NEW

Part–III 3-Tier

2016

COMPUTER SCIENCE

PAPER—VIIIA (SET—2)

(Honours)

(PRACTICAL)

Full Marks : 50

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group—A

Answer any *one* question. 1×20

1. Consider the following database :

EMPLOYEE (e_no, e_name, salary)

PROJECT (p_no, p_name)

WORK (e_no, p_no)

Write the following queries in SQL :

(a) Create the above tables and insert at least 5 records.

(b) Display employee names who are working on the project titled 'Railway Reservation'.

(c) Display all information about the employees whose salary more than 30,000 and also who are working on project titled 'Banking System'.

(d) Find the number of employees who are working on more than one project.

(e) Display the name and salary of the employees with project name and project number whose last character of employee name is either 'n' or 'a'.

2. Consider the following database :

HOTEL (H_no, H_name, H_address)
ROOM (R_no, H_no, Type, Room_Charge)
BOOKING (H_no, G_no, Date_from, Date_to, R_no)
GUEST (G_no, G_name, G_address)

Now write the following SQL queries :

(a) Create and insert at least 5 records in each table.

(b) Find the name of the hotel which offers a non A.C. room with the cheapest charge.

(c) Display all unoccupied room for the hotel 'Exotica'.

(d) List the details of all guests with their room numbers staying at the hotel 'Sea View' from '3rd December 2015' onwards.

(e) List the details of hotels in which maximum number of rooms are occupied.

3. Consider the following database :

Flights (fl_no, aid, from, to, distance, departs, arrives, price)

Aircraft (a_id, aname, cruising range)

Certified (e_id, a_id)

Employees (e_id, e_name, salary)

(a) Find the name of aircraft such that all pilots certified to operate them earn more than 80,000.

(b) Find the names of pilots whose salary is less than the price of the cheapest route from Kolkata to Mumbai.

(c) Find the names of pilots certified for some Boeing aircraft.

(d) Find the names of all aircraft that can be used on router from Kolkata to Delhi.

(e) Print the enames of Pilots who can operate planes with cruising range greater than 3,000 miles but are not certified on any Boeing aircraft.

4. Consider the following database :

PATIENTS (P_id, P_name, age, address)

DOCTOR (D_id, D_name, D_add)

ATTEND (D_id, P_id)

ADMITTED (P_id, d_o_a)

(a) List the name of patient who have the age greater than 50 and d_o_a 09.07.2015.

(b) List the total no. of doctors who check the same patient more than 2 times.

(c) List the name of patient in descending order of age.

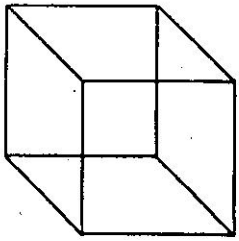
(d) List the name of the patient whose first letters of name stater with 'S' and age between 40 to 50.

(e) List the name of patients who have the same address as the doctor id 'D1005' and Doctor name 'Tapas Francis Biswas'.

Group—B

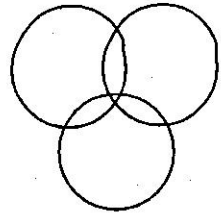
Answer any *one* question : 1×10

5. Design the following figure using any line drawing algorithm :



6. Write a program to draw an ellipse using Bresenham algorithm.

7. Draw a circle using midpoint circle drawing algorithm. Then draw three circle as mention figure below :



8. Write a program to clip the line segment using DDA line drawing algorithm.

Group—C

Answer any *one* question : 1×10

9. Write the HTML code to generate the following table :

DAY	SEMINAR		
	SCHEDULE		TOPIC
	START	END	
MONDAY	8:00 AM	5:00 PM	Cryptography
TUESDAY	8:00 AM	11:00 PM	Big Data
	12:00 PM	03:00 PM	Mobile Computing

10. Design a web page that have four frames column wise. In each frame, there should be a hyperlinked text whose document will be displayed on the frame right to it.

10. Design a web page of your college which must have a table, hyperlinked text, also have some text which will scroll.

Practical Note Book	:	**05**
Viva	:	**05**

NEW

Part–III 3-Tier

2016

COMPUTER SCIENCE

PAPER—VIIIB (SET—1)

(Honours)

(PRACTICAL)

Full Marks : 50

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer *two* questions taking *one* from each Group.

Group—A

(*Marks : 20*)

1. Write an assembly language program that will compare three numbers and will find out the smallest one.

2. Write an assembly language program that will multiply two eight bit numbers with shift and odd method.

3. Write an assembly language program to convert an 8 bit Hexadecimal to decimal number.

4. Write an ALP to count the number of occurrences of the data 00H in a series of data elements, say : 12H, 68H, 00H, 83H, 00H, 02H.

5. Write an ALP to find the smallest element in a block of ten 8 bit numbers.

6. Add two 16 bit numbers such as 5555H and EEBAH and store the addition result in 3 consecutive memory locations.

7. Write an assembly language program that will find out the smallest number from a set of 10 numbers and store that numbers into a specific memory location.

8. Write an assembly language program to divide a 16 bit number by an 8 bit number.

9. Write an assembly language program to check an 8 bit number either have odd parity or even parity.

Group—B

(Marks : 20)

1. Write an assembly language program using 8255 to scroll '6' using four seven-segment display.

2. Design and write an ALP to generate triangular waveform using 8255, use CRO to show the output wave form.

3. Design a traffic control system in which the red light glows for 15 seconds, yellow light glows for 5 seconds and green light glows for 10 seconds.

4. Write an assembly language program using 8255 to display 'UCS' in a 7-segment display.

Practical Note Book : 05

Viva : 05

NEW

Part–III 3-Tier

2016

COMPUTER SCIENCE

PAPER—VIIIB (SET—2)

(Honours)

(PRACTICAL)

Full Marks : 50

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer *two* questions taking *one* from each group.

Group—A

(*Marks : 20*)

1. Write an assembly language program to arrange 28, D2, B2, 92, 76, A9 and 52 in ascending order.

2. Write an assembly language program to count number of signed positive and negative number in a data array containing N number of data.

3. Write an assembly language program to count the number of zeroes, even and odd numbers in an array.

4. Write an assembly language program to transfer a block of ten 8 bit numbers from one memory location to another memory location in reverse order.

5. Divide a 16 bit number by an 8 bit number, then store the quotient at D050H memory location and remainder at D051H memory location.

6. Write an assembly language program to unpack a BCD number into two separate BCD numbers, say Input : 67H ; Output : 06H & 07H.

7. Write an assembly language program to generate first nth numbers of Fibonacci series and store from memory location F100.

8. Write an assembly language program to find the second smallest number from a set of 8 byte data items.

9. Write an assembly language program to add two decimal numbers and then store the result at XX55H memory location in decimal form.

Group—B

(Marks : 20)

1. Write an assembly language program using 8255 to display 00 to FF on two 7-segment displays. Delay between each number should be 1 sec.

2. Write an assembly language program to generate ramp wave form using 8255. Display the output wave using CRO.

3. Write an assembly language program and implement using 8255 interfacing to display your name in a 7-segment display.

4. Display the alphabets A – J using seven-segment display, each alphabet must be displayed for at least 10 seconds.

Practical Note Book	:	**05**
Viva	:	**05**