

K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH,
Vidyavihar, Mumbai- 400077

Program: PGDM A/B/RM (Batch2018-20)
Course: Design and Management of Information System
(End Term Examination)

Maximum Marks: 50

Duration: 3 hours

Date: Jan 19, 2019

Question 1 – Answer any FIVE of the following **[20]**

1. Explain the relationship between TPS, MIS, DSS and SSS. What do you mean by Digital Firm?
2. List and explain stages in decision making. Describe the deliverables at each stage.
3. Explain giving appropriate examples the task associated with data processing.
4. Explain the importance of identifying technical, functional and financial parameters for generating feasibility analysis report.
5. Draw a top down flow diagram explaining the stages in system development from users' perspective.
6. Explain the usefulness of creating a "Fishbone Diagram". Give appropriate example.

Question 2- Create decision table/s for the following

1. In order to encourage the regular customers to make early payment on its invoices the following payment procedure is being introduced. **[3]**

10% discount if the invoice is settled within 7 days

7% discount if the invoice is settled within 14 days

5% discount if the invoice is settled within 30 days

2. The accounts department assists the employees in computing income tax based on the following guidelines:
For male employees, the standard deduction is INR 12,000 while for the female employees having salary less than INR 75,000 a standard deduction of INR 15,000 is allowed and for the salary more than or equal to INR 75,000, the standard deduction allowed is INR 12,000.

After deducting the above, the tax is calculated as per the following slab.

For the salary up to INR 50,000 – tax is 20%. If the salary is more than INR 50,000 and less than INR 75000 – tax is 30%. For the salary more than or equal to INR 75000 – tax is 40%.

[7]

Question 3- Create the Report format for the following **[5]**

- a) DgTech requires a report about employees retiring at the end of every month. The details of the employees are available in the Employee database.

Any employee with age ≥ 60 is supposed to retire on the first of subsequent month of his/her birth month. The employee may be granted the extension. Provide a format for report highlighting the name of the employees retiring, names of the employees granted extension, total number of employees retiring, total number of employee granted extension. Each page report should list details about 20 employees.

[OR]

b) A luxury good producer has two types of workers (1) skilled and (2) unskilled and 7 different departments. Details about the workers are stored in a database. Create a report format with appropriate headings that will also highlight for each of the department

- Total number of skilled workers with the years of experience and expertise
- Total number of unskilled worker with year of experience

State your assumptions clearly.

Question 4- Case Analysis

[15]

DgTech offers various learning modules in the field of Data Science to the fresher's as well as working professionals. It has plans to digitize its front office In order to make it more effective for the institute. Create process flow diagram and generate data dictionary for front office management system.

The following are the details

- Upon registration and payment of first instalment, a student is given a specific reference code for future interaction.
- A counsellor assists the students by providing the details pertaining to seat available in a batch, batch profile, course details, fees payment schedule etc.,
- Since the course is modular a student may upgrade and enrol for additional modules as well. In such cases the students are given the final certification on completion of all the modules.
- Drop out option too is available to students on completion of a module and the fees for the remaining enrolled modules are refunded back on the basis of pre specified rules.
- Students enrolled may get the discount in course fees, if the parents are employed with DgTech or they have acquired online scholarship coupons.

Design a process flow diagram for DgTech and also define the data dictionary. Please state (if any) the business rules and assumptions clearly.

