

Part-B Unit 1: IT and ITeS Industry

SESSION 1: Introduction to IT and ITeS Industry

➤ Exercise:-

1. What is Information Technology? How does it help in enabling various business services.

Answer:- IT includes all types of technology used to manage information, such as computer hardware technology and various software applications used to create, store and transfer information.

IT is an integral part of almost all modern businesses. Modern businesses run on computers, networks, communication technology and information systems are essential parts of every business today. Every business, large, medium or small, needs to invest in technology to compete. IT brings a variety of benefits to a business, like automating most business operations, enhancing the customer relations, developing a business a relationship with potential customers.

2. What is BPO? List any of its 5 application areas.

Answer:- Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system. BPO also comes under IT services as IT plays a very useful role in optimising the business performance. The BPO industry is highly organised and hence various kinds of jobs are outsourced in India. India has proven its expertise in last many years by reducing costs with firm control on the quality of the service.

Some of the BPO services are as follows:

1. Financial & Accounting Services
2. Taxation and Insurance Services
3. E-Publishing and web Promotion
4. Legal Services and content Writing
5. Multimedia & Design Services

3. How is BPO different from BPM?

Answer:- Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system. BPM includes multinational companies, local ie Indian service providers and global inhouse centers.

SESSION 2: IT Applications

➤ Exercise:-

1. How has IT influenced our daily life and work place?

Answer:- In our daily life, we use air conditioners, refrigerators, washing machines, microwave ovens and many other appliances using software. We can store and manage all the information about our important tasks, appointments, schedules and list of contacts in a computer. Computer is, therefore, playing a vital role in our lives and we cannot imagine the world without computers. In offices, computers and software applications help in accomplishing a wide variety of tasks more effectively. In the industries, where attention to detail, speed, and efficiency are important, such as assembly-line, automation is an essential need and has become common. Web services and Office productivity applications form the basis of modern business.

2. How are computers help in managing a library?

Answer:- Nowadays, many libraries are computerised. Each book has a bar code associated with it. This makes it easier for the library to a keep track of library members, books and the availability of a specific book. Library management software is used to issue and return the book. Each book in the library has a magnetic strip attached to it that is deactivated before the book can be borrowed.

3. Write a note how IT has impacted education sector positively?

Answer:- The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

ICT in the classroom:

There are many ways in which the ICT is used for education in the classroom, such as

1. E-learning classrooms with digital learning content
2. Smart-board presentations
3. Videos on science experiments and places difficult to reach like marine life, physiology of the body, space etc.
4. Image and video processing (creation and editing)
5. Desktop publishing of magazines and other documents;
6. Educational games and activities
7. Computer based learning through educational disks
8. Information search and analysis on the Internet.

Education — anywhere anytime:

Any student in India can access the NCERT books online through the website www.epathshala.nic.in or mobile app. Apart from this there are a variety of websites and mobile apps to access educational resources on any topic. You can also contact a teacher/trainer via Internet to use WBT (Web-based Training). In this way education has reached the far flung areas by reaching the unreached.

Teaching aids and media:

ICT is used mostly as a teaching aid in schools to:

1. Use multimedia (pictures, animations, audio-visuals) to explain topics difficult to explain.
2. Make the lessons more engaging and interesting through interactive & animated presentations.
3. Organise lessons, lesson plans, worksheets etc. using the computer.
4. Collect and organise the information relevant to the subjects.

4. Write a brief note on LMS.

Answer:- Learning Management Systems (LMS) are used by several institutions to train students and enterprises to train their man power. A trainees can register themselves on the official website to access LMS and can get many services from LMS. The student can be benefited by using LMS, as it can be used to:

1. Follow lessons anytime, anywhere and by using any device.
2. Submit queries seeking clarity on any topic, getting replies, submit comments through forums.
3. Take part in the co-curricular activities via video.
4. Monitoring the progress and academic performance (usually by parents through parent login).

5. Discuss how IT has revolutionalised health care sector.

Answer:- ICT has revolutionalised the health sector great deal. Patient Management Sub-System is used to maintain and manage patients' records. Hospital Management Module takes care if various activities pertaining to hospital administration. The computerised machines are used for ECG, EEG, Ultrasound and CT Scan. The variety of measuring instruments and surgical equipment are used to monitor patients' conditions during complex surgery. Expert systems help in diagnosis. Health care manufacturing companies use computers to aid the production of diagnostic tools and instruments. Laboratory and dispensaries are equipped with advanced computerised machines. They are used in scanning and diagnosing different diseases.

6. What is E-Governance? How IT has realized the vision of E-Governance?

Answer:- The government makes use of advanced communication technology and large-scale computer applications in its daily operations thus encouraging G2C (Government to Customer) e-governance practices. Digital India and e-governance initiative of Government of India are best examples of this. Government and non-Governmental Organisations (NGOs). In addition to this, International Government Agencies use ICT applications to communicate and provide various services to the people and is called as e-governance. There are various official web portals of the Government of India for e-governance. There are various advantages of e-governance. The Income tax department, sales tax department, preparations of voters list, preparation of PAN card makes use of the computer system. Many government services are available online. Electricity bills can now be paid online. The government uses electronic voting for elections, by replacing the traditional voting slip and ballot box. People can enroll themselves in the electoral roll through the State Election Commission portal. Computers are common-place in modern society, and tend to make previously laborious manual tasks of data entry much simpler and quicker.

Assessment

1. What is the basic difference between IT and ITeS? Which 4 operations does IT encompass?

Answer:- Information Technology (IT) facilitates faster transmission of information in various fields catering to our requirements. Based on IT is the Information Technology enabled Services (ITeS) sector which has not only changed our impression as technology people on the international front but has also contributed to our nation's economy significantly. In this session, we shall explore the fundamentals of Information Technology (IT) and IT enabled Services (ITeS). Information Technology (IT) encompasses 4 basic operations:

1. Creating information
2. Managing information
3. Storing information
4. Exchanging information.

2. How is data different from information? Explain with an example.

Answer:- Computers take data and instructions as input, process the data as per the instructions given and produce the meaningful results as output. This output is information. Data refers to the facts or raw material, which are processed to get the information. For example, Number of items sold, unsold and returned in a shop is factual data of the stock in that shop.

3. Explain ITeS.

Answer:- Business services whose quality is improved by incorporating Information Technology in the business systems are called IT enabled Services (ITeS). ITeS is also called web-enabled services or remote services that cover the entire operations which exploit Information Technology for improving efficiency of an organisation. When business services are enabled, they provide a wide range of career options that include opportunities in all enterprises and companies.

4. What are BPO services? How are they different from BPM?

Answer:- Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system. BPO also comes under IT services as IT plays a very useful role in optimising the business performance. The BPO industry is highly organised and hence various kinds of jobs are outsourced in India. India has proven its expertise in last many years by reducing costs with firm control on the quality of the service.

BPO services are executed through an external service provider who is not the part of the business system while BPM includes multinational companies, local ie Indian service providers and global inhouse centers.

5. Discuss the advantages of BPO services.

Answer:- BPO Service Industry is doing exceptionally well in India because of the following advantages:

1. BPO service providers in India invest in hi-tech hardware and software to deliver the best of services. They follow quality checks to ensure error free and exceptional service.
2. Government of India is encouraging BPO Industry in India by providing necessary infrastructure and logistical support.
3. BPO Industry in India is highly developed and capable of delivering numerous types of BPO services in exceptional quality.

6. What is a BPM industry?

Answer:- The organisations within the IT-BPM industry includes Multinational Companies which have their headquarters outside India but operate in multiple locations worldwide, Indian Service Providers who have their headquarters in India while having offices at many international locations and Global In-house Centers who cater to the needs of their parent company only and do not serve external clients.

7. Discuss IT applications in certain major areas.

Answer:-

IT in education

Computers and Information Technology are extensively used in education for teaching-learning and assessment. The software and hardware technology is used for creation and transmission of information in various forms including still pictures, audio, video and animation to the learners. The learning becomes easier and accessible through IT. A lot of teaching resources are available for teachers to teach in a better way. The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

IT in communication

Communication is used to convey messages and ideas, pictures, or speeches. A person who receives this must understand clearly and correctly. Modern communication makes use of computer system, handheld devices and communication network. We use computers for email, chatting, FTP, telnet and video conferencing.

IT in banking

Modern banking systems run on computers. Every activity of bank is now online. The customer's data and transactions are recorded by computers. Recurring deposits (e-RD), Fixed deposits (e-FD), money transfers (NEFT, RTGS), etc., are done using Internet. Capital market transactions, financial analysis and related services are available in online platforms. Bank customers use Automated Teller Machines (ATM) for cash deposits and withdrawal, or to view current balance.

8. What is the role of IT in education and medical field?

Answer:-

IT in Education

The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

ICT in the classroom: There are many ways in which the ICT is used for education in the classroom, such as

1. E-learning classrooms with digital learning content
2. Smart-board presentations
3. Videos on science experiments and places difficult to reach like marine life, physiology of the body, space etc.

4. Image and video processing (creation and editing)
5. Desktop publishing of magazines and other documents;
6. Educational games and activities
7. Computer based learning through educational disks
8. Information search and analysis on the Internet.
9. Use multimedia (pictures, animations, audio-visuals) to explain topics difficult to explain.
10. Make the lessons more engaging and interesting through interactive & animated presentations.
11. Organise lessons, lesson plans, worksheets etc. using the computer.
12. Collect and organise the information relevant to the subjects.

IT in Health Care (Medical Sector)

ICT has revolutionised the health sector great deal. Patient Management Sub-System is used to maintain and manage patients' records. Hospital Management Module takes care if various activities pertaining to hospital administration. The computerised machines are used for ECG, EEG, Ultrasound and CT Scan. The variety of measuring instruments and surgical equipment are used to monitor patients' conditions during complex surgery. Expert systems help in diagnosis.

Use of ICT in diagnosis

With the advancement in computer hardware and software technology, various high-tech machines are used in the diagnosis and treatment of critical diseases diagnosed at the early stages and the patients can be given treatment accordingly.

Some of these machines are:

Computerised axial tomography Machine (CAT)

ECG—Electrocardiogram Machine

EEG (Electro-encephalography)

Blood Sugar Testing Machine

Blood Pressure Measuring Machine

9. How is LMS different from traditional way of training and learning?

Answer:- Learning Management Systems (LMS) are used by several institutions to train students and enterprises to train their man power. LMS is different from traditional learning system in that, uses can:

1. Follow lessons anytime, anywhere and by using any device.
2. Submit queries seeking clarity on any topic, getting replies, submit comments through forums.
3. Take part in the co-curricular activities via video.
4. Monitoring the progress and academic performance (usually by parents through parent login).

10. How do businesses and banks harness the power of IT?

Answer:- IT in business

Computers are used in various business enterprises for various operations such as payroll calculations, preparing budgeting, sales analysis, financial forecasting, managing inventory and maintaining stocks. Transactions are done through the internet (e-commerce). IT facilitates marketing, customer visit, product browsing, shopping basket checkout, tax and shopping, receipt and process order. E-commerce offers services pertaining to processing inventory management, transactions, documentation, presentations, and gathering product information. Smart cards, such as credit cards and debit cards are used in shops. These cards have a metallic strip on which the user's Personal Identification Number (PIN), and account number is stored and can be read when it is passed through a special reader. Airlines use large-scale computer applications for their reservations system, both in the airports and in central reservations call-centers. Other businesses that have large-scale computing requirements are insurance claims systems and online banking, which both have large numbers of users and operators interacting across a sophisticated system.

IT in banking

Modern banking systems run on computers. Every activity of bank is now online. The customer's data and transactions are recorded by computers. Recurring deposits (e-RD), Fixed deposits (e-FD), money transfers (NEFT, RTGS), etc., are done using Internet. Capital market transactions, financial analysis and related services are available in online platforms. Bank customers use Automated Teller Machines (ATM) for cash deposits and withdrawal, or to view current balance.

11. Discuss the role of government in serving the masses using IT.

Answer:- The government makes use of advanced communication technology and large-scale computer applications in its daily operations thus encouraging G2C (Government to Customer) e-governance practices. Digital India and e-governance initiative of Government of India are best examples of this. Government and non-Governmental Organisations (NGOs). In addition to this, International Government Agencies use ICT applications to communicate and provide various services to the people and is called as e-governance. There are various official web portals of the Government of India for e-governance. There are various advantages of e-governance. The Income tax department, sales tax department, preparations of voters list, preparation of PAN card makes use of the computer system. Many government services are available online. Electricity bills can now be paid online. Government uses

electronic voting for elections, by replacing the traditional voting slip and ballot box. People can enroll themselves in the electoral roll through the State Election Commission portal. Computers are common-place in modern society, and tend to make previously laborious manual tasks of data entry much simpler and quicker.

12. Write a note on IT applications in general in our daily lives.

Answer:- If we look around, we can observe the use of computer and Information Technology in various areas such as homes, workplaces, in the modern service industries and in many other aspects our life. Personally we use IT for entertainment or amusement like listening to music, watching videos, playing games, doing office work and assignments, video chatting and exchanging messages, managing daily plans, reading online books, paying utility bills, booking ticket for traveling, hotels, shows, conducting bank operations, etc. The various application areas are business, banking, insurance, education, marketing, health care, engineering design, military, communication, animation, research, agriculture and government.

A personal computer (PC) or a laptop is used to work at home along with entertainment such as to do household accounts, play games, surf the web, use e-mail, create music, and pursue a range of other hobbies. They are also used to play games. It includes action games, role playing games, puzzles and many more. A PC with a CDROM drive, sound card, and speakers can play audio CD. A computer can be used from home to study a wide range of online training courses. Computers and digital devices are now used for online shopping and e-commerce.

In our daily life, we use air conditioners, refrigerators, washing machines, microwave ovens and many other appliances using software. We can store and manage all the information about our important tasks, appointments, schedules and list of contacts in a computer. Computer is, therefore, playing a vital role in our lives and we cannot imagine the world without computers.