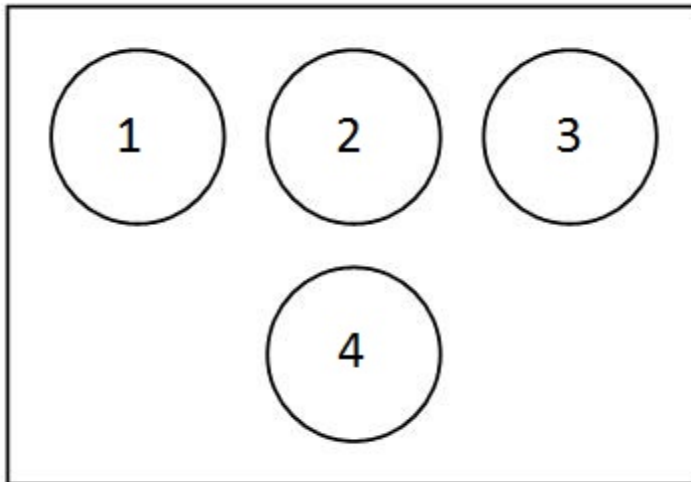


Question block created by wizard.

This exam contains 40 questions

- 1.** When looking at the basic T in the figure, what instrument is located at position indicated with number 2?



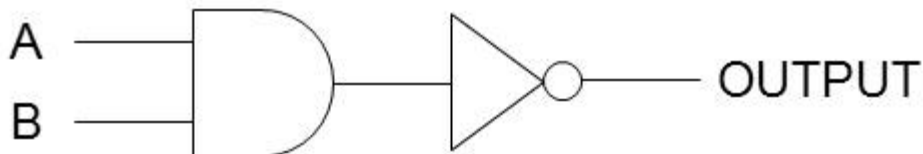
- a. The artificial horizon.
b. The airspeed indicator.
c. The altitude indicator.
- 2.** What is the name of the system used in collision avoidance?
- a. RAS.
b. ACARS.
c. ACAS/TCAS.
- 3.** A blue annunciation means....
- a. An indication for temporary normal system action.
b. A partial system malfunction caution.
c. An auto pilot mode annunciation.
- 4.** The base or radix of the binary number system is...
- a. one
b. two
c. four

5. What is the value of $224_{(8)}$ in the hexadecimal system?
- 94
 - 4A
 - 98
6. What type of converter is the fastest for analogue to digital conversion?
- Charge Balancing ADC
 - Integration ADC
 - Flash ADC
7. If a data message is made up of 1 and 0 it is
- analogue.
 - digital.
 - logic.
8. The ARINC 429 data-bus uses a....
- 8 bit label and 24 bit of data word.
 - 8 bit label and 16 bit of data word.
 - 8 bit label and 8 bit of data word.
9. An ARINC 629 data bus stub cable is the connection between...
- different bus couplers.
 - bus coupler and terminal resistor.
 - bus coupler and connected line replaceable unit.
10. Where is the ARINC429 high speed transmission rate used for?
- Cabin interphone system only.
 - Flight critical systems.
 - Flight non-critical systems.
11. The carrier-sense multiple access with collision detection (CSMA/CD) system in the ethernet protocol is used to prevent....
- signal weakening over a long distance.
 - for interference from adjacent devices.
 - the access of multiple devices to the ethernet at the same time.

12. Where are the repeaters in an ethernet medium used to?

- a. To increase the network diameter.
- b. To transmit a broadcast address.
- c. To construct a destination address.

13. What is the function of this logic circuit?

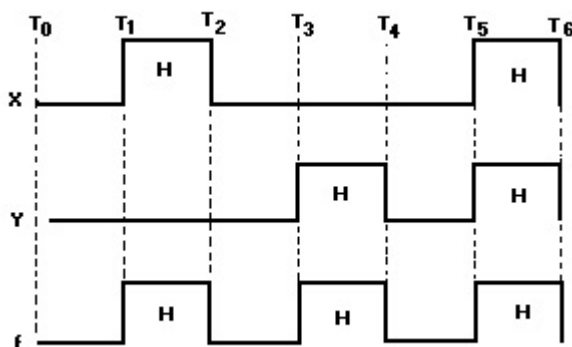


- a. Nor
- b. Nand
- c. And

14. What is the Boolean expression for an "and gate"?

- a. $A \cdot B \cdot C$
- b. $A + B + C$
- c. $A \cdot B + C$

15. What gate is represented by the time-diagram shown here?



- a. EXOR gate.
- b. EXNOR gate.
- c. OR gate.

16. In which way are schematic or functional diagrams usually drawn?

- a. From right to left.

- b. From left to right.
- c. From up to down.

17. What is a tristate device?

This is....

- a. a device that has the following three states: ON, OFF and UNKNOWN.
- b. a logic device that has the logic levels "0" and "1", and a level called Hi-Z
- c. a logic device that has three different voltage values on its output.

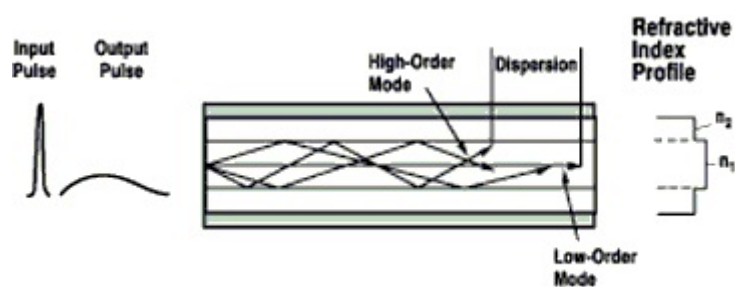
18. What is the purpose of the demultiplexer?

- a. To amplify an input and sending it to one output.
- b. To take one input and sending it to one of many outputs.
- c. To take many inputs and sending it to one output.

19. How do we erase the data content of an Eprom?

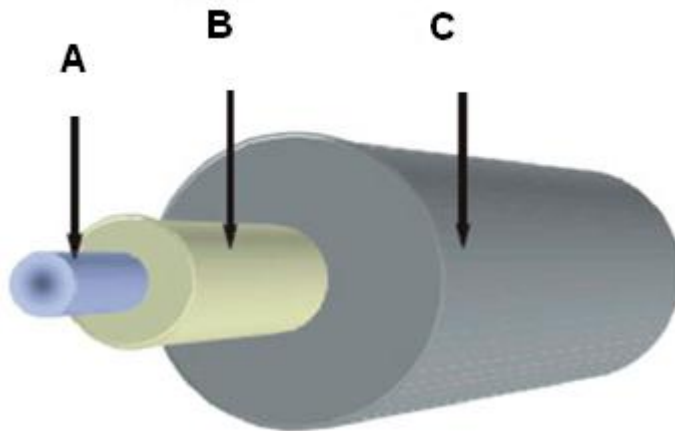
- a. With a burst of ultra-violet light.
- b. By removing the power.
- c. By exposing it to an electrical charge.

20. What type of fibre optic is shown here?



- a. Multi-Mode Step Index.
- b. Multi-Mode Grade Index.
- c. Single-Mode Step Index.

21. What is name of the part (indicated with arrow B) as shown in the picture?



- a. Cladding
- b. Coating
- c. Core

22. What is the biggest advantage to use fibre optics for angular rate sensing (gyroscopes)?

- a. There are low losses for high frequency signals.
- b. You can transmit over long distances.
- c. They are not affected by magnetic fields.

23. What type of display is a 7-segment LCD display?

- a. An active display, generating its own light source.
- b. A passive display, generating its own light source.
- c. A passive display, using reflected light.

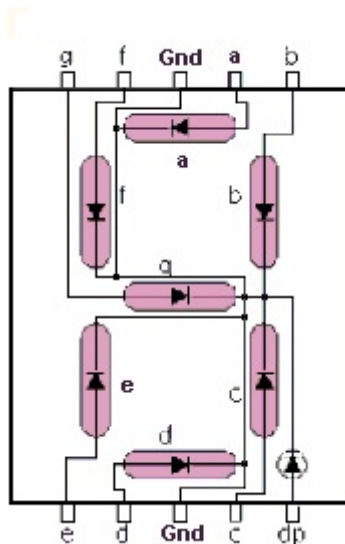
24. What type of display is shown here?



- a. LED Display
- b. CRT Display

c. LCD Display

25. What is the connection method called of the display shown here?



- a. Common Anode.
- b. Common Cathode.
- c. Multiplexed.

26. At which circumstance is it necessary to wear a wrist strap?

- a. Only when the power source is switched on.
- b. When changing an electrically sensitive computer mounted in a metal cabinet (LRU).
- c. When changing a power printed circuit board.

27. What is meant by static electricity?

- a. An electric voltage without any user.
- b. Electric energy in a battery.
- c. Electrical charge at rest.

28. Some materials can be positively- or negatively charged.

Which material can hardly be charged at all?

- a. PVC pipes
- b. Cotton wire
- c. Nylon wool

- 29.** What is in equipment the maximum contact or bonding resistance?
- 1 mega ohm.
 - 100 Ohm
 - 0.05 Ohm
- 30.** Avionics software is in accordance to flight safety classified into 5 levels (A till E). What is the meaning of level "C"?
- A failure would not have an effect on the aircraft or the pilot work load.
 - A failure would cause a catastrophic aircraft failure.
 - A failure would cause a major failure condition.
- 31.** What does the abbreviation FLS mean?
- Field Loading System
 - Flight Leading Software.
 - Field Loadable Software.
- 32.** Which department shall assign an airborne software critically category?
- The computer designer.
 - The aircraft constructor.
 - The software developer.
- 33.** What is an example of an EMI external noise producing source?
- Cosmic noise from objects in space.
 - The energy pulses produced by the anti-collision light system.
 - The radiation of a display.
- 34.** How can you achieve HIRF immunity for multilayer circuit boards?
- By aircraft structure bonding.
 - By static dischargers.
 - By full voltage and ground planes between the board layers.
- 35.** What is the most important step to do during an after-lightning strike inspection?
- Movement of the flight control surfaces.
 - An operational avionics test.
 - Inspection for burn spots and pitted areas.

- 36.** When does the Aircraft Communication Addressing and Reporting System (ACARS) operate in the polled mode?
- When a message block is longer than 220 characters.
 - When the aircraft is interrogated by a ground facility.
 - When the flight crew initiates ACARS communication.
- 37.** With the Global Positioning System (GPS) a satellite position error is affected by
- the satellite clock.
 - the GPS receiver.
 - gravity forces.
- 38.** What is the symbol for the highest collision threat that will be displayed by the Traffic Collision Avoidance System (TCAS)?
- A red square.
 - A yellow roundel.
 - A white diamond.
- 39.** What is the basic concept behind Integrated Modular Avionics?
- To have a modular system....
- that can easily be maintained.
 - with processing units for every function.
 - sharing hardware for multiple functions.
- 40.** One of the build-in test functions is a cyclic test. This test.....
- is carried out permanently during system operation.
 - is carried out only on the ground.
 - interrupts the system operation.