

45. Which of the following is true about Functional programming?
- A It is used to calculate using mathematical functions
  - B It focuses on what has to be done rather than on how it is done
  - C It is used in programming functions
  - D Its codes are made up of mostly functions
46. The structured approach of writing programs using routines is beneficial in that
- A it makes programs to be easily understood by non-programmers
  - B routines can be tested in isolation before being added to larger programs
  - C it generates output after each statement for easy understanding
  - D programs can run even when there are errors
47. Which of the following may not be helpful to a project manager in the execution of a project?
- A PERT chart
  - B Scheduling software
  - C Data flow diagrams
  - D Gantt chart
48. Some tasks can be extended for a number of days without affecting the finished day of a project. Such a task is known as
- A slack task
  - B floating task
  - C critical task
  - D extended task
49. In html, the tags `<ol>` `</ol>` are used to create
- A ordered list
  - B bulleted list
  - C lines of text
  - D indentation
50. To avoid unnecessary duplication of the same data in a database
- A we have to normalize the database
  - B we have to query the report generator
  - C avoid using tables with so many fields
  - D proof read any data before input into the database

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**STOP**  
**NOW GO BACK AND CHECK YOUR WORK**

1. (i) (a) Explain two reasons why robots are useful to industries. (2 marks)  
(b) Describe two measures that can be taken to secure a banking system (4 marks)
- (ii) (a) Describe a DBMS. (2 marks)  
(b) What is relational database? (2 marks)  
(c) Give two disadvantages of a flat file in databases. (2 marks)
- (iii) (a) Explain the term "Programming paradigm". (1 mark)  
(b) Define the following programming paradigms  
• Procedural programming  
• Declarative programming (4 marks)
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2. (i) (a) What is network topology? (2 marks)  
(b) Explain two considerations in selecting a topology for a school network. (4 marks)
- (ii) (a) What is prototyping? (2 marks)  
(b) Give two reasons for prototyping. (2 marks)
- (iii) (a) What is a program control structure? (2 marks)  
(b) Using either Pascal or C programming language write out the general form for the following control structures.  
• Sequence (1 mark)  
• FOR statement and (1 mark)  
• WHILE statement (1 mark)  
(c) Draw the flowchart symbol for the choice/selection structure. (2 marks)
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3. (i) (a) Write out the steps involved in SDLC in an annotated diagram. (2 marks)  
(b) Distinguish between piecemeal and direct system implementation methods. (2 marks)  
(c) Describe one other alternative method of building a system. (2 marks)
- (ii) (a) State two functions of a project manager in project management. (2 marks)  
(b) With respect to project management, describe a PERT chart, stating all the elements involved. (2 marks)  
(c) What is the importance of identifying the critical path of a project? (1 mark)
- (iii) Discuss TWO possible effects on people who live in some developing countries of having no access or very limited access to ICT. (6 marks)
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4. (i) (a) What is a file format? Give one type of file format. (2 marks)  
(b) Explain one importance of file format. (1 mark)  
(c) State two reasons why file formats vary. (2 marks)
- (ii) (a) Systems need protection from hazards e.g. natural hazards such as flood and fire. Describe two other hazards that may impede a computer system. (4 marks)



ICT 2014 2

1. The computer that allows more than one user to work at the same time is known as a
  - A mainframe computer
  - B embedded computer
  - C micro computer
  - D multiprogrammed computer
2. \_\_\_\_\_ is the technological basis on which the Third Generation computers were built.
  - A Transistor
  - B vacuum tube
  - C microprocessor
  - D integrated circuit
3. A computer that exists in a system that cannot be reprogrammed by the user is
  - A tablet computer system
  - B embedded system
  - C handheld computer system
  - D system access control
4. The De Morgan law for the logic AND states that  $A \cdot B =$ 
  - A  $\overline{A + B}$
  - B  $A + \overline{B}$
  - C  $\overline{A} + B$
  - D  $\overline{A} + \overline{B}$
5. Which of the following is NOT a function of an operating system?
  - A Providing user interface
  - B Memory management
  - C Executing program instructions
  - D System access control
6. A chip in computer that contains essential information in a computer such as the date and time is
  - A CMOS
  - B BIOS
  - C RAM
  - D ROM
7. What file format would you use for publishing and distributing electronic text documents?
  - A .mpeg
  - B .jpeg
  - C .pdf
  - D .wav
8. A document created in an application package which could be used over and over by many users for the same purposes is known as:
  - A Wizard
  - B Template
  - C Draft
  - D Form
9. The check by computers to ensure that data entered into a database is sensible is known as:
  - A integrity check
  - B verification
  - C validation
  - D redundancy check
10. Which of the following application packages would be the most appropriate for representing information on charts and performing calculations?
  - A Presentation packages
  - B Database packages
  - C Word processing packages
  - D Spreadsheet packages
11. Which of the following is an advantage of a Vector-based graphics format?
  - A It allows graphs to be placed in a vector form
  - B It is device independent
  - C It allows vectors to be used to draw graphs
  - D It tolerates straight line graphs
12. The act of gaining unauthorized access by use of network to people's computer is known as
  - A hacking
  - B surfing
  - C scamming
  - D spoofing
13. Software designed to meet the needs of a particular organisation is called
  - A generic
  - B surfing
  - C integrated
  - D Bespoke
14. One way to limit piracy of intellectual property is by
  - A Use of antivirus software
  - B using encryption
  - C enforcing legislation
  - D use of firewall
15. An information system that provide periodic and predetermined reports that summarizes information only is called
  - A MIS
  - B GIS
  - C HIS
  - D DDS



16. An information system consists of
  - A Software and hardware
  - B People, software and hardware
  - C People, data, machine and procedures
  - D People, data, software and procedures
17. An expert system that is used in organisation to manage daily business activities can also be termed as a
  - A GIS
  - B DSS
  - C MIS
  - D TPS
18. A linear list whose elements are inserted and deleted in a last-in-first-out order is a
  - A Stack
  - B Queue
  - C hash table
  - D binary tree
19. Which of the following is in the right order of time measurement?
  - A Picoseconds-nanoseconds-microseconds
  - B Nanoseconds-picoseconds-microseconds
  - C Microseconds-nanoseconds-picoseconds
  - D Microseconds-nanoseconds-picoseconds
20. Which of the following is NOT true about arrays?
  - A Access elements by an index
  - B Sort the elements
  - C Can hold element of the same type
  - D Can hold elements of different types
21. How many KB (as used in everyday speaking) are in 1.5 GB?
  - A 1500
  - B 15000
  - C 150000
  - D 1500000
22. The technique of developing a system model and testing to make adjustments until an acceptable product is realized is known as
  - A try-by-error
  - B flow charting
  - C waterfall model
  - D Prototyping
23. Some programming languages are said to be high level because
  - A codes are written in a form that the computer can easily execute
  - B programmers easily write codes using them
  - C they are cheaper to design
  - D they cannot be used to write programs for difficult tasks
24. A module in a system is said to be reusable if the module is
  - A independent of the system
  - B depends only on a few modules in the system
  - C iteratively defined
  - D recursive
25. A data communication method in which bits are transmitted through separate channels simultaneously is termed
  - A parallel data transmission
  - B serial data transmission
  - C simplex data transmission
  - D asynchronous transmission
26. Devices in a network indicate their connectivity during data transmission by
  - A buffering
  - B handshaking
  - C signaling
  - D interrupts
27. Which is a data transmission method by which signals from several lines are made to be transmitted through a single line?
  - A Serial transmission
  - B Broadband transmission
  - C Switching
  - D Multiplexing
28. The main role of a repeater in a network is
  - A separates a single stream of signals into separate streams
  - B selects the best path for network packets
  - C boosts the strength of signals to cover long distances
  - D receive sends signals only to requesting computers in a network
29. \_\_\_\_\_ controls the flow of each character in asynchronous transmission mode.
  - A Error control bits
  - B Start-stop bits
  - C Parity bits
  - D Check-sum bits
30. The cheapest means by which a group of students found in different geographic locations can exchange views through the Internet is by
  - A e-mail
  - B Forum
  - C videoconference
  - D Skype

Turn Over

31. The topology with the greatest fault tolerance is  
 A Mesh  
 B LAN  
 C Ring  
 D bus
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32. A device that connects computers and forwards data packets from one network segment to the other of different platforms is a  
 A Hub  
 B Bridge  
 C Switch  
 D Router
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33. The bandwidth of Internet connection in a public cyber café suddenly becomes congested. One possible reason is  
 A poor weather  
 B number of users  
 C virus activity  
 D poor network design
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34. If a laptop is to have Internet connection through a LAN with Internet facilities then,  
 A the laptop needs an IP address  
 B the user must be given a password  
 C the service provider must be contacted  
 D the modem must be used to connect the laptop to the LAN.
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35. The protocol used to receive electronic mail over the Internet is  
 A TCP/IP  
 B SMTP  
 C FTP  
 D VOIP
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36. The buying and selling of stocks over the Internet is called  
 A e-commerce  
 B e-shopping  
 C e-banking  
 D e-trading
- 
37. Which is the correct order of the stages of the SDLC?  
 A Analysis, implementation, design, maintenance  
 B Design, analysis, support, implementation  
 C Analysis, design, implementation, support  
 D Coding, support, evaluation, maintenance
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38. The phase in a system development life cycle where requirements are first identified is  
 A feasibility studies phase  
 B analysis phase  
 C implementation phase  
 D design phase
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39. A practice that enhances understanding of algorithms is  
 A use of capital letters  
 B use of good language  
 C use of programming words  
 D use of comments
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40. Algorithms are different from codes in that  
 A they can be easily executed by the computer  
 B they are easily understood by non-programmers  
 C they are shorter than codes  
 D they have a style of presentation
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41. Which of the following control structures is NOT a loop structure?  
 A IF-THEN statement  
 B REPEAT statement  
 C WHILE statement  
 D FOR statement
- 
42. **Start**  
**Get an integer, x**  
**Get another integer, y**  
**If  $x < y$  then**  
     **Take y to be  $y-2$**   
**Else**  
     **Take x to be  $y*2$**   
**EndIf**  
**Print x, y**  
**Stop**  
 If  $x=3$  and  $y=7$  then the output is  
 A 14, 5  
 B 14, 1  
 C 3, 5  
 D 3, 7
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43. An example of an Object Oriented programming language is  
 A Turbo Pascal  
 B C#  
 C Java  
 D Fortran
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44. In programming, what specifies the order in which a computer will execute each line of software code?  
 A Switch statement  
 B Control structure  
 C Conditional statement  
 D Syntax structure
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