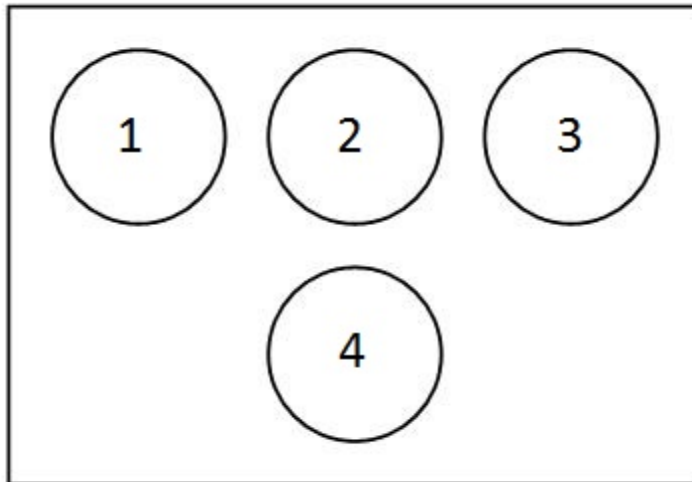


**Question block created by wizard.**

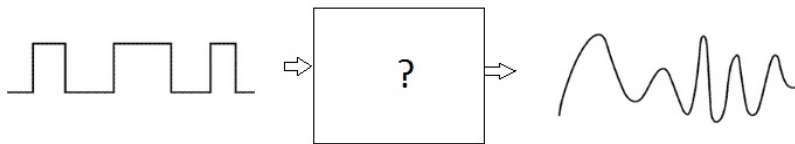
**This exam contains 40 questions**

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. ACAS/TCAS.  
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. 4 elements.  
b. 16 elements.  
c. 8 elements.

5. Convert  $29_{(16)}$  to the octal system.
- a. 51
  - b. 41
  - c. 39
6. What type of converter is the fastest for analogue to digital conversion?
- a. Integration ADC
  - b. Flash ADC
  - c. Charge Balancing ADC
7. What is the function of the block marked with "?" in this figure?



This is....

- a. a SAR.
  - b. a DAC.
  - c. an ADC.
8. The ARINC 429 data-bus uses a....
- a. 8 bit label and 16 bit of data word.
  - b. 8 bit label and 8 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. bus coupler and connected line replaceable unit.
  - c. different bus couplers.
10. Where is the ARINC429 high speed transmission rate used for?
- a. Flight non-critical systems.
  - b. Flight critical systems.
  - c. Cabin interphone system only.

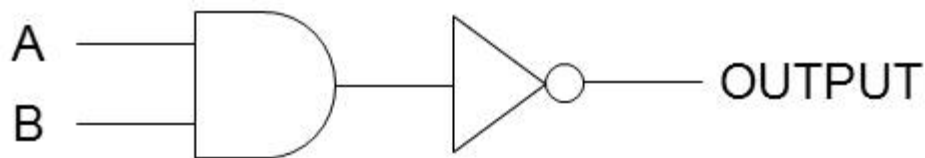
**11.** The carrier-sense multiple access with collision detection (CSMA/CD) system in the ethernet protocol is used to prevent....

- a. the access of multiple devices to the ethernet at the same time.
- b. signal weakening over a long distance.
- c. for interference from adjacent devices.

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

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

**13.** What is the function of this logic circuit?

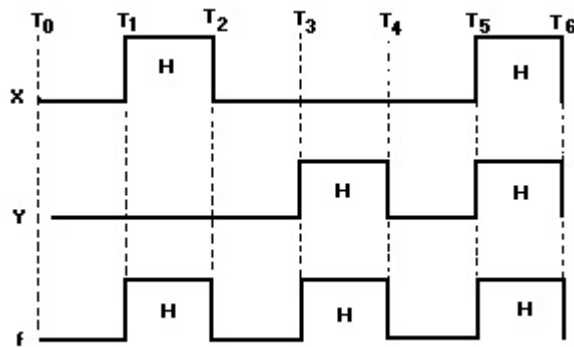


- a. And
- b. Nor
- c. Nand

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

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

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



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

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

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

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

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

18. What is the purpose of the demultiplexer?

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

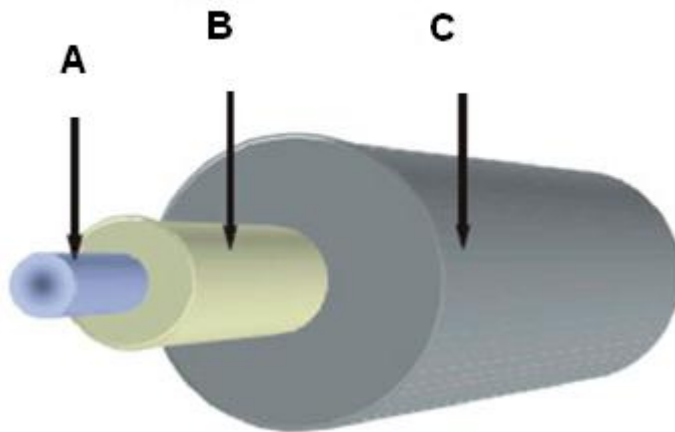
19. How do we erase the data content of an Eprom?

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

20. What is transmitted through a fibre optic cable?

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

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

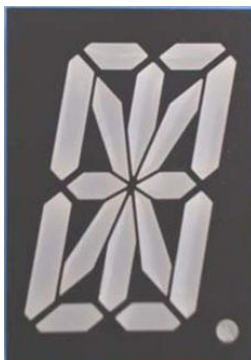


- a. Core
- b. Coating
- c. Cladding

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.

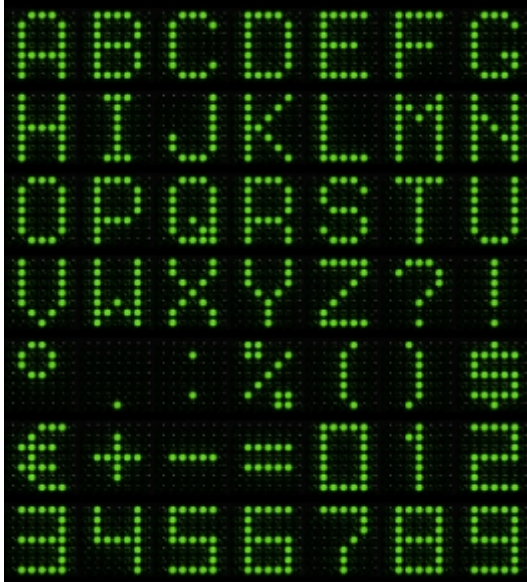
23. What type of display is shown here?



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

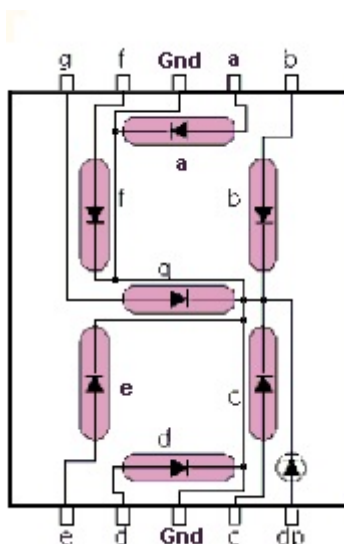
c. This is a matrix display.

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

- 26.** At which circumstance is it necessary to wear a wrist strap?
- Only when the power source is switched on.
  - When changing an electrically sensitive computer mounted in a metal cabinet (LRU).
  - When changing a power printed circuit board.
- 27.** What is meant by static electricity?
- An electric voltage without any user.
  - Electrical charge at rest.
  - Electric energy in a battery.
- 28.** Some materials can be positively- or negatively charged.
- Which material can hardly be charged at all?
- PVC pipes
  - Cotton wire
  - Nylon wool
- 29.** What is in equipment the maximum contact or bonding resistance?
- 100 Ohm
  - 0.05 Ohm
  - 1 mega ohm.
- 30.** When software is classified a level E, what may be the consequences for occupants of the aircraft?
- There may be discomfort, possibly including for the occupants.
  - There will be slight inconvenience for the occupants.
  - There will be no effect or consequences for the occupants.
- 31.** What does the abbreviation FLS mean?
- Field Loadable Software.
  - Field Loading System
  - Flight Leading Software.
- 32.** May the User Modifiable Software (UMS) be modified by the aircraft operator?
- Never during the flight.
  - Yes, only with review by the Civil Aviation Authority (CAA).

- c. Yes, without review by the Civil Aviation Authority (CAA).

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

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

**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. 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. the GPS receiver.
- c. gravity forces.

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

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

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