

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

Wednesday 15 May 2002 (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. What is a macro?
 - A. A small program in a communications package which ensures data compatibility
 - B. A small program to facilitate repetitive tasks in an applications package
 - C. A part of the operating system which runs in the background to aid data security
 - D. An unwanted piece of code downloaded across a network, attached to a file, sending information back to the author of the code

2. Design packages use two different methods of producing and storing images - bit-mapping and object-oriented. What is the main reason for using object-oriented images?
 - A. Modern laser printers require this form of computer output.
 - B. Object-oriented images are required so that a wider variety of colours can be used.
 - C. Animation would be impossible with bit-mapped images.
 - D. Changing from 2D to 3D is easier with object-oriented images.

3. Which of the following **cannot** be entered effectively in a modern spreadsheet cell?
 - A. A coloured background
 - B. A circular reference (one which includes its own cell reference in the calculation)
 - C. A high-resolution image
 - D. A paragraph of text referenced from a word-processed document

4. What is the advantage of using computer-controlled simulation to train pilots compared to using real aircraft?
- A. Using a real aircraft is less expensive than using a simulator.
 - B. Flight simulators cannot be used for transportation when not in use for training.
 - C. Trainee pilots can make mistakes without crashing a real aircraft.
 - D. Trainee pilots learn to fly the simulator, not the real aircraft.
5. Which **one** of the following can be used in an ethically acceptable way?
- A. A cookie
 - B. A Trojan horse
 - C. A worm
 - D. A virus
6. A clothing store is designing a new database to store details of the clothes it sells. There are 5000 different items, bought from 200 different suppliers. Which statement(s) would apply to a database for this store?
- I. A relational database is required to store data.
 - II. A flat-file database is required to save storage space.
 - III. The validation of data on entry is not important.
- A. I only
 - B. I and II only
 - C. II and III only
 - D. I, II and III

7. In the near future, televisions will be very large, have thin screens, and will hang on our walls. What is the reason we do **not** presently have such televisions?
- A. The software technology to support such televisions is not yet available.
 - B. Such televisions can be produced but are currently too expensive for the average household to buy.
 - C. Present communications systems do not have the required bandwidth.
 - D. The hardware technology to construct such televisions is not yet available.
8. Which is **not** part of system software?
- A. A spell-checking program
 - B. A disk partitioning program
 - C. A defragmenting program
 - D. A memory management subsystem
9. In which situation is it more appropriate to use a human than a machine?
- A. Making precision cuts in a patient's hip during hip surgery
 - B. Marking multiple choice tests
 - C. Deciding on a pay rise for an employee
 - D. Adjusting air conditioning to keep a room at a constant temperature
10. On which **one** of the following areas were the first successful expert systems based?
- A. Medicine
 - B. Business
 - C. Geography
 - D. Sport

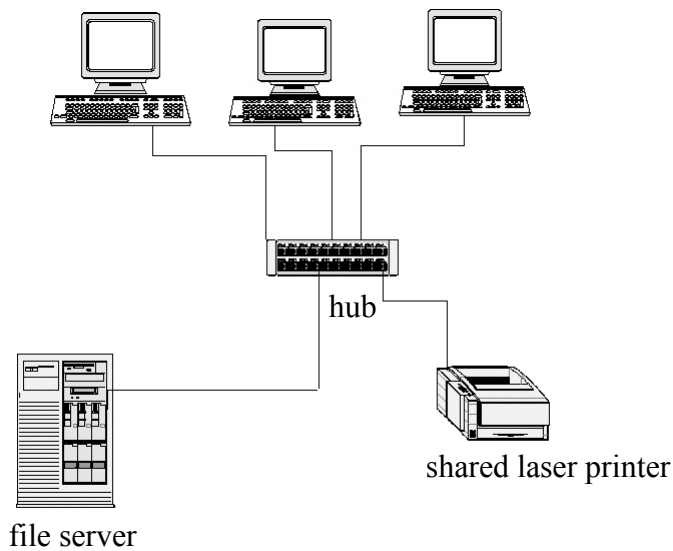
11. Which **one** of the following is **not** a problem associated with cellular phones?

- A. They are suspected of causing health problems.
- B. They are often disruptive in public places.
- C. They interfere with airplane landing and take-off procedures.
- D. They are causing a decrease in the number of people using the Internet.

12. Which function should be included in a system input to avoid incorrect output?

- A. Searching
- B. Selecting
- C. Value checking
- D. Analysing

13. Which type of network is shown in the diagram below?



- A. A peer-to-peer network where computers share files
- B. A wide area network of three computers linked to a wiring hub
- C. A client/server local area network
- D. A stand-alone network with connection to the Internet via a hub

14. Word processors incorporate many useful tools. Which **one** of the following is **not** an incorporated tool?
- A. A checker to ensure that the sense and spelling of a word is correct
 - B. A shared document indication for annotation and correction record
 - C. A checker to ensure that sentence and grammatical construction is correct
 - D. A tool to format documents automatically
15. Which statement describes the term “protocol”?
- A. A standard to enable communication between compilers of different operating systems or character code sets
 - B. A standard used in integrating full-motion video and sound in computer programs
 - C. A file format which permits files to be displayed independent of the original application
 - D. A polite way to communicate on the World Wide Web
16. What is used by hackers to access a system illegally?
- A. A virus
 - B. A programming module
 - C. A trap door
 - D. A phone line
17. Features of interactive virtual reality games are listed below. Which **one** is most likely to have a negative effect on society?
- A. Virtual reality allows the user to play games that cannot be played in the real world.
 - B. Virtual reality games allow the user to explore an artificial world as if it were real.
 - C. Virtual reality games can make the user unable to differentiate between the real world and the one created by the computer.
 - D. Virtual reality games allow the user to control the change of virtual scenes.

18. What statement defines a computer model?
- A. A set of concepts and ideas designed to mimic a database
 - B. A description of an event, behaviour or condition in the real world
 - C. An explanation of conditions of the real world
 - D. A program that simulates an abstract system to produce different outcomes
19. Which situation describes an unethical action taken by a person?
- A. A computer teacher installs a public domain program on all of the computers in the computer lab.
 - B. A car vendor supplies the personal data of customers to a car insurance vendor without permission.
 - C. A network administrator fails to register the serial numbers of network software.
 - D. Computer users do not change their passwords frequently.
20. What is the most common tool for restricting access to computer systems?
- A. Audit-control systems
 - B. Passwords
 - C. Cryptography
 - D. Key

21. Which action does **not** comply with Asimov’s laws of robotics?
- A. A robot obeys the order to launch a missile attack on another country.
 - B. A robot carries out orders to detonate a land mine in an unpopulated area.
 - C. A robot obeys an order to step in front of an armed robber to save a child.
 - D. A robot escapes from a burning building after carrying out orders to take all occupants to safety.
22. What is a possible disadvantage of providing schools with online encyclopedias accessible via the Internet?
- A. Many users can access the same entry at one time.
 - B. Students can copy and paste information to create documents.
 - C. Information can be easily updated by the publisher.
 - D. Searching for information will be easier.
23. A company’s personnel records are stored electronically. What problem occurs when a number of flat-file databases are used instead of a relational database?
- A. Hacking
 - B. A virus destroys some of the data.
 - C. Unauthorized access
 - D. Redundancy of data
24. What important information is contained on the outside of software packages which should be read before purchasing?
- A. Copyright agreement
 - B. System requirements
 - C. Warranty
 - D. Installation instructions

25. What type of reference is used in the spreadsheet when D2 is copied into D3, D4 and D5?

	A	B	C	D
1	Product	Amount	Cost	Total
2	Milk	2	12	24
3	Flour	4	5	
4	Sugar	5	11	
5	Butter	2	15	

- A. Dynamic reference
 - B. Cell reference
 - C. Absolute reference
 - D. Relative reference
26. Which tool uses reflected light to input pencil marks from test answer sheets?
- A. Bar-code reader
 - B. Optical mark reader
 - C. Wand reader
 - D. Optical character reader
27. Which unit is used to measure a computer's processing speed?
- A. Megahertz
 - B. Megabytes
 - C. Baud Rate
 - D. Bits per second

28. Which item requires the most storage space?
- A. One page of text
 - B. One minute of digital sound
 - C. One minute of digital video
 - D. One page containing an image scanned at 72 dpi
29. *Sound Bite.Com* has indicated that users may log on to their web site and download music. What ethical consideration(s) should *Sound Bite.Com* take into account in offering this service?
- I. Whether the artists of the music are being paid royalties
 - II. Whether permission has been granted to the company to post the music
 - III. Whether the company should charge the user
- A. I only
 - B. I and II only
 - C. II and III only
 - D. I, II and III
30. What is a collection of multimedia documents created by organizations and users all over the world called?
- A. Java
 - B. FTP
 - C. WWW
 - D. HTML

31. In which situation is there an ethical issue involved?
- A. A network manager regularly upgrades the system software.
 - B. Biometrics is used for security purposes.
 - C. Public domain font editor has been installed on all of a company's computers.
 - D. Illegal music files are made available with a network file sharing program.
32. What is the main consideration when making an online reservation for an airline flight?
- A. Airline tickets should only be purchased from secure sites.
 - B. The ticket from the online airline system may be forged.
 - C. Major airline companies do not update the reservation information frequently.
 - D. An online reservation may not be changed.
33. Which of the following is a valid format for an email address?
- A. www.whitehouse.gov
 - B. @www.ibo.org
 - C. info@ibca.org
 - D. <http://www.yahoo.com>
34. Which information technology could be used by a blind person to get information rapidly from the Internet?
- A. An IT solution which uses a digitized voice to read the web page automatically
 - B. An IT solution which prints the text and graphics from the web page in Braille
 - C. An IT solution which controls the web page by eye movements
 - D. An IT solution which saves all of the text and graphics onto the hard disk

35. Which statement describes an advantage for a company employing teleworkers?
- A. Salary costs are less.
 - B. The company has increased personal contact with employees.
 - C. Employees can be based in many countries.
 - D. Less computer hardware and software is needed.
36. Which statement describes the chronological order in which software applications using graphics became available to home users?
- A. desktop publishing, web page designing, multimedia designing
 - B. web page designing, desktop publishing, multimedia designing
 - C. web page designing, multimedia designing, desktop publishing
 - D. desktop publishing, multimedia designing, web page designing
37. Which type of software would be most useful in a situation where information needs to be sent **securely** between international business offices?
- A. Electronic Data Interchange (EDI)
 - B. Encryption program
 - C. Virus checking software
 - D. Data compression program
38. Which situation describes how the film industry has used computer technologies in the filming process?
- A. Calculating the cost of the film in a spreadsheet
 - B. Creating a Website to promote the film
 - C. Using desktop publishing to advertise the film
 - D. Creating artificial film sequences which are used to show dangerous scenes

39. Which is an example of a wide area network?
- A. Cellular phones
 - B. Internet
 - C. Fax machines
 - D. A networked school computer lab
40. In which situation would ergonomics be considered?
- A. Purchasing new office furniture
 - B. Updating a virus checking program
 - C. Implementing teleconferencing
 - D. Issuing passwords to all employees
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