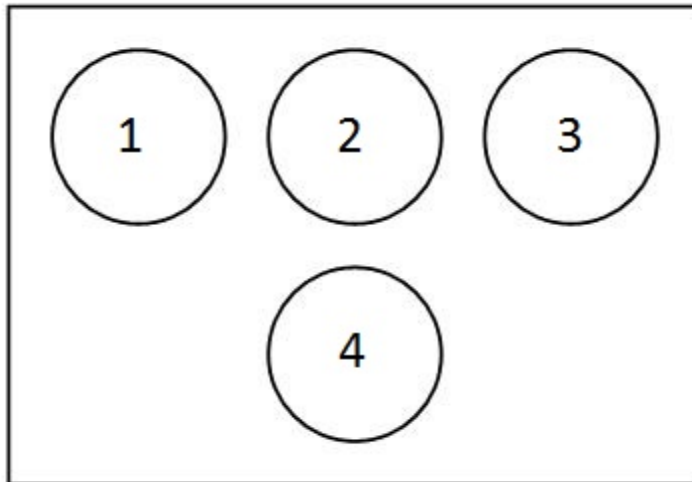


**Question block created by wizard.**

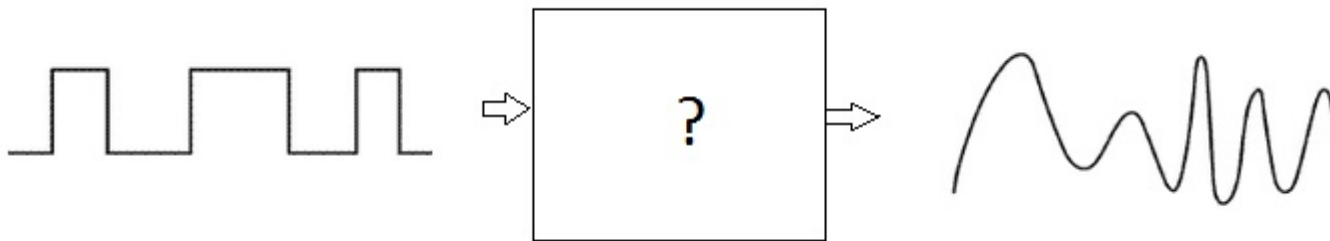
**This exam contains 40 questions**

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. ACAS/TCAS.  
b. ACARS.  
c. RAS.
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. How many elements uses the hexadecimal system?
- It uses...
- a. 8 elements.  
b. 4 elements.  
c. 16 elements.

5. Convert  $65_{(16)}$  to the binary number system.
- a. 1100 1010
  - b. 0101 0110
  - c. 0110 0101
6. What type of converter is the fastest for analogue to digital conversion?
- a. Flash ADC
  - b. Integration ADC
  - c. Charge Balancing ADC
7. What is the function of the block marked with "?" in this figure?



This is...

- a. a SAR.
  - b. an ADC.
  - c. a DAC.
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 connected line replaceable unit.
  - b. different bus couplers.
  - c. bus coupler and terminal resistor.

**10.** Where is the ARINC429 high speed transmission rate used for?

- a. Cabin interphone system only.
- b. Flight critical systems.
- c. Flight non-critical systems.

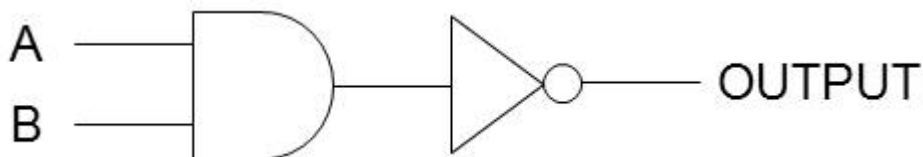
**11.** The carrier-sense multiple access with collision detection (CSMA/CD) system in the ethernet protocol is used to prevent....

- 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?

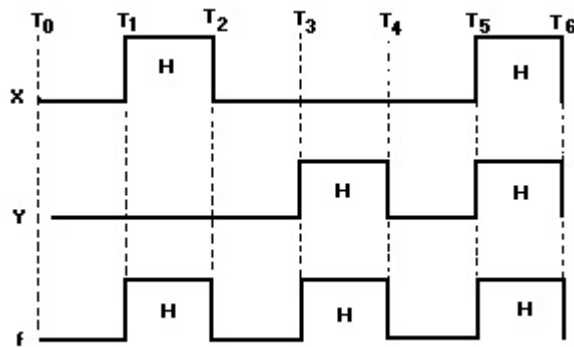


- a. And
- b. Nand
- c. Nor

**14.** What is the meaning of "Fan out"?

- a. The maximum number of inputs that the output of a single logic circuit can feed.
- b. The maximum output voltage of a particular logic circuit.
- c. The maximum number of inputs that a single logic circuit can accept.

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



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

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

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

17. A schematic or functional diagram is usually drawn with the inputs.....

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

18. What is the purpose of the demultiplexer?

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

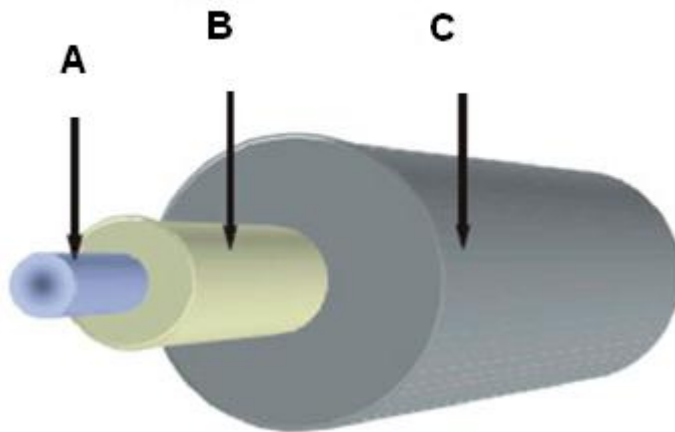
19. How do we erase the data content of an Eprom?

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

**20.** What is transmitted through a fibre optic cable?

- a. Electrical signals
- b. Magnetic Energy
- c. Radiant power

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

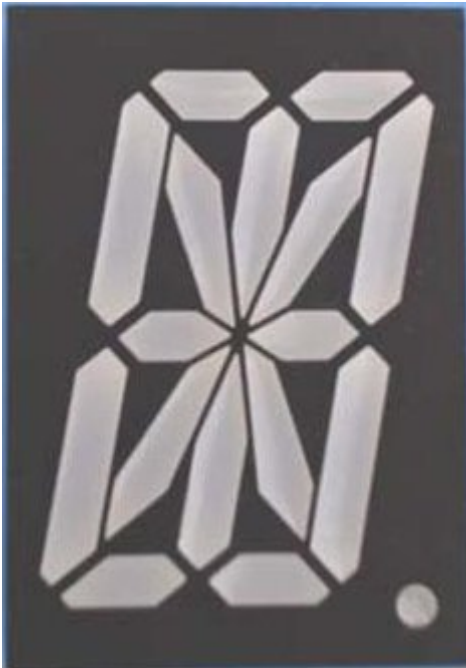


- a. Coating
- b. Core
- c. Cladding

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

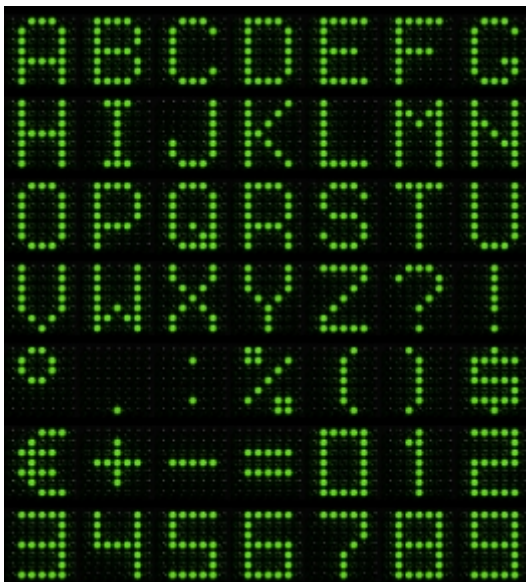
- a. There are low losses for high frequency signals.
- b. They are not affected by magnetic fields.
- c. You can transmit over long distances.

23. What type of display is shown here?



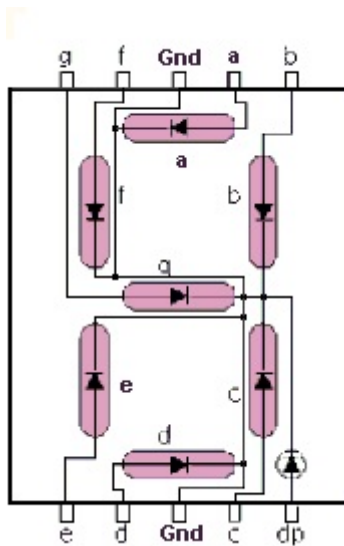
- a. This is a 12-segment display.
- b. This is a matrix display.
- c. This is a starburst display.

24. What type of display is shown here?



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

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



- a. Common Anode.
- b. Multiplexed.
- 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. An electric voltage without any user.
- c. Electric energy in a battery.

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. 1 mega ohm.
- b. 100 Ohm

c. 0.05 Ohm

**30.** When software is classified a level E, what may be the consequences for occupants of the aircraft?

- a. There may be discomfort, possibly including for the occupants.
- b. There will be slight inconvenience for the occupants.
- c. There will be no effect or consequences for the occupants.

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

- a. Field Loadable Software.
- b. Field Loading System
- 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. Never during the flight.
- c. Yes, without review by the Civil Aviation Authority (CAA).

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

- a. The radiation of a display.
- b. Cosmic noise from objects in space.
- 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 static dischargers.
- c. By aircraft structure bonding.

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

- a. Inspection for burn spots and pitted areas.
- b. An operational avionics test.
- 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. gravity forces.
- b. the GPS receiver.
- c. the satellite clock.

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

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

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

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

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

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