SUGGESTED SOLUTION

IPCC NOVEMBER 2016 EXAM

INFORMATION TECHNOLOGY

Test Code - I N J1 0 9 3
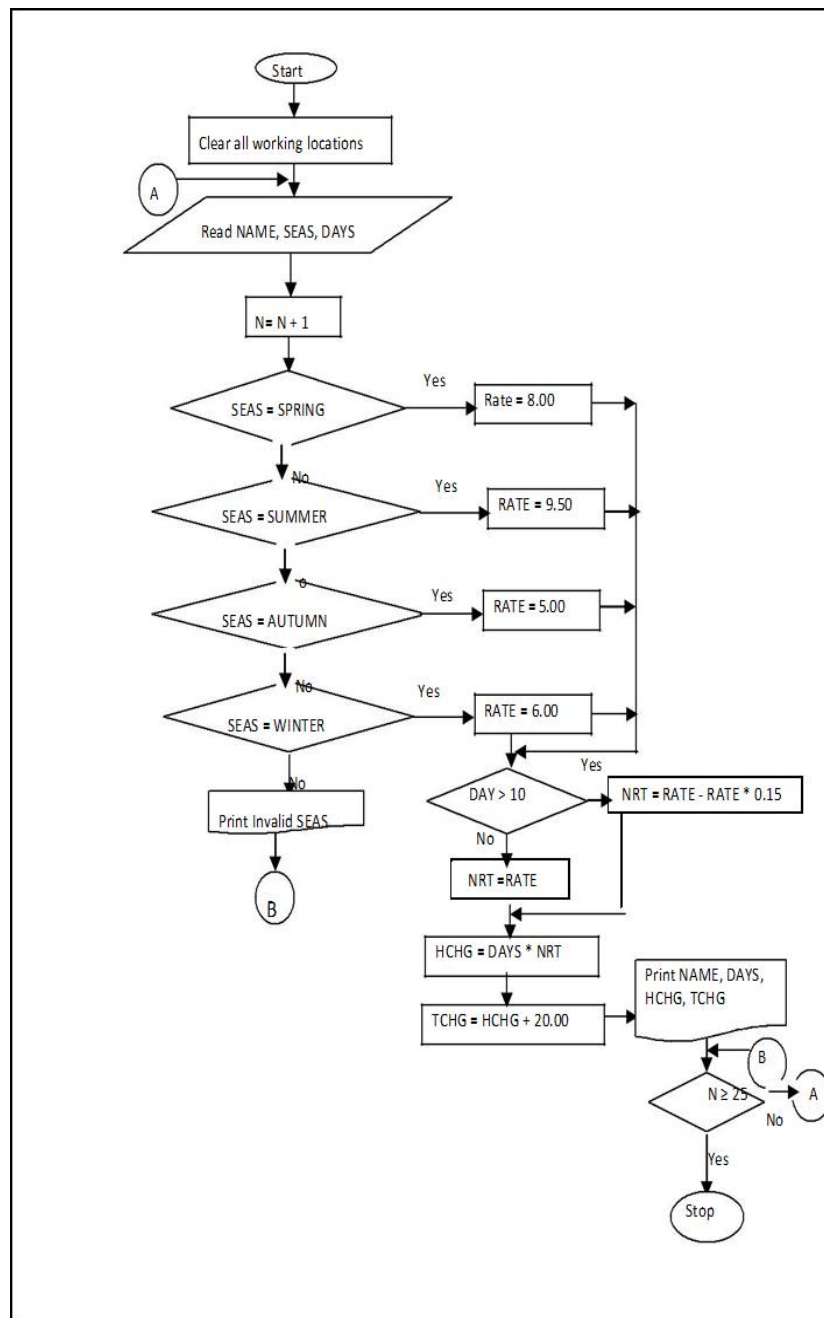
BRANCH - (MUMBAI) (Date : 03.07.2016)

Answer-1 (a) :

The key factors to be considered in implementing BPM are:

a) Scope: A single process, a department, the entire company   **(1 Mark)**
b) Goals: Process understanding, improvement, automation, reengineering, optimization   **(1 Mark)**
c) Methods to be used: Six Sigma, BPM Life Cycle Method, TQM, Informal methods   **(1 Mark)**
d) Skills Required: Consultants, Train Employees, Formal Certification, Basic Education, Existing Skill sets
                                                                              (1 Mark)
e) Tools to be used: White-Boards, Sticky Notes, Software For Mapping, Documenting, Software for Simulation, Comprehensive BPMS   **(1 Mark)**
f) Investments to Make:Training, Tools, Time   **(1 Mark) or**
g) Sponsorship/Buy-in Needed: Executive Level, Department Level, Process Owner Level, Employee Level   **(1 Mark)**

Answer-1 (b) :   **(6 Marks)**

Answer-2 (a) :

Bluetooth is a wireless technology standard for exchanging data over short distances up to 50 meters (164 feet) from fixed and mobile devices, creating personal Area Networks (PANs) with high levels of security. Bluetooth is like a very low-power, short-range radio signal which is secure from the moment they're sent, so unlike any other wireless network we don't have to worry about turning on security. **(2 Marks)**

Few devices that utilize Bluetooth technology are Keyboards and mice, Printers, mobile phones and headsets, PDAs (Personal Digital Assistants), Desktop and laptop computers, Digital cameras, and Remotes. Through the use of a mobile phone with Bluetooth enabled; we can send pictures, videos, exchange business cards and also transfer files to our PC. Both data and voice transmissions can be sent and received through the use of short range networks. **(2 Marks)**

Answer-2 (b) :

- Improving Collaboration and Information Sharing: Business processes designed through a collaborative interface mean Information Technology can integrate its processes with the business-side logic that drives day-to-day operations. **(1 Mark)**
- Reducing the Impact of Human Error: BPA removes human participation in the process, which is the source of many errors. **(1 Mark)**
- Transforming Data into Information: BPA can, apart from collecting and storing data also analyze data and make it available in a form that is useful for decision-making. **(1 Mark)**
- Improving performance and process effectiveness: In many cases, tasks that must be done manually are the bottleneck in the process. Automating those manual tasks speeds up the effective throughput of the application. **(1 Mark)**
- Making users more efficient and effective: People can focus their energies on the tasks they do best, allowing the computers to handle those that machines are best suited for. **(1 Mark)**
- Making the business more responsive: Business can easily automate new applications and processes as they are introduced. **(1 Mark)**

Answer-3 (a) :

Advantages are as follows:

- Several users can use the central unit at the same time.
- It is easy to add new nodes and remove existing nodes.
- A node failure does not bring down the entire network.
- It is easier to diagnose network problems through a central hub. **(2 Marks)**

Disadvantages are as follows:

- The whole network is affected if the main unit "goes down," and all communications stop. If it fails, there is no backup processing and communications capability and the local computers will be cut off from the corporate headquarters and from each other.
- Cost of cabling the central system and the points of the star network together are very high. **(2 Marks)**

Answer-3 (b) :

The strategic capabilities of Internet include the Following:

(i)   Overcome geographic barriers: Capture information about business transactions from remote locations. This provides better customer service by reducing delay in filling orders and improves cash flow by speeding up the billing of customers. For example - Use the Internet and Extranet to transmit customer orders from travelling salespeople to a corporate data centre for order processing and inventory control. **(1 Mark)**

(ii)   Overcome time barriers: Provide information to remote locations immediately after it is requested. Credit inquiries can be made and answered in seconds. For example - Credit authorization at the point of sale using online POS networks. **(1 Mark)**

(iii)   Overcome cost barriers: Reduce the cost of more traditional means of communication. This reduces expensive business trips; allows customers, suppliers, and employees to collaborate, thus improving the quality of decisions reached. For example - Desktop videoconferencing between a company and its business partners using the Internet, Intranet and Extranet. **(1 Mark)**

(iv)   Overcome structural barriers: Support linkages for competitive advantage. Fast, convenient services lock in customers and suppliers. For example - Business-to-business electronic commerce websites

for transactions with suppliers and customers using the Internet and Extranet.   **(1 Mark)**

Answer-4 (a) :
1. **Word Processing:**Use of a computer to perform automatically many of the tasks necessary to prepare typed or printed documents.
2. **Electronic mail:** Use of a computer network that allows users to send, store and retrieve messages using terminals and storage devices.
3. **Voice Mail:** Requires computers with an ability to store audio messages digitally and convert them back upon retrieval.
4. **Electronic Calendaring:** Use of a networked computer to store and retrieve a manager's appointment calendar. Allows other managers' calendars to be accessed and facilitates scheduling.
5. **Video Conferencing**: Use of television equipment to link geographically dispersed conference participants.
6. **Desktop Video Conferencing:** Video and audio equipment are attached to each workstation in the network enabling the two-way communication of picture and way communication of picture and sound.
7. **FAX:** Uses special equipment that can read a document at one end of a communication channel and make a copy at the other end.
8. **Imaging**: Uses Optical Character Recognition (OCR) to convert data on paper to a digital format for storage in a secondary storage device.
9. **Desktop Publishing:** Uses a computer to prepare output that is very close in quality to that produced by a typesetter.

        (5 Marks)

Answer-4 (b) :
Transaction Processing System (TPS) may be defined as a type of information system that collects, stores, modifies and retrieves the day-to-day data transactions of an enterprise. Archetypal examples of such systems would be used in an Airline Reservation Systems, Railway reservation by IRCT, Banking Systems, or the Accounting System of roughly any outsized company. These are designed to process transactions virtually instantly to ensure that customer data is available to the processes that require it.   **(1 Mark)**

Most of the Transaction Processing Systems include one or additional of the following attributes:

Access Control-TPS: Most Transaction Processing Systems come with access control to put a ceiling on users to only those allowed to accomplish so. Access Control ensures that people who are not authorized to use the system are not permissible to influence or transform the transaction process.

Equivalence-TPS: Transactions are processed in the similar format every time to ensure that full effectiveness is achieved. The TPS Interfaces are designed to get hold of identical data for each transaction, despite the consequences of the source.

High Volume Rapid Processing-TPS: TPS is designed to process transactions in an immediate to make confident that the transaction data is available to other users or processes that entail it. The instantaneous processing of transactions is noteworthy to the success of certain industry such as banking.

Trustworthiness-TPS: A TPS system is designed to be robust and trustworthy. The system is capable to process transactions very rapidly, yet at the same time, conduct several checks to make certain that the data integrity is preserved.   **(4 Marks)**

Answer-5 (a) :
The primary purpose for which an enterprise implements automation may vary from enterprise to enterprise. A list of generic reasons for going for BPA may include any or combination of the following:
1. Errors in manual processes leading to higher costs.
2. Payment processes not streamlined, due to duplicate or late payments, missing early pay discounts, and losing revenue.
3. Paying for goods and services not received.
4. Poor debtor management leading to high invoice aging and poor cash flow.
5. Not being able to find documents quickly during an audit or lawsuit or not being able to find all documents.
6. Lengthy or incomplete new employee or new account on-boarding.
7. Unable to recruit and train new employees, but where employees are urgently required.
8. Lack of management understanding of business processes.

9.	Poor customer service.	**(4 Marks)**

Answer-5 (b) :
If used properly and to the extent necessary, working with data in the cloud can vastly benefit all types of businesses. Mentioned below are some of the advantages of this technology:
1.	**Cost Efficient:** Cloud computing is probably the most cost efficient method to use, maintain and upgrade.	**(1 Mark)**
2.	**Almost Unlimited Storage:** Storing information in the cloud gives us almost unlimited storage capacity.	**(1 Mark)**
3.	**Backup and Recovery:** Since all the data is stored in the cloud, backing it up and restoring the same is relatively much easier than storing the same on a physical device. Furthermore, most cloud service providers are usually competent enough to handle recovery of information.	**(1 Mark)**
4.	**Automatic Software Integration:** In the cloud, software integration is usually something that occurs automatically. Not only that, cloud computing allows us to customize the options with great ease. Hence, we can handpick just those services and software applications that we think will best suit the particular enterprise.	**(1 Mark)**
5.	**Easy Access to Information:** Once we register ourselves in the cloud, we can access the information from anywhere, where there is an Internet connection.	**(1 Mark)**
6.	**Easy Access to Information:** Once we register ourselves in the cloud, we can access the information from anywhere, where there is an Internet connection.	**(1 Mark)**