted. (True/False)

6. (b) Case Study Two

Jackie Judson, vice president of marketing and Jim Woo, a senior system analyst, have been involved with Pine Valley Furniture's Customer Tracking System since the beginning of the project. After receiving project approval from the System Priority Board, Jim and his project development team turned their attention toward analyzing the Customer Tracking System.

During a Wednesday afternoon meeting, Jim and his project team members decide to utilize several requirements determination methods. Because the Customer Tracking System will facilitate the tracking of customer purchasing activity and help identify sales trends, various levels of end users will benefit from the new system. Therefore, the project team feels it is necessary to collect requirements from these potential end users. The project team will use interviews, observations, questionnaires, and JAD sessions as data-gathering tools.

Jim assigns you the task of interviewing Stacie Walker, a middle manager in the marketing department; Pauline McBride, a sales representative; and Tom Percy, assistant vice president of Marketing. Tom is responsible for preparing the sales forecasts. In addition, Jim assigns Pete Polovich, a project team member, the task of organization the upcoming JAD sessions.

Consider the given scenario of Pine Valley Furniture project, answer the following questions.

- Q1. In the given scenario, which methods use to collect requirements determination? (2 marks)
- Q2. Which type of questions you may prepare to interview and describe its advantage and disadvantage? (5 marks)
- Q3. What modern requirement determination method is used in this project? Describe the list of participants? (5 marks)
- Q4. Is prototyping an appropriate requirements determination method for this project? Why? (3 marks)

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