Define the term micr

Question 1 Define the term MICR and explain what it is. Using a suitable example, discuss how does MICR readers work and what is it used for? Answer: MICR, or Magnetic Ink Character Recognition, is a character recognitiontechnologyused primarily by the banking industry to facilitate the processing of cheques and makes up the routing number and account number at the bottom of a cheque. It allows computer to read account number off printed documents. Its different and unlike with barcodes or other similar technologies, MICR codes can be easily read by humans. MICR characters usually contain iron oxide.

They are printed in special typefaces with a magnetic ink or toner and in the form of either and E-13B or CMC-7 Font. Each font series is made up of a series of numbers and symbols specifically designed for readability on check sorting machines which read and extremely high rates of speed. The machine can always determine what each series of number signifies quickly, due to the symbols provide a beginning and end pint for each group of numbers. Line placement, character placement skew and quality are several critical components of printing MICR; the line must be precisely positioned in the MICR Clear Band area.

The use of magnetic printing allows the characters to be read reliably even if they have been overprinted or obscured by other marks, such as cancellation stamps and signature. The magnetic scanning of a typical check has a smaller error rate than with optical character recognition systems. As for well printed MICR documents, the " can't read " rate is usually less than 1% while the misread rate is in the order of 1 per 100, 000 characters. A cheque is a

suitable example to discuss how MICR readers work and what it is use for does.

When a bank receives a check for payment, is uses an MICR inscriber to print the amount of the check in MICR characters in the lower-right corner. The check then is sorted or routed to the customer's bank, along with thousands of others. Each check is inserted in an MICR reader, which sends the check information – including the amount of the check – to a computer for processing. When you balance your checkbook, verify that the amount printed in the lower-right corner is the same as the amount written on the check; otherwise, your statement will not balance. Some retailers use MICR reader to minimize their exposure to check fraud.

Corporations and government agencies also use the technology to speed up the sorting of documents. The banking industry has established an international standard not only for bank numbers, but also for the font of the MICR characters. This standardization makes it possible for people to write checks in other countries. Question 2 Discuss what a laser printer is and how it differs from Thermal Printers. Answer: A laser printer is a high-speed, high quality nonimpact printer. It's a printer that uses a focused beam or light to transfer text and images on to paper.

Though contrary to popular belief, the laser does not actually burn the images on to the paper. The laser beam will fire at the surface of a cylindrical drum called a photoreceptor instead of as a paper passing through the printer. This drum has an typically positive electrical charge, that is reversed in areas where the laser beam hits it. The laser beam is able to print patterns such as text and pictures on to the photoreceptor by

reversing the charge in certain areas of the drum. Once the pattern has been created on the drum, it is coated with toner from a toner cartridge.

The positively charged toner clings to areas of the drum that have been negatively charged by the laser. The drum is given a strong negative charge which allows the toner to transfer and stick to the paper when the paper is passing through the printer. Laser printers do not use ink therefore they have less smearing problems that ink-jet printers and are able to print pages faster. While laser printers typically cost more that inkjet printers, most laser toner cartridges last longer than ink cartridges, which makes their cost per page is about equal.

Based on this reason, businesses tend to use laser printers, while consumers are more likely to use inkjet printers. A thermal printer generates images by pushing electrically heated pins against heat-sensitive paper. Basic thermal printers are inexpensive, but the print quality is low and the images tend to fade over time. Self-service gas pumps often print gas receipts using a built-in lower-quality thermal printer. Many point-of-sale terminals in retail and grocery stores also print purchases receipts on thermal paper.

Two special types of thermal printers have high print quality and can print at much faster rates than ink-jet and laser printers. A thermal-wax-transfer printer generates rich, nonsmearing images by using heat to melt colored was onto heat-sensitive paper. Thermal wax-transfer printers are more expensive than many color laser printers. Both printers have advantages and disadvantages; by comparing we are able to differentiate them. The advantages of a laser printer are it is an accessible and efficient office document printer. The document quality is very high, except for barcodes.

There are a few disadvantages for a laser printer. It prints labels in sheets and resulting in waste. Its label and wristband adhesives can ooze from fuser and cause jamming. The barcodes require more ink and the toner is driving up the costs. Lastly, output susceptible to toner flaking and smudging. As for thermal printers it has more advantages than a laser printer, such as it is designed specifically for label and wristband printing, print on demand which does not lead to wastage, it is simple to operate and the best part are its durable, it has low maintenance and its does not have toner expenses.

The disadvantages of a thermal printer are, for example they cannot print 8 1/2- by 11-inch documents and the printers are not readily available in hospitals today. Referencing List Question 1 - http://en. wikipedia. org/wiki/Magnetic_ink_character_recognition - http://www. whatismicr. com/index. html - Pg 281 from Discovering COMPUTERS by Gary Shelly Question 2 - http://www. techterms. com/definition/laserprinter - Pg 321 from Discovering COMPUTERS by Gary Shelly -http://www. datarayusa. com/index. php? option= com_content& view= article& id= 52& Itemid= 70