Headquarters Air Cadets
Examination

Senior Cadet
35/3 Adv Radio & Radar
Generated 10-Sep-08
Serial: 1847

1. *Use black or dark blue pen, NOT pencil.*
2. *Mark one answer per question with a cross.*
3. *If you wish to change an answer, cancel the original mark and mark another single answer.*

☒ *A selected answer.*
☒ *A cancelled answer.*

Mark:

ame and Initals _____ Date of Exam _____

Date of Birth _____ Squadron/Unit _____ Wing _____

To change the displayed range on a radar screen:

- ☐ Only a new set of markers is required
- ☐ The intensity of the display is changed
- ☐ The velocity of the timebase sweep is changed
- ☐ The transmitted power is changed

One advantage of em waves is:

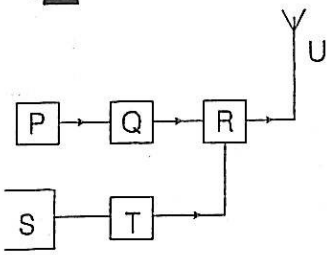
- ☐ They travel a short way for a given power
- ☐ They travel forever for a set power
- ☐ They travel a long way for a given power
- ☐ They travel a long way for a set power

If the wavelength was 10 metres, the best aerial lengths would be:

- ☐ 2.5 or 5 metres
- ☐ 5 or 10 metres
- ☐ 15 or 25 metres
- ☐ 2.5 or 1.5 metres

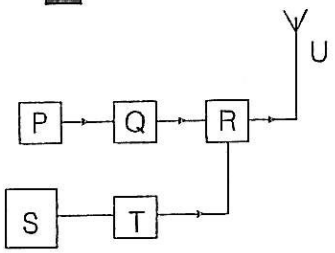
What does the block marked P represent in the diagram?

- ☐ Microphone
- ☐ Buffer Amplifier
- ☐ Power Amplifier
- ☐ Master Oscillator



5 What does the block marked U represent in the diagram?

- a ☐ Master Oscillator
- b ☐ Amplifier
- c ☐ Buffer Amplifier
- d ☐ Aerial

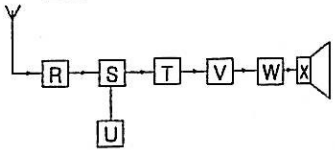


6 A tuned circuit is used to:

- a ☐ Attenuate all unwanted signals
- b ☐ Filter out all unwanted signals
- c ☐ Select only unwanted signals
- d ☐ Amplify all unwanted signals

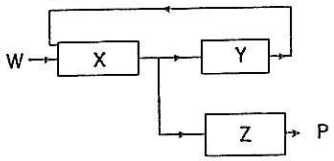
7 What does the block marked W represent on the diagram:

- a ☐ Local Oscillator
- b ☐ Loudspeaker
- c ☐ AF Amplifier
- d ☐ Demodulator



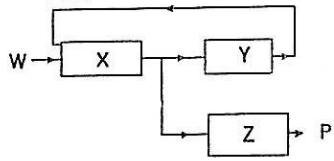
8 The diagram shows a discriminator (ratio detector) - what does the letter P represent:

- a ☐ Carrier input
- b ☐ Phase detector
- c ☐ Reference source
- d ☐ Recovered signal



9 The diagram shows a discriminator (ratio detector) - what does the letter Y represent:

- a ☐ Recovered signal
- b ☐ Amplifier output
- c ☐ Carrier input
- d ☐ Phase Detector



10 Radio detection and ranging is better known as:

- a ☐ RAADAR
- b ☐ RIDDOR
- c ☐ RADAR
- d ☐ RDF

11 What does IFF stand for?

- a ☐ Identify friend or foe
- b ☐ Identifying foes fighters
- c ☐ Identify friendly fighters
- d ☐ Identify fighter formations

12 What does code 7700 mean in SSR usage:

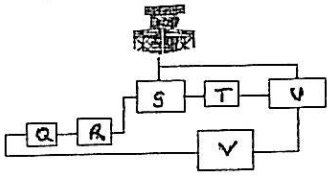
a ☐ SOS
b ☐ Height information
c ☐ Loss of radio communications
d ☐ Highjack

13 The receivers on an SSR system are:

a ☐ Single frequency
b ☐ Wide bandwidth
c ☐ Narrow bandwidth
d ☐ Multiband

14 In this block diagram of a radar system, what does the block marked V represent:

a ☐ CRT indicator
b ☐ Timebase generator
c ☐ TX
d ☐ RX



15 Which radar employed by the RAF can be rotated to serve the runway in use:

a ☐ PUR
b ☐ PIR
c ☐ PAR
d ☐ PER

16 Which of the following is information supplied to a pilot from ILS:

a ☐ Azimuth descent angle
b ☐ Elevation from sea level
c ☐ Certain Ranges
d ☐ Height to touchdown

17 ILS is made up of three elements, marker beacons, glide path and which other:

a ☐ Localiser
b ☐ Airfield lights
c ☐ Distance data
d ☐ Marker buoys

18 In an aircraft using ILS the meter's flags are set beacause:

a ☐ The pilot has not calibrated the meter
b ☐ The signal strength is inadequate
c ☐ The aircraft is too close to the airfield
d ☐ The signal strength is adequate

19 What does DRDF stand for ?

a ☐ Digitally resolved direction finder
b ☐ Digital resolution direction finding
c ☐ Direct radio digital finder
d ☐ Day radio dawn flight

20 DRDF provides the controller with data in three forms, combined digital pulses, digital pulses and which other:

a ☐ A sinusoidal output
b ☐ Mains hum
c ☐ An AC voltage
d ☐ A DC voltage

21 There are two main control centres used in the DRDF system, one is Prestwick, the other is at:

a ☐ West Watton
b ☐ West Ham
c ☐ West Raynham
d ☐ West Drayton

22 There is a system that uses a transponder to provide regular transmissions to guide aircraft across country. This system is called:

a ☐ TACAN
b ☐ TUCAN
c ☐ TAKAN
d ☐ TACAAN

23 The pilot of an aircraft receives beacon identification, distance and which other from TACAN:

a ☐ Altitude
b ☐ Bearing
c ☐ Elevation
d ☐ Azimuth

24 What does STCICS stand for ?

a ☐ Strike Command Integrated Communications System
b ☐ Support Command Internal Communications System
c ☐ Support Command Integrated Communications System
d ☐ Strike Command Internal Communications System

25 RAF FTS has two sub-systems, one is called Boxer the other is called:

a ☐ Uniter
b ☐ United
c ☐ Unitor
d ☐ Unites