

- (g) Shekher is a junior programmer at ducom Enterprises. He created the following GUI in Netbeans.

The screenshot shows a Java Swing window titled "Salary Generator". Inside the window, there are five text input fields arranged vertically, each with a label to its left: "Basic", "House Rent Allowance", "Dearness Allowance", "Income Tax", and "Salary". Below these input fields, there are three command buttons stacked vertically: "Calculate Income Tax", "Calculate Salary", and "Clear". The window has a standard title bar with minimize, maximize, and close buttons.

Help him to write code for the following :

- (i) To calculate Income Tax to be paid and display in jTextField4 on the click of Command Button "Calculate Income Tax" as per the following condition :

2

If the Basic is less than 50000 then  $\text{IncomeTax} = \text{Basic} * 0.2$

And if is greater or equal to 50000 then  $\text{IncomeTax} = \text{Basic} * 0.3$

- (ii) To calculate Salary and display in jTextField5 on the click of Command Button "Calculate\_Salary".

2

Hint:

Salary =

$(\text{Basic} + \text{DearnessAllowance} + \text{HouseRentAllowance}) - \text{IncomeTax}$ .

- (iii) To Clear all Text Fields on the click of Command Button "Clear".

1

- (g) Abraham is a programmer at Shouryen World School. He created the following GUI in Netbeans. The grade is calculated on the basis of percentage of total marks in five subjects (English, Maths, Physics, Chemistry, Computers). The Grade is calculated using the following criterion :

(Each subject marks is out of 100)

Percentage	Grade
$\geq 90$	A
$\geq 70$ & $< 90$	B
$\geq 50$ & $< 70$	C
$\geq 33$ & $< 50$	D
$< 33$	F

90/1

4

Help him to write code for the following :

- (i) Write Java code to calculate and display Total (as sum of marks obtained in all the subjects), Percentage (as  $\text{Total}/5$ ) and Grade on the basis Percentage of marks and the given criteria on the click of Command Buttons [Calculate Total], [Calculate %] and [Calculate Grade] respectively. 3
  - (ii) Write Java code to clear all Textboxes on the click of [Clear] button. 1
  - (iii) Write Java code to close the application on the click of [exit] button. 1
5. (a) State difference between date functions NOW() and SYSDATE() of MySQL. 2
- (b) Name a function of MySQL which is used to remove trailing and leading spaces



```
String name="Chennai Express";
jTextField2.setText(Integer.toString(TM));
jTextField3.setText(Integer.toString(TN));
```

90

4

- (g) Mr. Rangaswami works at a Recreation Park analyst. He has created the following GUI.

When a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water Park or not is entered. Entry fees is ₹ 500 per person. The person can choose to play at Water Park by selecting the checkbox. Rides of Water Park will cost ₹ 250 extra per person.

Help him to write code for the following :

- On the click of command button 'Calculate', textfield for 'Entry Fees' should display Entry Fees per person  $\times$  Number of people.
- Write Java code to clear all Textboxes on the click of 'Clear' button.
- Write Java code to close the application on the click of 'Exit' button.

3

1

1

90

5

P.T.O.

5. (a) What is the difference between "%" and "\_" with reference to LIKE clause of MySQL ?

2

- (b) Name a function of MySQL used to give the first occurrence of a

- (f) The students of “Shiksha Vidyalaya” work for different extra curricular activities like ‘Community Outreach Programme’, ‘Swachh Bharat Abhiyan’ and ‘Traffic Safety Club’. The Programmer at the school has developed a GUI application as shown below :

**Shiksha Vidyalaya**

Enter Roll Number

Enter Name

☐ Community Outreach Programme

☐ Swachh Bharat Abhiyan

☐ Traffic Safety Club

**Total Score**

- A student can participate in more than one activities.
- Each student gets 10 points for each activity – namely Community Outreach Programme, Swachh Bharat Abhiyan and Traffic Safety Club.

Help the programmer to write code for the following :

- |       |   |   |
|-------|---|---|
| (i)   | When ‘Calculate Total Score’ button is clicked, the points for each activity (that is selected) should be displayed in the text field in front of that activity’s checkbox and the Total Score should be displayed in the appropriate Text field. | 3 |
| (ii)  | When Clear button is clicked, all the Textfields and Checkboxes should be cleared.  | 1 |
| (iii) | When Stop button is clicked, the application should close.  | 1 |

- (f) Seema is a junior programmer at 'Avon Shoe Factory'. She has created the following GUI in Netbeans.

- 3 items namely Shoes, Sandals and Slippers are manufactured by the factory.
- A buyer can buy more than one item at a time.
- Each pair of shoes costs ₹ 1,500.00, each pair of sandals costs ₹ 1,000.00 and each pair of slippers cost ₹ 500.00.
- The item bought will be selected by the user and the Quantity (number of pairs) bought will be entered by the user.
- Amount to be paid for that item will be displayed in front of the item.

90/1

4



For example if 'Shoe' is selected and Quantity entered is 20, then Amount should be displayed as 30000.

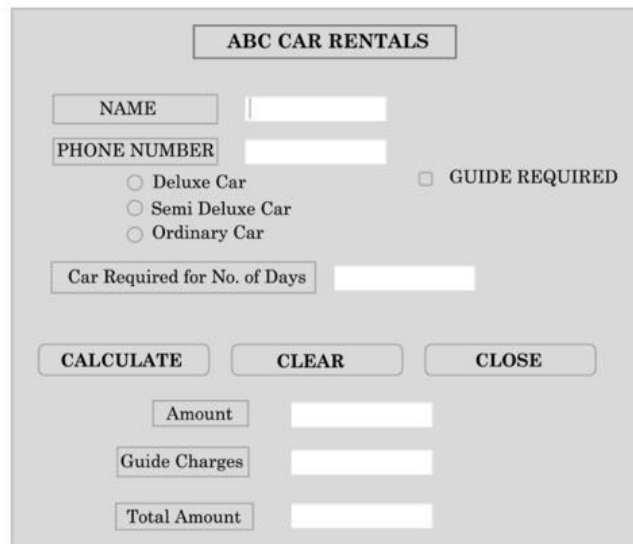
Help Seema write code for the following :

3

- When 'Calculate' button is clicked, the amount should be displayed in front of each item (in the appropriate textfield) and Total amount (sum total of all the amounts) should be displayed in the appropriate textfield. 1
- When Clear button is clicked, all the Textfields and Checkboxes should be cleared.
- When Stop button is clicked, the application should close. 1



- (g) Ms. Sharma works as a programmer in “ABC Car Rental Company” where she has designed a software to compute charges to be paid by the client. A screenshot of the same is shown below :



A client can take any car out of Deluxe/SemiDeluxe/Ordinary for rent.

A client can also opt for services of a guide. Charges vary depending on the type of car opted.

Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following :

90

7

P.T.O.

- (i) After selecting appropriate Radio Button and checkbox(if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective

2

Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following :

90

7

P.T.O.



- (i) After selecting appropriate Radio Button and checkbox(if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields. 2

Category of Car	Amount (in ₹)
Deluxe Car	1000 per day
Semi Deluxe Car	800 per day
Ordinary Car	700 per day

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken. 2

If 'Guide Required' checkbox is selected, Guide charges per day are ₹ 500.00.

Guide Charges is calculated as : Car required for No. of days \* 500;

Total Amount = Amount + Guide Charges

- (ii) When 'CLEAR' button is clicked, all text fields and checkbox should be cleared. 1
- (iii) When 'CLOSE' button is clicked, the application should close. 1

- (g) Vijay has developed a software for planning personal budget. A screenshot of the same is shown below :

**PERSONAL BUDGET PLAN**

Total Income

**EXPENSES**

Bills(Water/Electricity)

Groceries

Entertainment

Other Expenses

☐ Money to be sent to Hostel

**CALCULATE** **CLEAR** **CLOSE**

SUM OF EXPENSES

GRAND TOTAL OF EXPENSES

SAVINGS

Total Income, Expenses of Bills (Water/Electricity), Groceries, Entertainment, other expenses and whether money is to be sent to Hostel are entered by the user. Sum of Expenses, Grand Total of Expenses and Savings are calculated and displayed by the program.

Write the code to do the following :

- (i) When 'CALCULATE' button is clicked, Sum of Expenses, Total Expenses and Savings should be calculated and displayed in appropriate text fields. **3**
  - Sum of Expenses is calculated by adding expenses on Bills (Water/Electricity), Groceries, Entertainment and other expenses.

90/1

5

[P.T.O.]

- Grand Total of Expenses is calculated according to the following criteria :  
If 'Money to be sent to Hostel' checkbox is selected, 3000.00 is to be added to the sum of expenses. If it is not selected, Grand Total of Expenses is the same as sum of expenses.
  - Savings = Total Income – Grand Total of Expenses.
- (ii) When 'CLEAR' button is clicked, all text fields and checkbox should be cleared. **1**
  - (iii) When 'CLOSE' button is clicked, the application should close. **1**



jTextField1.setText("K And L are equal);

- (f) What will be the contents of JTextField1 and JTextFiled2 after executing the following code 2

```
jTextField1.setText(Math.round(2.5)+"");  
jTextField2.setText("Micro".concat("System"));
```



- (g) ABC Sales Enterprise wants developed a software to make the bill for their customer. GUI for the application given below.

Write the java statement for the following requirements.

- a) Write the statement to make the text fields (txtDiscount) and txtNet non-editable. 2
- b) Calculate discount and net amount for calculate button based on the following criteria. 2

Sales Amount	Discount
$\geq 5000$	5
$\geq 3000$	3
$\geq 1000$	1

- c) Write the statement to clear all textfields when clicking the clear button. 1
- d) Write the java statement for the exit button to close the application. 1

- (g) Mr. Pawan works as a programmer in "ABC Marketing Company" where he has designed a Salary generator software to generate the salary of salesman in which Name and Salary are entered by the user. A screenshot of the same is shown below:

Help him in writing the code to do the following:

- i. After selecting appropriate Radio Button, when 'Commission' button is clicked, commission should be displayed in the respective text field as each Salesman will get a commission based on the units sold according to the following criteria:

7

Units Sold	Commission (in Rs)
1 to 20	500
20 to 40	1000
>40	2000

- ii. When 'Gross Salary' button is clicked, Gross Salary should be calculated and displayed in the respective text field as per the given formula:  
Gross Salary= Salary+Commission

- iii. After required selection of Checkbox(es), when 'Facility Charges' button is clicked, Facility charges will be displayed in the respective text field according to the following criteria:

Facility	Charges
Transport	500
Mess	2000

- iv. Money will be deducted from the Gross Salary according to the facilities opted by the employee. When 'Net Salary' button is clicked, Net Salary should be calculated and displayed in the respective text field as per the given formulae:  
Net Salary= Gross Salary-Deductions

- 5 (a) Mrs. Sharma is the classteacher of Class 'XII A' She wants to create a table 'Student' to store details of her class

in a string variable called strPassword. He wants to store the same password in an Integer type variable called intPassword. Write an appropriate Java statement to transfer the content from strPassword to intPassword. [2]

3 of 7

(g) Mrs. Kumar is using table STUDENTS with the following columns :

RAO, ADMNO, NAME, AGGREGATE

She wants to display all information of students in descending order of name and within ascending order of aggregate. She wrote the following SQL query and she did not get the desired output: `SELECT * FROM STUDENTS ORDER BY NAME, AGGREGATE DESC;`

Rewrite the above query to get the desired output. [2]

4. (a) Common Wealth International is a bank. The bank provides three types of loan – Car loan, House loan, Education loan. The following is the Interest rate and discount calculation form.

Material downloaded from <http://myCBSEguide.com> and <http://onlineteachers.co.in>  
Portal for CBSE Notes, Test Papers, Sample Papers, Tips and Tricks



A JPanel container is used for Loan type with jRadioButton controls as follow:

jRadioButton1 : Car Loan (**optCar**) with buttonGroup1

jRadioButton2 : House Loan (**optHouse**) with buttonGroup1

jRadioButton2 : Education Loan (**optEdu**) with buttonGroup1

Enter the loan amount (txtLAmount) in the text box and do the following :

(i) Write the code for clear button (named as cmdClear) to clear all the text boxes and set car loan as default loan type. [1]

(ii) Write the code for Show Interest Amount button (named as btnShowInt) to show the interest rate (txtRate) according to the following criteria: [1]

Car Loan – 10%

House loan – 8.5%

Education loan – 5%

(iii) Write the code for Calculate Discount button (named as btnCalcDisc) to find the Discount amount (txtDisc). Notice that the bank provides discount on loan amount according to following criteria. [2]

If loan amount  $\leq$  Rs10,000,00 then discount amount is 0.20% of loan amount.

If loan amount  $>$  Rs 10,000,00 then discount amount is 0.25% of loan amount.

The Net Amount = Interest – Discount Amount.

(g) Read the following case study and answer the questions that follow.

A programmer is required to develop a student record. The school offers two different streams, medical and non-medical, with different grading criteria. The following is the data entry screen used to

calculate percentage and grade. \* Student can assume name for the controls.



**Student Record**

First Term Marks :

Second Term Marks :

Percentage :

Grade :

Stream

☐ Medical

☐ Non-Medical

1. Write the code for the Frame Window Activate event to disable the Percentage and the Grade text fields. (1)
2. Write the code for the Clear button to clear all the text fields. (1)
3. Write the code for the Calculate button to calculate the percentage to display in text field after finding the total marks of first term and second term (assuming that both marks are out of 100). (2)
4. Write the code for the cmdCalcGrade button to calculate the grade to display in text field txtGrade, depending on the stream selected according to the criteria in the following table: (2)

Stream	Percentage	Grade
Medical	$\geq 80$	A
	60-80	B
	$< 60$	C
Non Medical	$\geq 75$	A
	50-75	B
	$< 50$	C

5.
  - a) Explain the purpose of DDL and DML statement. Give two examples of each. 2
  - b) Write the output of the following SQL queries. 2
    - (i) `SELECT INSTR('CORPORATE FLOOR','OR');`
    - (ii) `SELECT MID('Welcome',3,4);`
    - (iii) `SELECT SIGN(-15);`
    - (iv) `SELECT ROUND(15.193,1);`
  - c) Write the SQL command for the following on the basis of given table 6

b) Assume the following interface built using Netbeans used for bill calculation of a ice-cream parlor. The parlor offers three varieties of ice-cream – vanilla, strawberry, chocolate. Vanilla ice cream costs Rs. 30, Strawberry Rs. 35 and Chocolate Rs. 50. A customer can choose one or more ice-creams, with quantities more than one for each of the variety chosen. To calculate the bill parlor manager selects the appropriate check boxes according to the varieties of ice-cream chosen by the customer and enter their respective quantities.

Icecream	Price	Qty	JLabel5
<input type="checkbox"/> Strawberry	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Chocolate	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Vinella	<input type="text"/>	<input type="text"/>	<input type="text"/>

Total Amount

Write Java code for the following:

On the click event of the button 'Calculate', the application finds and displays the total

bill of the customer. It first displays the rate of various ice-creams in the respective text fields. If a user doesn't select a check box, the respective ice-cream rate must become zero. The bill is calculated by multiplying the various quantities with their respective rate and later adding them all.

(4)