

INTRODUCTION TO FLOWCHARTING

Question 1

An insurance company follows the following rules:

- (i) If a person's health is good and age is between 20 and 40 years and lives in a city and sex is male, then the premium is Rs.20 per thousand and he will be insured for maximum amount of Rs.10.0 lakhs.*
- (ii) If a person satisfies all the above conditions, except that sex is female, then the premium is Rs.15 per thousand and maximum insured sum will be Rs.15.0 lakhs.*
- (iii) If a person's health is poor and age is between 20 and 40 years, but lives in a village. For a male sex, premium is Rs.50 per thousand and maximum insured sum is Rs.1.0 lakh only.*
- (iv) In all other cases, the person is not to be insured.*

Draw a flow chart to find the eligibility of a person to be insured, premium rate and maximum amount of Insurance.
(PE – II Nov. 2002)

Question 2

An electricity distribution company has three categories of consumers namely–

- (i) Domestic*
- (ii) Commercial*
- (iii) Industry*

The charges of electricity per unit consumed by these consumers are Rs.3, Rs.4 and Rs.5 respectively. The computer database of the company has following information:

- Consumer's name*
- Category*
- Units consumed*
- Bill date*
- Date of payment.*

The company processes bills according to the following criterion.

If the consumer is domestic and pays his bill within 10 days of the bill date, 5% discount is given. If he pays the bill within 15 days, no discount is given. If he makes the payment after 15 days of the bill date, 10% surcharge is levied. For the non-domestic consumers (commercial or industry), corresponding percentage be 10%, 0% and 15% respectively.

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Draw a flowchart to calculate the bill amount, discount, surcharge and net amount of the bill for each type of consumer and print it.
(PE – II May 2003)

Question 3

A bank accepts fixed deposit for a year or more and the policy on interest rate is as follows:

- (i) *If a deposit is less than Rs.10,000 and for two or more years, the interest rate is 5% compounded annually.*
- (ii) *If a deposit is Rs.10,000 or more, but less than Rs.50,000 and for two or more years, the interest rate is 7% compounded annually.*
- (iii) *If the deposit is Rs.50,000 or more and is for one year or more the interest rate is 8% compounded annually.*
- (iv) *On all deposits for five years or more interest rate is 10% compounded annually.*
- (v) *On all other deposits not covered by the above conditions, the interest rate is 3%.*
- (vi) *If the customer is holder of any type of account for last five years, an additional 1% interest is allowed.*

Draw a flow chart to obtain the money in customer's account and interest credited at the time of withdrawal.
(PE – II Nov. 2003)

Question 4

Draw a flow chart to compute and print Income-tax, Surcharge and Education cess on the income of a person, where income is to be read from terminal and tax is to be calculated as per the following rates:

	Slab (Rs.)	Rate
(i)	1 to 1,00,000	No tax
(ii)	1,00,001 to 1,50,000	@ 10% of amount above 1,00,000
(iii)	1,50,001 to 2,50,000	Rs. 5,000 + 20% of amount above 1,50,000
(iv)	2,50,001 onwards	Rs. 25,000 + 30% of amount above 2,50,000
	Surcharge	@ 10% on the amount of total tax, if the income of a person exceeds Rs. 10,00,000
	Education cess	2% on the total tax

(PE – II Nov. 2006)

Question 5

A company ABC Ltd. is engaged in selling consumer goods to different categories of

customers. In order to increase its sales, different types of discounts are offered to customers. The policy of discount is as given below:

- (i) On cooking range, a discount of 12 percent is allowed to dealers and 9 percent to retailers irrespective of the value of the order.
- (ii) A discount of 12 percent is allowed on washing machine irrespective of the category of customer and the value of the order.
- (iii) On decorative products, dealers are allowed a discount of 20 percent provided that the value of the order is Rs. 10,000 and above. Retailers are allowed a discount of 10 percent irrespective of the value of the order.

Draw a flow chart to calculate the discount for the above policy. (PE – II May 2004)

Question 6

A bicycle shop in a city hires bicycles by the day at different rates for different models as given below:

Model No.	Hire rate per day
Model No. 1	Rs. 10
Model No. 2	Rs. 9
Model No. 3	Rs. 8
Model No. 4	Rs. 7

In order to attract customers, the shopkeeper gives a discount of 15 percent to all those customers, who hire a bicycle for more than one-week period. Further to attract women customer, he gives additional discount of 10 percent irrespective of hire period. For every bicycle hired a security deposit of Rs. 25 must be paid.

Draw a flow chart to print out the details of each customer such as name of customer, bicycle model number, number of days a bicycle is hired for, hire charges, discount and total charges including deposits. (PE – II Nov. 2004)

Question 7

An electric supply company charges the following rates for its domestic consumers:

No. of units consumed	Charges/unit (Rs.)
For the first 200 units	1.60
For the next 300 units	2.10
Over 500 units	3.90

Surcharge @ 20% of the bill is to be added to the charges.

14.4 Information Technology

Draw a Flow chart for the above, which will read the consumer number and the number of units consumed and print out the total charges with the consumer number and the units consumed.
(PE II Nov 2006)

Question 8

A bank has 500 employees. The salary paid to each employee is sum of his basic pay, Dearness Allowance and House rent allowance. For the purpose of computing house rent allowance bank has classified his employees into three classes A, B and C. The house rent allowance for each class is computed at the rate of 30 percent, 20 percent and 10 percent of the basic pay respectively. The dearness allowance is computed at a flat rate of 60 percent of the basic pay.

Draw a flow chart to determine the percentage of employee falling in the each of the following salary slabs:

- (i) Above Rs. 30,000
- (ii) Rs. 15,001 to Rs. 30,000
- (iii) Rs. 8,001 to Rs. 15,000
- (iv) Less than or equal to Rs. 8,000.

(PE II May 2005)

Question 9

A water distribution company has two categories of consumers (Domestic and Commercial).

The charges of water per unit consumed by these consumers are Rs. 5.00 and Rs. 8.00 respectively. The computer database of the company has the following information:

- Consumer's name
- Category
- Units consumed
- Bill's date
- Date of payment.

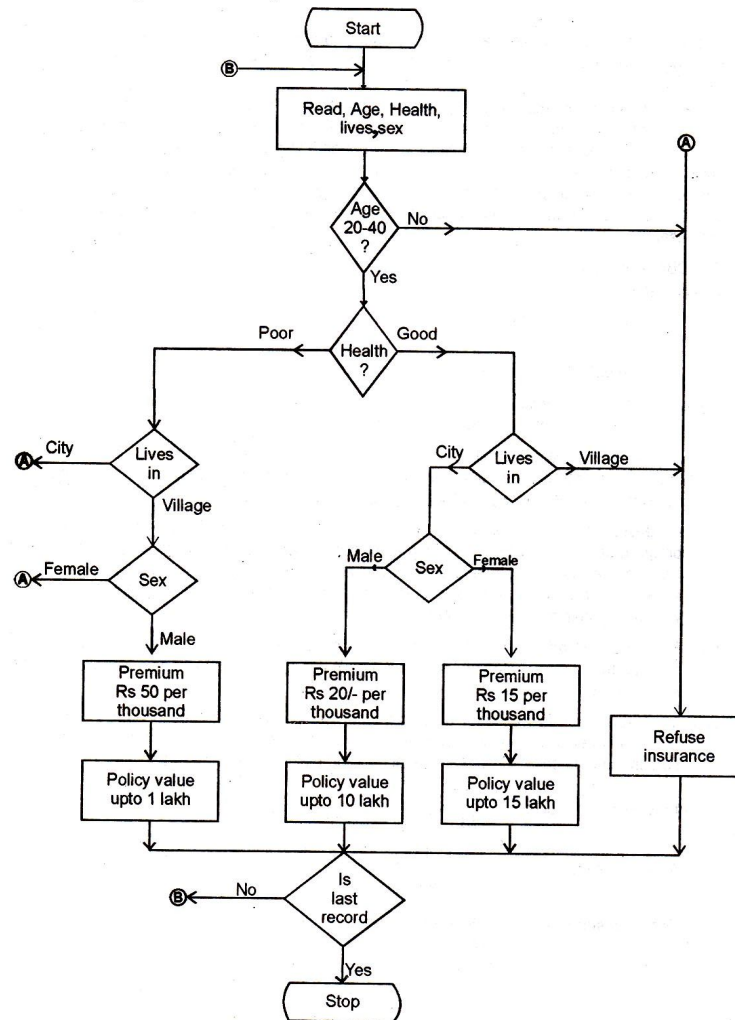
The company processes bills according to the following criterion:

If the consumer is domestic and pays his bill within 10 days of the bill date, 7% discount is given. If he pays the bill within 15 days, no discount is given. If he makes the payment after 15 days of the bill date, 10% surcharge is levied. For commercial consumers, corresponding percentage be 15%, 0% and 15% respectively.

Draw a Flow chart to calculate the bill amount, discount, surcharge and net amount of the bill for each type of consumer and print it.
(PE II Nov 2005)

Answer of question 1

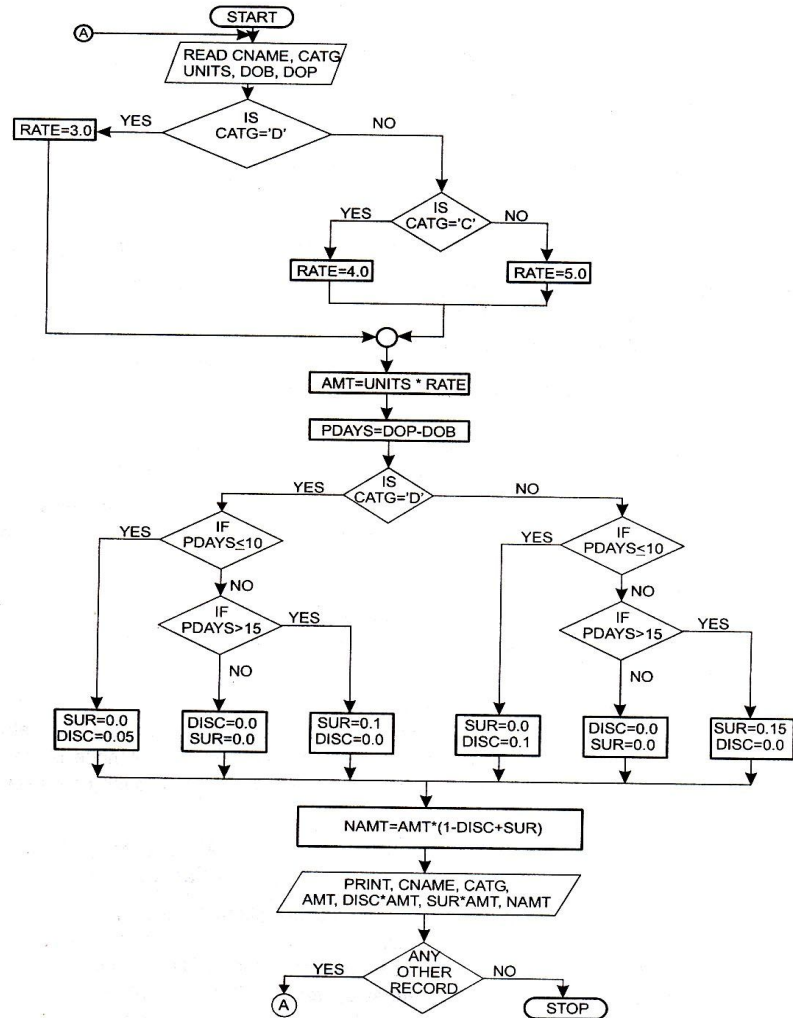
The required flowchart is given below:



Answer of question 2

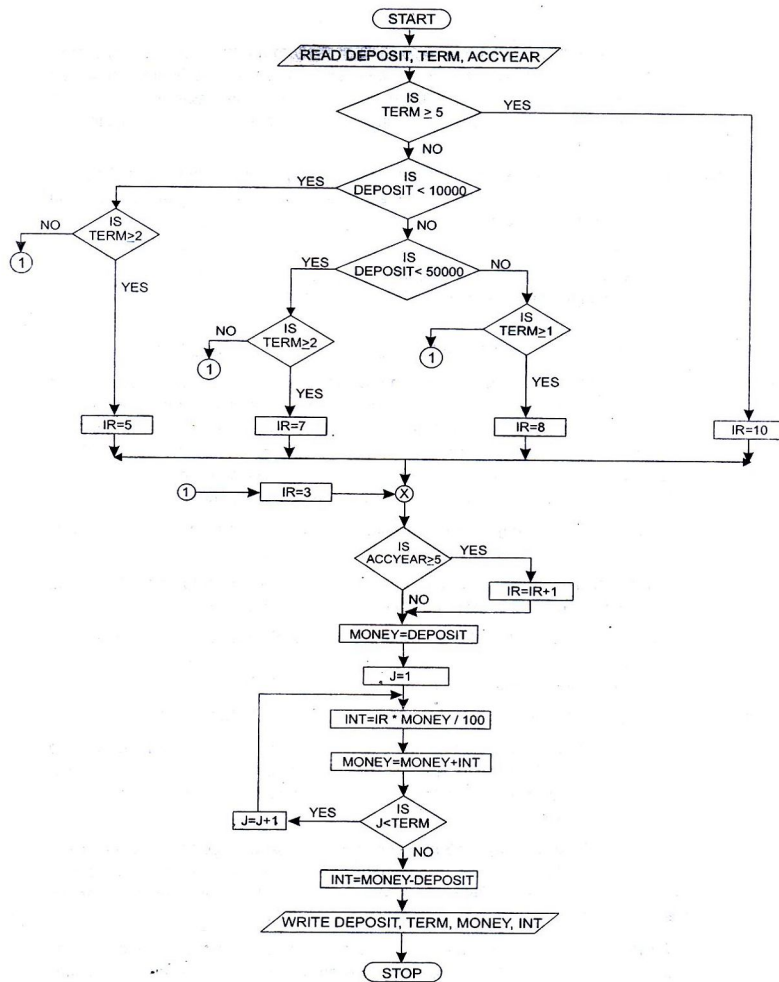
14.6 Information Technology

Flowchart is given below:



Answer of question 3

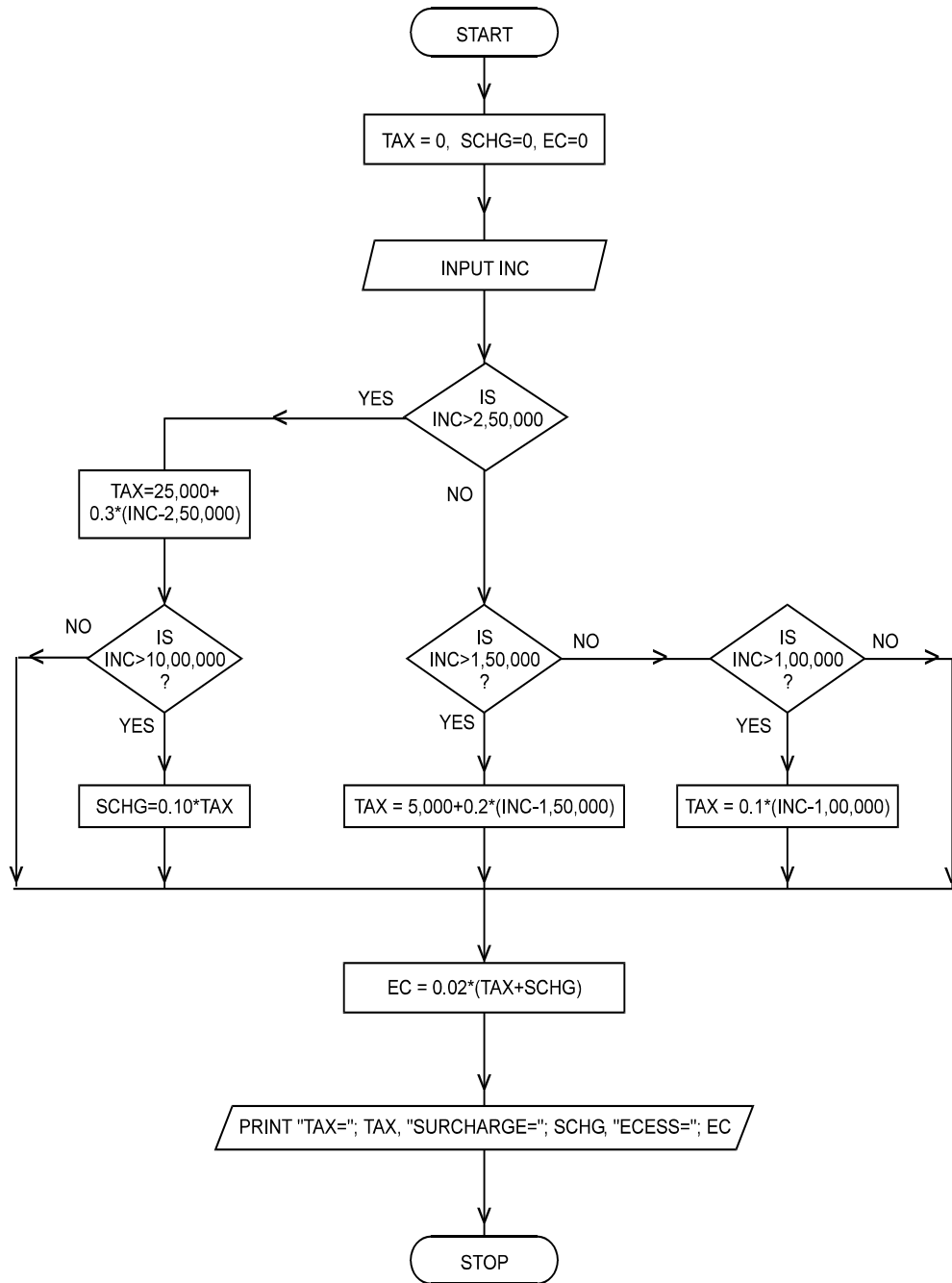
The flowchart is given below:



14.8 Information Technology

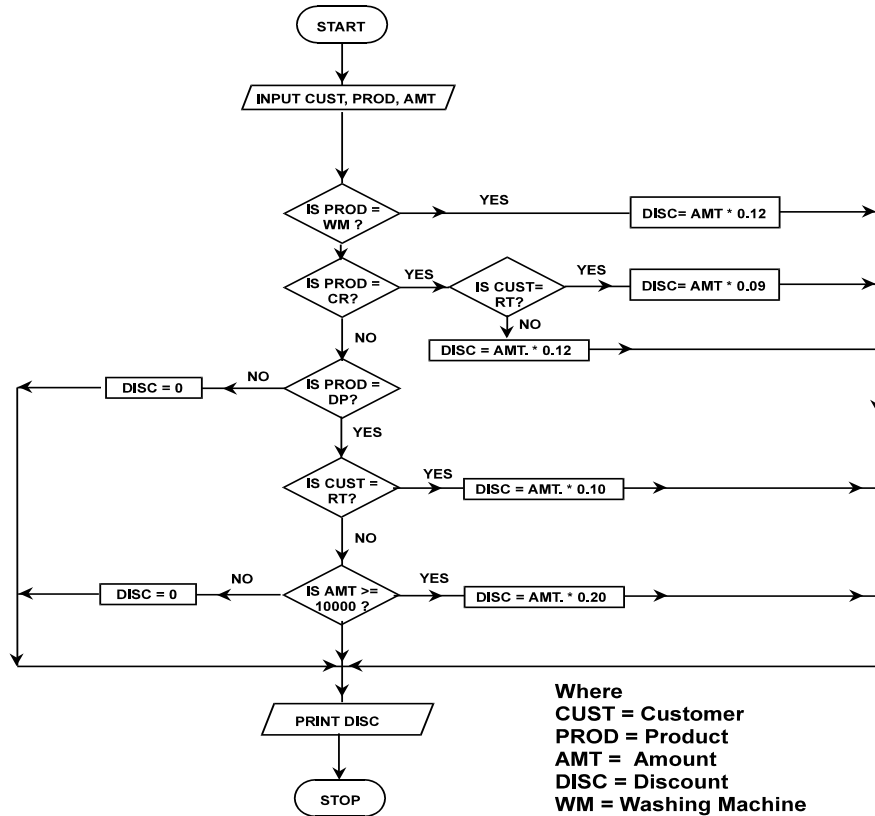
Answer of question 4

The flowchart is given below:



Answer of question 5

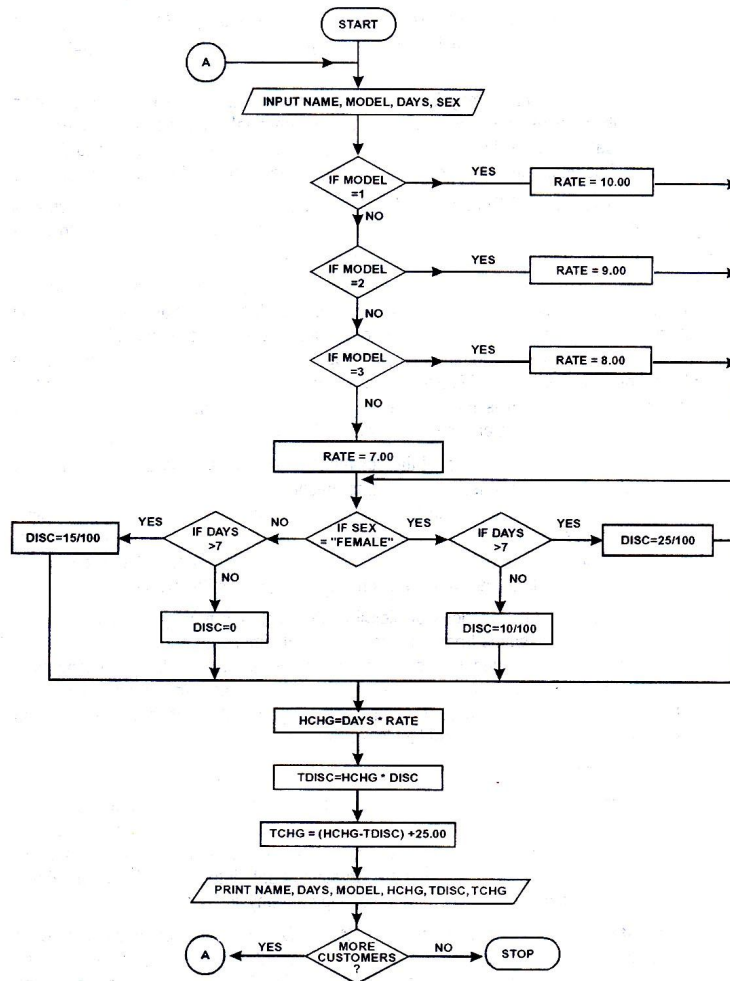
The flowchart is given below:



14.10 Information Technology

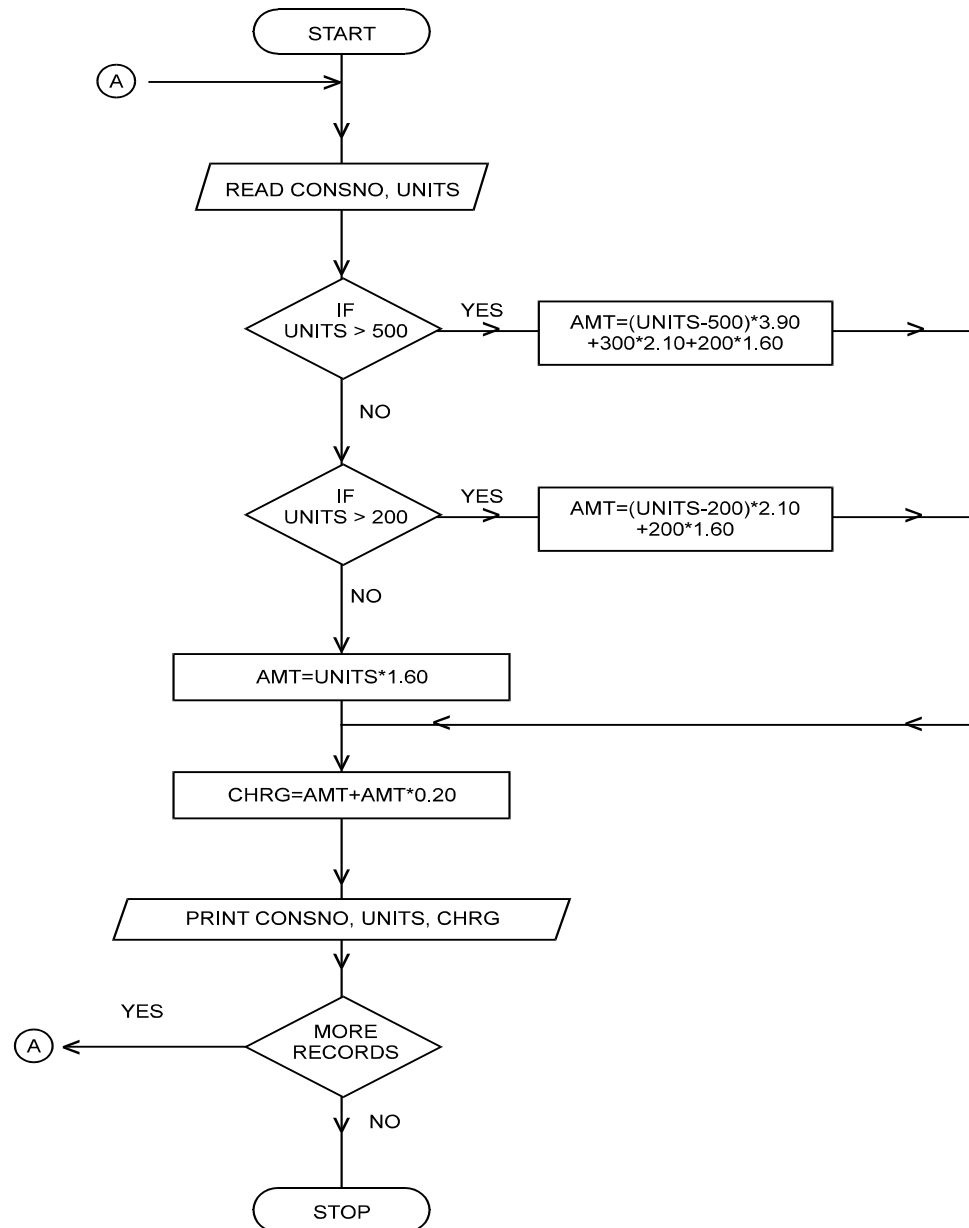
Answer of question 6

The flowchart is given below:



Answer of question 7

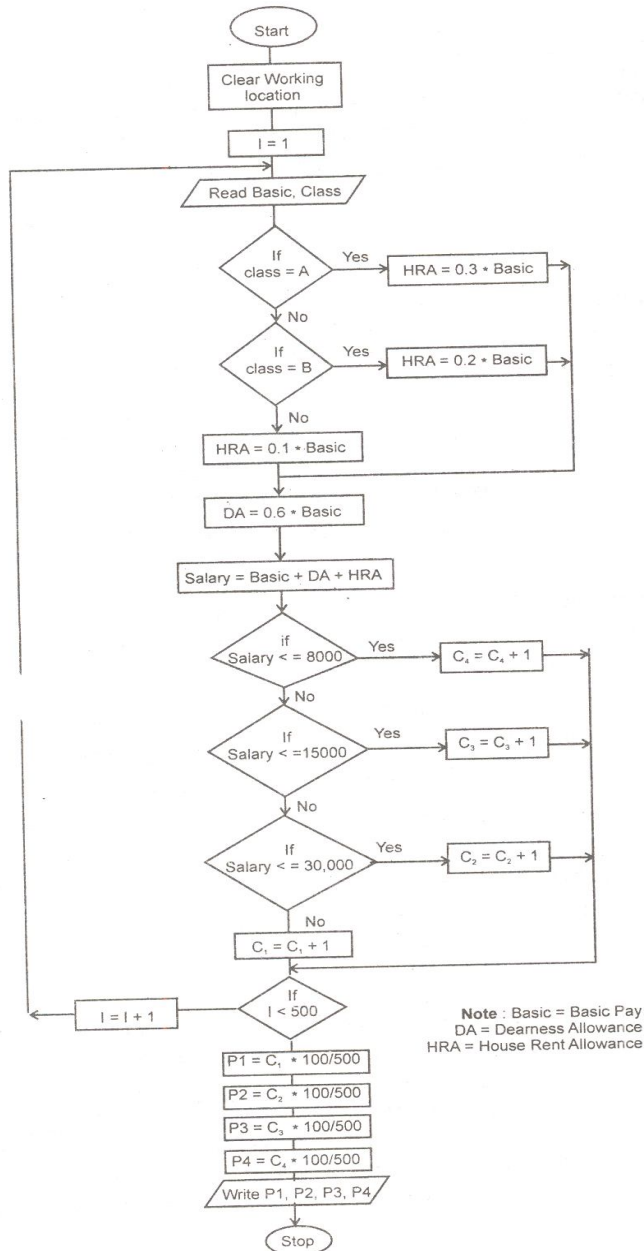
The flowchart is given below:



14.12 Information Technology

Answer of question 8

The flowchart is given below:



Answer of question 9

The flowchart is given below:

