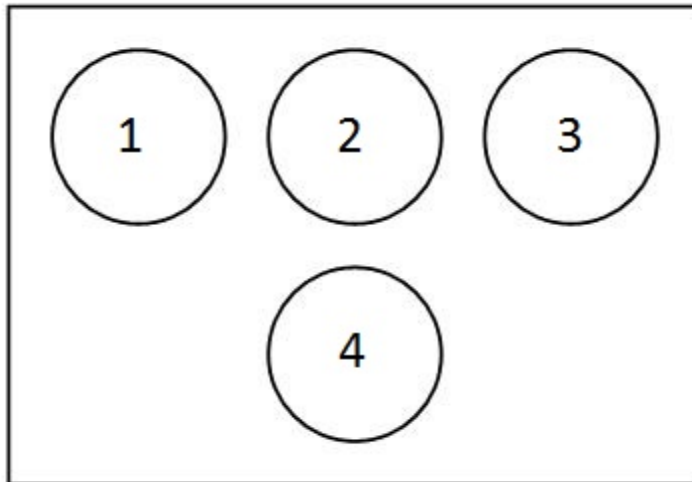


**Question block created by wizard.**

**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.

*If choice c is selected set score to 1.*

2. What is the name of the system used in collision avoidance?

- (a) ACARS.
- (b) ACAS/TCAS.
- (c) RAS.

*If choice b is selected set score to 1.*

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.

*If choice a is selected set score to 1.*

4. How many elements uses the hexadecimal system?

It uses...

- (a) 4 elements.
- (b) 16 elements.
- (c) 8 elements.

*If choice b is selected set score to 1.*

5. Convert  $29_{(16)}$  to the octal system.

- (a) 51
- (b) 41
- (c) 39

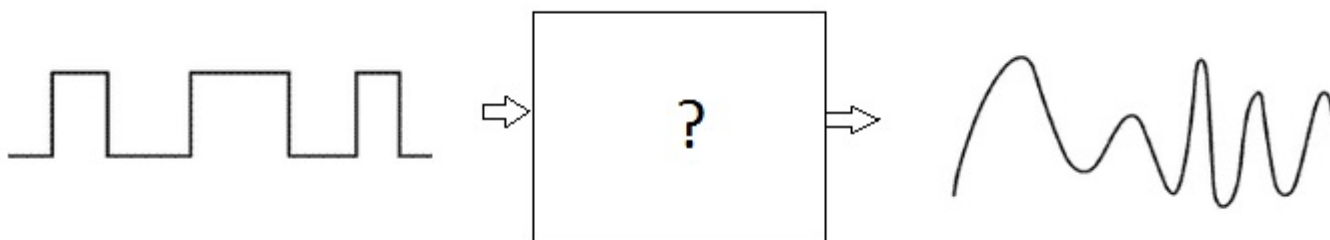
*If choice a is selected set score to 1.*

6. What type of converter is the fastest for analogue to digital conversion?

- (a) Integration ADC
- (b) Flash ADC
- (c) Charge Balancing ADC

*If choice b is selected set score to 1.*

7. What is the function of the block marked with "?" in this figure?



This is...

- (a) a SAR.
- (b) a DAC.
- (c) an ADC.

*If choice b is selected set score to 1.*

- 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.

*If choice c is selected set score to 1.*

- 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.

*If choice b is selected set score to 1.*

- 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.

*If choice b is selected set score to 1.*

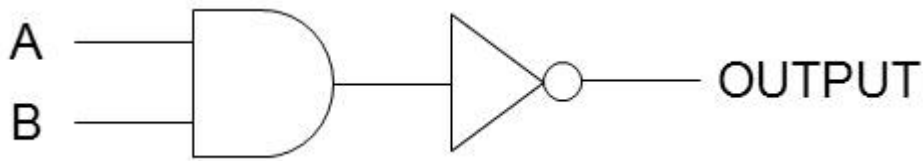
- 11.** The carrier-sense multiple access with collision detection (CSMA/CD) system in the ethernet protocol is used to prevent....
- (a) the access of multiple devices to the ethernet at the same time.
  - (b) signal weakening over a long distance.
  - (c) for interference from adjacent devices.

*If choice a is selected set score to 1.*

- 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.

*If choice c is selected set score to 1.*

13. What is the function of this logic circuit?



- (a) And
- (b) Nor
- (c) Nand

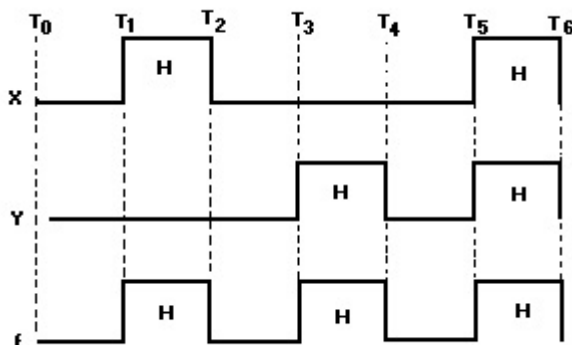
*If choice c is selected set score to 1.*

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.

*If choice b is selected set score to 1.*

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



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

*If choice c is selected set score to 1.*

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.

*If choice a is selected set score to 1.*

**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.

*If choice b is selected set score to 1.*

**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.

*If choice b is selected set score to 1.*

**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.

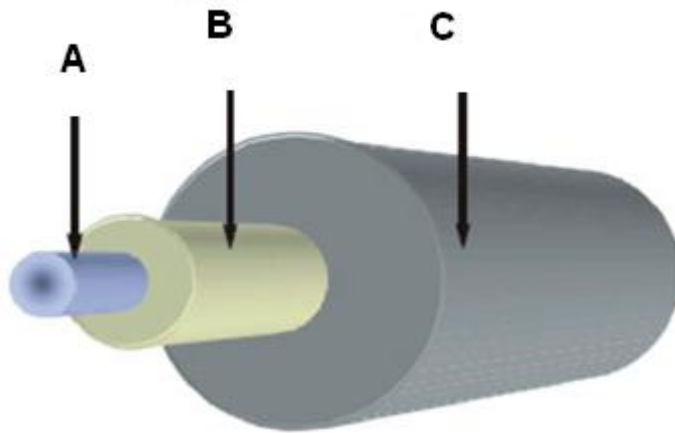
*If choice a is selected set score to 1.*

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

- (a) Radiant power
- (b) Magnetic Energy
- (c) Electrical signals

*If choice a is selected set score to 1.*

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



- (a) Core
- (b) Coating
- (c) Cladding

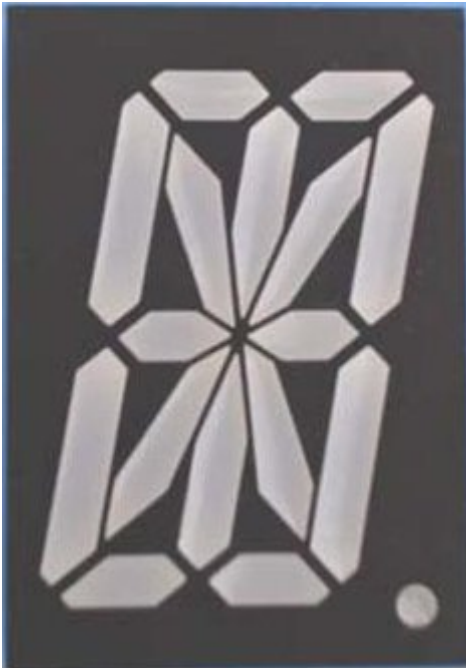
*If choice c is selected set score to 1.*

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.

*If choice c is selected set score to 1.*

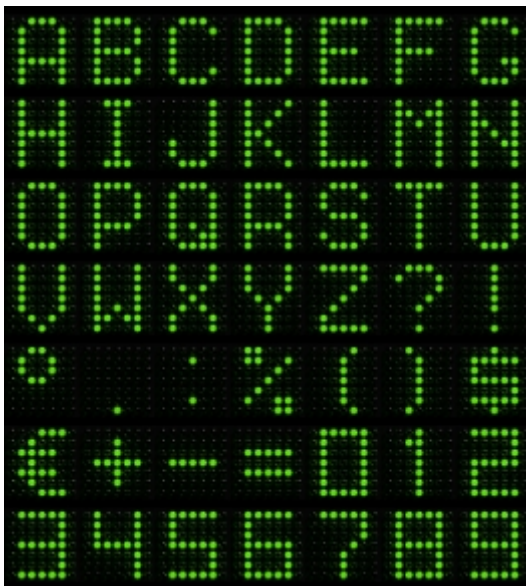
23. What type of display is shown here?



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

*If choice a is selected set score to 1.*

24. What type of display is shown here?

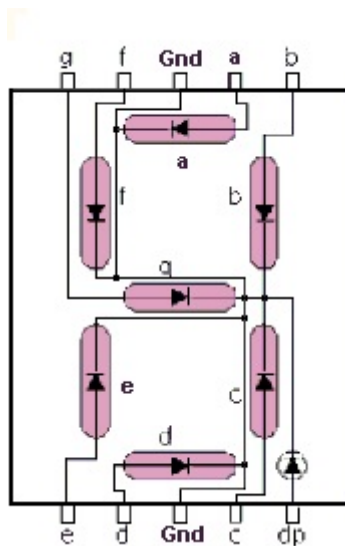


- (a) LED Display

- (b) LCD Display
- (c) CRT Display

*If choice a is selected set score to 1.*

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



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

*If choice c is selected set score to 1.*

**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.

*If choice c is selected set score to 1.*

**27.** What is meant by static electricity?

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

*If choice b is selected set score to 1.*

**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

*If choice b is selected set score to 1.*

**29.** What is in equipment the maximum contact or bonding resistance?

- (a) 100 Ohm
- (b) 0.05 Ohm
- (c) 1 mega ohm.

*If choice b is selected set score to 1.*

**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.

*If choice c is selected set score to 1.*

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

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

*If choice a is selected set score to 1.*

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

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

*If choice c is selected set score to 1.*

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

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

*If choice a is selected set score to 1.*

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

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

*If choice a is selected set score to 1.*

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

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

*If choice b is selected set score to 1.*

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

- o (a) When a message block is longer than 220 characters.
- (b) When the aircraft is interrogated by a ground facility.
- o (c) When the flight crew initiates ACARS communication.

*If choice b is selected set score to 1.*

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

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

*If choice c is selected set score to 1.*

**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.
- o (b) A yellow roundel.
- o (c) A white diamond.

*If choice a is selected set score to 1.*

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

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

*If choice c is selected set score to 1.*

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

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

*If choice b is selected set score to 1.*

***If assessment score is 75% to 100% Pass  
If assessment score is 0% to 74% Fail***