



**INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY
STANDARD LEVEL
PAPER 1**

Monday 14 May 2001 (afternoon)

1 hour

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer all the questions.
- For each question, choose the answer you consider to be the best and indicate your choice on the answer sheet provided.

1. Information and data are different. Which of the following is an example of data?
 - A. Numbers, codes or words without identification of their meaning
 - B. Numbers and descriptive units used to create a graph on a spreadsheet
 - C. The analysis of the results of an experiment
 - D. Statements which describe an object

2. Which statement describes a situation where people should be used rather than computers?
 - A. Converting a photograph into a digital image
 - B. Finding a specific record in a database
 - C. Selecting names and addresses randomly to use in a mailing list for a survey
 - D. Making financial decisions based on the results from a spreadsheet

3. Which is an example of information with economic value?
 - A. Barcode numbers
 - B. International Standard Book Numbers (ISBN)
 - C. A list of people's names, addresses and purchases made
 - D. A list of courses that a student takes

4. What is the definition of digital data?
 - A. Data with values that can vary continuously
 - B. Data with discrete values in binary format
 - C. Data with economic value
 - D. Data that can be stored or edited

5. Frequent use of IT equipment over a long period of time may lead to health problems. What responsibility does an employer have to prevent such problems?
- A. To monitor the time that employees spend training
 - B. To provide an air-conditioned working environment
 - C. To provide access to the network at different locations
 - D. To organise the daily routine of each employee indicating when breaks can take place
6. Which device is required to convert a voice input system into a digital form?
- A. Microphone
 - B. Sound card
 - C. Video card
 - D. Speaker
7. Which device allows for the easy and rapid checking out of grocery items at a food store?
- A. Keyboard
 - B. Touch screen
 - C. Barcode reader
 - D. Numerical key pad
8. What is an advantage of CD-ROMs as storage devices?
- A. They allow faster access than the hard disk.
 - B. They require a special operating system.
 - C. They cannot be damaged.
 - D. They are read-only.

9. Which statement defines a *bug* in computer terminology?
- A. An unwanted operation caused by a computer virus
 - B. An unwanted operation found in an operating system
 - C. An unwanted operation or function found in either software or hardware
 - D. A mechanically corrupt component of a computer
10. A serial number is often required to complete software installations. Which statement describes the main purpose of this number?
- A. To prevent software piracy and register users for future upgrades
 - B. To limit the number of copies produced by the company
 - C. To provide a free backup from the company
 - D. To allow access to the software company's Web site
11. Which situation describes a person acting in an unethical way?
- A. A network administrator monitors computer activity of employees according to company policy.
 - B. A library collects data about the books read by its users and shares this information with a local bookstore without the users' knowledge.
 - C. A store owner records in a database the name and credit card information of customers who pay by credit card.
 - D. An IT manager purchases one copy of a piece of software and makes one backup copy to archive in case the original becomes damaged.

12. Security is a major issue in many organisations. Which statement describes an acceptable security method that uses IT to prevent unauthorised physical access to a file server?
- A. A firewall is used to require password changes.
 - B. Biometric data is used to allow entry to the secure area where the file server is located.
 - C. A network administrator restricts access to certain network files or directories.
 - D. Security systems are used to prevent hackers from gaining access over a network to the file server.
13. Which task is performed by utility programs?
- A. Setting the internal clock on the computer
 - B. Producing digitised images of photographs
 - C. Controlling input and output devices
 - D. Defragmenting a hard disk
14. What is the advantage of using a desktop publishing program to prepare a company report?
- A. Graphs based on numerical data can be created.
 - B. The pages of the report can be easily laid out.
 - C. Text, graphics, sound and movies can be presented in a pleasing format.
 - D. Images presented in the report can be edited.
15. Which is a characteristic of word processors?
- A. Documents can be saved in only one format.
 - B. The size, face type and style of characters can be changed.
 - C. Spelling can be checked without the need for human proof reading.
 - D. Only files saved as text files can be imported.

16. Which file format allows images to be displayed on web pages?
- A. RTF
 - B. MP3
 - C. GIF
 - D. ASCII
17. Many magazine publishers now store photographs in digital format. Which situation could be regarded as having ethical considerations?
- A. Sending copies of the photographs by e-mail attachments to the editor
 - B. Combining photographs into a single image to illustrate a newspaper story
 - C. Printing multiple copies of photographs on a colour printer
 - D. Saving the images on the publisher's network
18. Which application software was first used on personal computers?
- A. Database manager
 - B. Sound editor
 - C. Image editor
 - D. Spreadsheet
19. A computer simulation can help people achieve a better understanding of the world. Which statement describes a characteristic of computer simulations?
- A. Computer simulations cannot be used for forecasting or training.
 - B. Computer simulations can use only one set of conditions.
 - C. Computer simulations are accurate only if they correspond to reality.
 - D. Computer simulations are independent of the input data.

20. What is the ethical responsibility of the IT manager who maintains a database of personnel data?
- A. Installing virus checking software
 - B. Ensuring the accuracy of the data
 - C. Funding upgrades of the database management software
 - D. Ensuring all company workstations can access the database
21. Which action describes an invasion of privacy?
- A. A student who returned the registration card for a piece of software receives software advertisements.
 - B. An online retailer records the name, address and telephone number of a customer.
 - C. A company records the number of times a homemaker accesses the company file server.
 - D. Government agencies match information about individuals in several databases to predict how they will vote.
22. What is an advantage of a relational database over a flat-file database?
- A. It eliminates data redundancy.
 - B. It allows saving of files on a central server.
 - C. It allows multi-user access.
 - D. It reduces the possibility of computer crime.

23. Why are there so many digital musical files on the Internet?
- A. The music file formats allow the files to transfer quickly.
 - B. They are free of intellectual property rights.
 - C. Digital music files can be directly downloaded from the Internet to a digital music device.
 - D. Musicians are combining files to produce new music.
24. In a shopping centre information systems are provided for use by customers. What would be the appropriate human-computer interface in this situation?
- A. Slideshow presentation with input using a touch screen
 - B. Internet access with input using a mouse
 - C. An interactive multimedia presentation with input using a touch screen
 - D. Slideshow presentation with input using a keyboard
25. Which statement(s) describe situations where distance learning could be used successfully?
- I. Two schools wish to share the teaching expertise of their staff.
 - II. Students have to travel a long distance to the nearest school.
 - III. Students wish to develop projects with students in another country.
- A. I only
 - B. I and II
 - C. II and III
 - D. I, II and III

26. How would employees in a company be positively affected by the use of robots?
- A. It will not affect the self-esteem of employees.
 - B. It will reduce the anxieties of employees about losing their jobs.
 - C. It will allow some employees to be trained to work on more intellectually demanding tasks.
 - D. It will require employees to work on less creative tasks.
27. Smart weapons are changing modern warfare. Which statement describes an ethical consideration regarding the use of such weapons?
- A. They are more expensive than conventional weapons.
 - B. They may not reliably hit their intended target.
 - C. They use artificial intelligence.
 - D. They use visual pattern recognition technology.
28. Which device is used for input?
- A. Virtual Reality Helmet
 - B. Graphics Tablet
 - C. Speakers
 - D. Bar Code Printer
29. Which is an example of ‘push’ technology in the merging of computers and broadcast technologies?
- A. Displaying unrequested videos when an Internet site is accessed
 - B. Requesting personal information before users are permitted to enter a Web site
 - C. Sending many requests to commercial Web sites in an attempt to disrupt services
 - D. Sending a personal e-mail to more than one person

- 30.** Which statement defines teleconferencing?
- A. Participants are at various locations and simultaneously engage in conversation.
 - B. Participants are able to see and hear each other.
 - C. Participants are at various locations and television images are simultaneously exchanged between them.
 - D. Participants are able to hear and see each other but not simultaneously.
- 31.** Cellular phones have become a major communication technology for individuals and businesses. Which is/are characteristic of modern cellular phones?
- I. They can be used in an emergency situation where there is no other possible communication system.
 - II. They have increased communication between individuals.
 - III. They can be used without the time and cost of installing phone lines.
- A. I only
 - B. I and II
 - C. II and III
 - D. I, II and III
- 32.** Which phrase describes the process of transferring a file from a desktop computer to a file server?
- A. Downloading the file
 - B. Encrypting the file
 - C. Uploading the file
 - D. Booting the system

33. In order to increase the transmission speed of data from the WWW to your home PC, the bandwidth should be increased. How is this achieved?
- A. Using a faster modem
 - B. Using a faster personal computer
 - C. Using an ISDN connection, not a dial-up modem connection
 - D. Downloading information only from .com sites, **not** .org sites
34. What is the main purpose of setting up a computer network?
- A. To share applications and information over the network
 - B. To make computer-stored data more secure
 - C. To require password access to applications
 - D. To enforce the purchase of legal software
35. Which statement expresses the way hackers usually view hacking?
- A. Hacking is illegal.
 - B. Hacking requires a high level of knowledge about systems.
 - C. Hacking never causes data or systems to be changed.
 - D. Hacking is the same as cracking.
36. Business organisations use JIT systems. What does the abbreviation JIT stand for?
- A. Justification, Information, Transmission
 - B. Just in Time
 - C. Judge Information Transmission
 - D. Justify Identity Transfer

37. Which abbreviation is used to describe the Internet address <http://www.altavista.com>
- A. HTML
 - B. FTP
 - C. URL
 - D. HTTP
38. Which statement is **not** true with respect to surfing on the World Wide Web?
- A. All URL addresses must contain a country abbreviation to indicate where the web site is located.
 - B. Web servers can record the address of computers visiting the site.
 - C. Search engines do not use Boolean logic.
 - D. URL addresses on the Internet are permanent.
39. What are *netiquette* rules on the Internet?
- A. Guidelines for acceptable behaviour on the Internet
 - B. Guidelines for downloading documents from the Internet
 - C. Guidelines for quoting information downloaded from the Internet
 - D. Guidelines for controlling access to the Internet

40. What ethical consideration(s) arise from digital music files being readily available on the Internet?
- I. More people may not respect copyright laws.
 - II. Fewer people will purchase music at retail stores.
 - III. More people will listen to music.
- A. I only
 - B. I and II
 - C. II and III
 - D. I, II and III
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