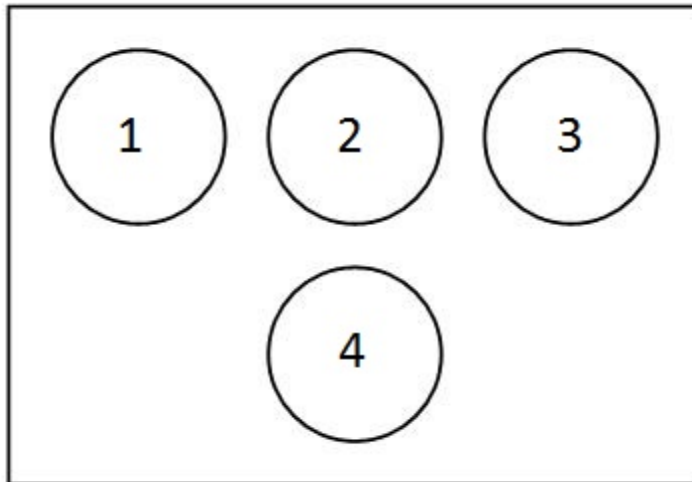


**Question block created by wizard.**

**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?



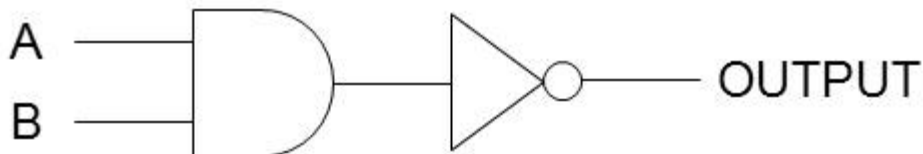
- a. The airspeed indicator.  
b. The altitude indicator.  
c. The artificial horizon.
2. What is the name of the system used in collision avoidance?
- a. ACARS.  
b. RAS.  
c. ACAS/TCAS.
3. A blue annunciation means....
- a. An indication for temporary normal system action.  
b. A partial system malfunction caution.  
c. An auto pilot mode annunciation.
4. A hexadecimal number is a number to base....
- a. 2  
b. 8  
c. 16

5. Convert  $6_{(8)}$  to the binary number system.
  - a. 101
  - b. 011
  - c. 110
  
6. What type of converter is the fastest for analogue to digital conversion?
  - a. Integration ADC
  - b. Charge Balancing ADC
  - c. Flash ADC
  
7. Physical variables, such as voltage or angular rotation of a shaft are....
  - a. analogue.
  - b. digital.
  - c. logic.
  
8. The ARINC 429 data-bus uses a....
  - a. 8 bit label and 8 bit of data word.
  - b. 8 bit label and 16 bit of data word.
  - c. 8 bit label and 24 bit of data word.
  
9. An ARINC 629 data bus stub cable is the connection between...
  - a. bus coupler and terminal resistor.
  - b. different bus couplers.
  - c. bus coupler and connected line replaceable unit.
  
10. Where is the ARINC429 high speed transmission rate used for?
  - a. Flight critical systems.
  - b. Flight non-critical systems.
  - c. Cabin interphone system only.
  
11. The carrier-sense multiple access with collision detection (CSMA/CD) system in the ethernet protocol is used to prevent....
  - a. signal weakening over a long distance.
  - b. for interference from adjacent devices.
  - c. 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?

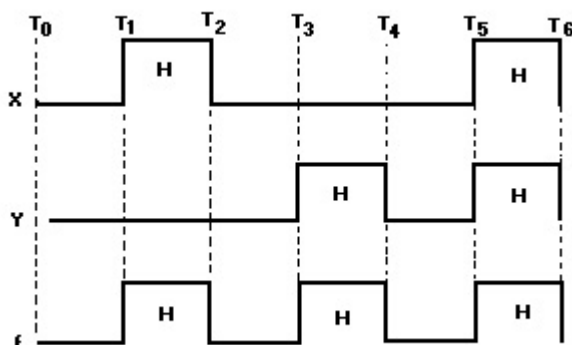


- a. Nand
- b. Nor
- c. And

14. What is meant by the expression "negative logic"?

- a. This means that all outputs are inverted.
- b. This means that the output voltages are negative with respect to ground.
- c. The logic "1" state is at a more negative voltage than the logic "0" state.

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



- a. EXOR gate.
- b. OR gate.
- c. EXNOR 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. A schematic or functional diagram is usually drawn with the inputs.....

- a. left and the outputs right.
- b. right and the outputs left
- c. up and the outputs down.

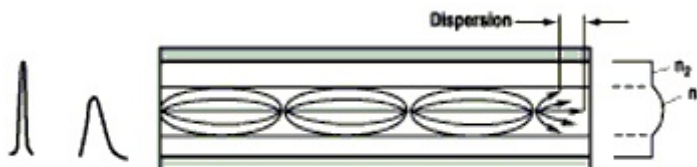
18. What is the purpose of the demultiplexer?

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

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

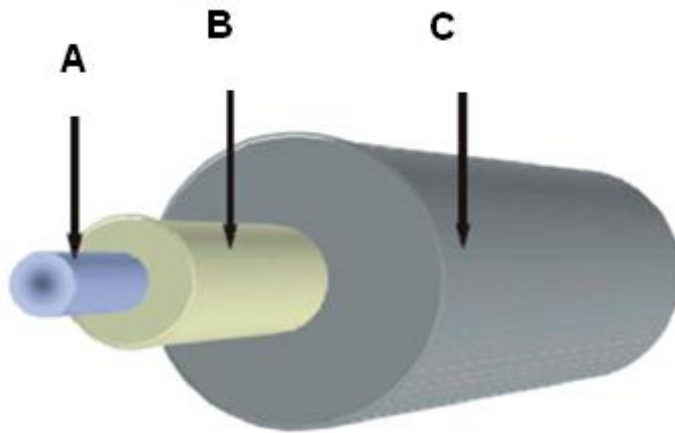
- a. With a burst of ultra-violet light.
- b. By removing the power.
- c. By exposing it to an electrical charge.

20. What type of fibre optic is shown here?



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

23. What type of display is shown here?



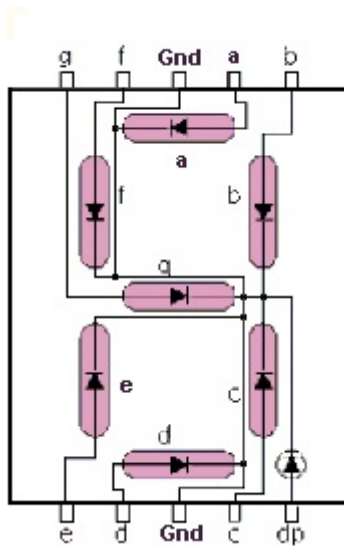
- a. This is a 12-segment display.
- b. This is a matrix display.
- c. This is a starburst display.

24. What type of display is shown here?



- a. LED Display
- b. LCD Display
- c. CRT Display

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



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

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

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?

- a. 100 Ohm
- b. 1 mega ohm.

c. 0.05 Ohm

**30.** Which airborne software safety classifications do effect the flight safety?

- a. Level A + C
- b. Level B + E
- c. Level D + E

**31.** What does the abbreviation FLS mean?

- a. Field Loading System
- b. Field Loadable Software.
- c. Flight Leading Software.

**32.** May the User Modifiable Software (UMS) be modified by the aircraft operator?

- a. Yes, only with review by the Civil Aviation Authority (CAA).
- b. Yes, without review by the Civil Aviation Authority (CAA).
- c. Never during the flight.

**33.** What is an example of an EMI external noise producing source?

- a. Cosmic noise from objects in space.
- b. The radiation of a display.
- c. The energy pulses produced by the anti-collision light system.

**34.** How can you achieve HIRF immunity for multilayer circuit boards?

- a. By full voltage and ground planes between the board layers.
- b. By aircraft structure bonding.
- c. By static dischargers.

**35.** What is the most important step to do during an after-lightning strike inspection?

- a. An operational avionics test.
- b. Inspection for burn spots and pitted areas.
- c. Movement of the flight control surfaces.

**36.** When does the Aircraft Communication Addressing and Reporting System (ACARS) operate in the polled mode?

- a. When a message block is longer than 220 characters.

- b. When the aircraft is interrogated by a ground facility.
- c. When the flight crew initiates ACARS communication.

**37.** With the Global Positioning System (GPS) a satellite position error is affected by .....

- a. the satellite clock.
- b. gravity forces.
- c. the GPS receiver.

**38.** What is the symbol for the highest collision threat that will be displayed by the Traffic Collision Avoidance System (TCAS)?

- a. A white diamond.
- b. A red square.
- c. A yellow roundel.

**39.** One of the benefits of Integrated Modular Avionics (IMA) is lower weight. This is accomplished by.....

- a. using lighter materials for avionics.
- b. using less aircraft systems.
- c. using less Line Replaceable Units (LRU's)

**40.** One of the build-in test functions is a cyclic test. This test.....

- a. is carried out permanently during system operation.
- b. is carried out only on the ground.
- c. interrupts the system operation.