

1. According to the Telecommunications Order 2001, any person who establishes, installs, maintains, provides or operates a radio-communication service or any radio-communication equipment in any place or on board any vessel, aircraft or in any vehicle in Brunei Darussalam without a licence shall be guilty of an offence. Which of the statement below is CORRECT?
 - A. Any person guilty of an offence shall be liable on conviction to a fine not exceeding \$50,000, imprisonment for a term not exceeding 3 years or both.
 - B. Any person guilty of an offence shall be liable on conviction to a fine not exceeding \$10,000, imprisonment for a term not exceeding 3 years of both.
 - C. Any person guilty of an offence shall be liable on conviction to a fine not exceeding \$10,000, imprisonment for a term not exceeding 1 year or both.
 - D. No fine applies.
2. If you purchase amateur radio equipment from outside the country, what is the right thing to do upon arrival at the custom's control post?
 - A. Bring in the said equipment without notifying Royal Brunei Customs and Excise official.
 - B. Pay import tax for the equipment.
 - C. Declare the equipment to the Royal Brunei Customs and Excise officials.
 - D. Bring the equipment directly to AITI officials.
3. Which of the conversation below should be avoid when using an amateur radio?
 - A. Religion, Business, Politics, Racial and Ethnic Slurs.
 - B. Hobbies, Education, and Entertainment.
 - C. Sport, Personal details and Socializing
 - D. Weather, Location and Q-Codes.
4. Is Amateur Radio equipment allowed to be modified?
 - A. Yes, with permission from the Royal Brunei Police Force and Royal Brunei Custom and Excise.
 - B. Yes, if the equipment is modified by a certified dealer.
 - C. Once you have obtained a licence, you can immediately modify.
 - D. No. Any equipment is not allowed to be modified, unless with written approval from AITI.
5. Amateur radio frequencies in Brunei Darussalam are coordinated by:
 - A. Unified National Networks (UNN).
 - B. International Amateur Radio Union (IARU).
 - C. Amateur Radio Society.
 - D. Authority for Info-communications Technology Industry of Brunei Darussalam (AITI).

6. What is the requirement for a VHF (Standard) licence holder to upgrade for HF (Advance) licence?
- A. Register an HF (Advance) licence written examination.
 - B. Holding a standard licence for a minimum of three (3) months and to submit a logbook indicating active communication for the past six (3) months.
 - C. Holding a standard licence and pass practical examination.
 - D. Holding a standard licence for a minimum of six (6) months and to submit a logbook indicating active communication for the past six (6) months.
7. What are the requirements for a non-local who stays in Brunei Darussalam for more than three months to obtain an Amateur Radio Apparatus licence?
- A. A local guarantor, applicant must produce a valid foreign Amateur Radio licence and a copy of applicant valid passport.
 - B. Applicant has to sit for AITI amateur radio exam.
 - C. Foreigners are not allowed to hold a local amateur radio licence.
 - D. None of the above.
8. How much does the import permit fee cost if you import amateur radio equipment from overseas?
- A. Fee of BND 20 per unit.
 - B. No charges for the imported equipment.
 - C. Third unit onwards charged at BND 50 per unit.
 - D. Fee of BND 25 per unit.
9. An amateur radio licensee should renew their licence:
- A. No renewal required.
 - B. Annually.
 - C. Quarterly.
 - D. Bi-annually.
10. What does the Amateur Radio Practical Examination consist of?
- A. Operating Spectrum Analyzer.
 - B. Licensing Conditions.
 - C. Assembling and Identifying equipment.
 - D. Checking interference.

11. What is the Amateur Apparatus Licence fee for a repeater station?
- A. BND 20 per unit.
 - B. BND 25 annually per equipment.
 - C. BND 100 annually per equipment.
 - D. No fee is required.
12. Which of the following is NOT an offence against the Telecommunication Order 2001:
- A. Selling radio equipment without a licence.
 - B. Operating an unapproved radio equipment on an unlicence band.
 - C. Operating an approved radio equipment with an expired operating licence.
 - D. Operating another operator's radio equipment where both users are licenced.
13. If you are in contact with another station and you hear an emergency call for help on your frequency, what should you do?
- A. Stop your QSO immediately and take the emergency call.
 - B. Tell the calling station that the frequency is in use.
 - C. Call your local Fire and Rescue Department and inform them of the emergency.
 - D. Direct the calling station to the nearest emergency net frequency.
14. An Amateur Radio licensee is allowed to operate on which band?
- A. Amateur band.
 - B. Marine band.
 - C. Aeronautical band.
 - D. Broadcast band.
15. The correct International phonetic code for the callsign V85AITI is:
- A. Victor Eighty-Five Apple Italy Tango Italy.
 - B. Victory Eighty-Five Alpha India Tango India.
 - C. Vicky Eighty-Five Apple India Thailand India.
 - D. Victor Eighty-Five Alpha India Tango India.

16. The purpose of an antenna is to:
- A. Provide a convenient place for birds to land.
 - B. Allow balanced transmission lines.
 - C. Let people know you are a radio amateur.
 - D. Convert electrical signals into radio waves.
17. You installed a 144MHz transceiver for marine operation on your boat to operate as an Amateur Radio mobile station. Under which of the following conditions is operating permitted?
- A. Not permitted at all.
 - B. Anywhere, provided the boat remains in Brunei Darussalam waters.
 - C. On inland waterways and river but not in docks, estuaries or harbours.
 - D. Only with special permission from AITI.
18. Digital signals are:
- A. Constantly changing in amplitude, frequency or both.
 - B. A stream of finite values at a specific sampling interval.
 - C. Demodulated using a frequency discriminator.
 - D. Created by a digital to analogue converter.
19. What does 'CQ' and 'DX' stands for?
- A. Calling all station and Wait.
 - B. Call quit/Closing down and Digital signal transmission.
 - C. Station call interference and Distance foreign countries.
 - D. Calling all station and Distance foreign countries.
20. Band plans are used because:
- A. Using them is a condition of the licence.
 - B. They help prevent on-air abuse.
 - C. They enable efficient use of the band for different modes.
 - D. They are required for radio competitions.

21. The most common input/output frequency offset for repeaters in the 2-metre band is:
- A. 1.6 MHz.
 - B. 5.0 MHz.
 - C. 0.4 MHz.
 - D. 0.6 MHz.
22. Which of the following is the correct code used in Amateur Radio communications for “Best Regards”?
- A. 74.
 - B. 77.
 - C. 73.
 - D. 88.
23. If an Amateur Radio licensee intends to terminate their licence, they must:
- A. Submit termination application via AITI Online Services and state reasons for termination while also informing the status of equipment prior to the licence expiry date.
 - B. Submit termination application via AITI Online Services and also informing the status of equipment after licence has expired.
 - C. Disconnect their Amateur Radio equipment.
 - D. Inform their Amateur Radio association.
24. For Amateur Radio special events such as Jamboree On The Air, AITI allocates call sign with the following prefix:
- A. V84S.
 - B. V85S.
 - C. V88S.
 - D. V89S.
25. What is the correct way to make a contact on a repeater?
- A. Say the callsign of the station you want to contact three times.
 - B. Say the other operator’s name, then your callsign three times.
 - C. Say the call sign of the station you want to contact, then your callsign.
 - D. Say, “Breaker, breaker” then your callsign.

26. In what circumstances can an amateur radio broadcast information to the public?
- A. When an amateur radio operator is paid.
 - B. When broadcasting is less than one hour.
 - C. When broadcasting is more than 15 minutes.
 - D. It is entirely prohibited.
27. An urgent situation not involving the safety of life is called:
- A. An emergency call.
 - B. A high priority call.
 - C. A sub-distress call.
 - D. An urgency call.
28. Which component can amplify a small signal using low voltages:
- A. PNP transistor.
 - B. An electrolytic capacitor
 - C. A variable resistor.
 - D. A multiple-cell battery.
29. A minor who hold an Amateur Apparatus Licence must be supervised by any Amateur Apparatus licensee:
- A. Only when training another Amateur.
 - B. Whenever the station receiver is operated.
 - C. Whenever the station used for transmitting.
 - D. At all times when operating.
30. What does a frequency counter do?
- A. It measured frequency signal.
 - B. It produces a reference frequency.
 - C. It generates broadband white noise.
 - D. It measures FM transmitter deviation.

[END OF SECTION A MULTIPLE-CHOICE QUESTIONS]

1. The process of modulation allows:
 - A. Information to be removed from a carrier.
 - B. Voice and Morse code to be combined.
 - C. Information to be impressed on to a carrier.
 - D. None of the above.

2. The wavelength of a signal in free space with a frequency of 100MHz is:
 - A. 3 millimeter.
 - B. 30 meter.
 - C. 3 meter.
 - D. 3 cm.

3. What does a variable resistor or potentiometer do?
 - A. Its resistance changes when AC is applied to it.
 - B. It transforms a variable voltage into a constant voltage.
 - C. Its resistance changes when its slide or contact is moved.
 - D. To create an open circuit when there is too much current in a circuit.

4. What might happen if you switch a multimeter to measure resistance while you have it connected to measure voltage?
 - A. The multimeter would read half the actual voltage.
 - B. It would probably destroy the meter circuitry.
 - C. The multimeter would read twice the actual voltage.
 - D. Nothing unusual would happen; the multimeter would measure the circuit's resistance.

5. Define the function of a Bandpass filter?
 - A. Restrict high frequency.
 - B. Restrict low frequency.
 - C. Allow only data between two cutoff frequencies to pass.
 - D. Allow data except between two cutoff frequencies to pass.

6. An antenna which transmits equally well in all compass directions is a
- A. Dipole with a reflector only.
 - B. Half-wave horizontal dipole.
 - C. Dipole with director only.
 - D. Quarterwave grounded vertical.
7. How do you test an ammeter connected to a circuit?
- A. In series with the circuit.
 - B. In quadrature with the circuit.
 - C. In parallel with the circuit.
 - D. A phase with the circuit.
8. The output from the transmitter should be connected to the antenna by:
- A. Coaxial cable.
 - B. Waterproof mains cable.
 - C. Screened audio cable.
 - D. Fuse wire.
9. If 'c' is speed of light, 'f' is frequency and $c=f\lambda$, what does λ represent?
- A. Time.
 - B. Wavelength.
 - C. Amplitude.
 - D. Velocity.
10. What is the Unit(s) for each of the components (Capacitor, Ammeter, Resistor, Inductor) respectively?
- A. Coulombs, Meter, Ohm, Henry.
 - B. Coulombs, Ampere, Ohm, Farad.
 - C. Farad, Ampere, Ohm, Henry.
 - D. Farad, Ampere, Resistance, Henry.

11. What is the modulation used in “Very High Frequency” and “High Frequency” respectively?
- A. Single band and multiple band.
 - B. Amplitude modulation and frequency modulation.
 - C. Quadrature amplitude modulation and phase modulation.
 - D. Frequency modulation and amplitude modulation.
12. The frequency of a Variable Frequency Oscillator (VFO) is determined by
- A. The supply voltage.
 - B. The type of transistor used.
 - C. The particular circuit used.
 - D. The inductance and capacitance of the tuned circuit.
13. Define the function of Low-pass filter and High-pass filter respectively?
- A. Restrict high frequency and restrict low frequency.
 - B. Restrict low frequency and restrict high frequency.
 - C. Channeling high frequency and channeling low frequency.
 - D. None of the above.
14. The unit Watt (W) is a measure for:
- A. RF electric field strength.
 - B. RF power.
 - C. RF energy.
 - D. RF voltage.
15. Define which antenna comprises of a center-fed driven element for transmitting or receiving radio frequency energy?
- A. Omni-directional Antenna.
 - B. Half wavelength dipole.
 - C. Yagi Antenna.
 - D. Straight wire antenna.

16. Groundwave are defined as:

- A. Radio waves that reflect off the ionosphere.
- B. Radio waves traveling along the Earth's surface.
- C. Radio waves that is absorb by the ground.
- D. None of the above.

17. What does a dip-meter do?

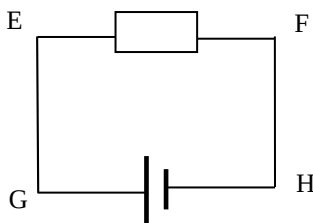
- A. It accurately indicates signal strength.
- B. It measures frequency accurately.
- C. It measures transmitter output power accurately.
- D. It gives an indication of the resonant frequency of a circuit.

18. Over driving a power amplifier will:

- A. Give a high SWR.
- B. Give minimum distortion on receive.
- C. Generate excessive harmonics.
- D. Minimize power output.

19. Which direction is the electron flowing in the diagram below?

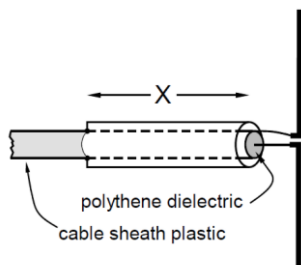
- A. From E to F
- B. From H to G
- C. From H -> F -> E -> G
- D. From G -> E -> F -> H



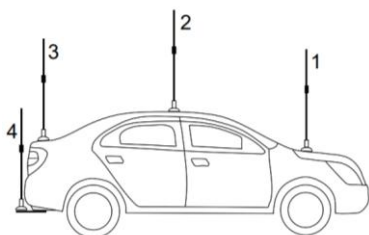
20. 2 resistors are connected in parallel and are connected across a 240 volt battery. If each resistor is 5000 ohms, the total current is:

- A. 96 Miliampere.
- B. 96 Ampere.
- C. 9.6 Miliampere.
- D. 9.6 Ampere.

21. The drawing shows a metal sleeve balun suitable to connect a coaxial cable to a centre-fed half-wave dipole. The distance marked 'X' should be?



- A. $\lambda/2$ allowing for the permittivity of polythene.
 - B. $\lambda/2$ allowing for the permittivity of plastic.
 - C. $\lambda/4$ allowing for the permittivity of polythene.
 - D. $\lambda/4$ allowing for the permittivity of plastic.
22. The distance between the transmitter and the nearest point at which the received signal is received from ionospheric propagation is known as the:
- A. Skip distance.
 - B. Skip angle.
 - C. Radiation distance.
 - D. Skip zone.
23. Which is the BEST location to place a mobile antenna?



- A. Location 1.
- B. Location 2.
- C. Location 3.
- D. Location 4.

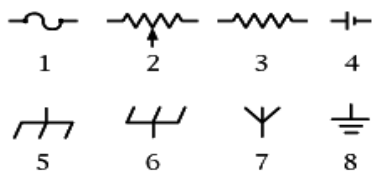
24. Loss in feeder increases with:

- A. Transmit power.
- B. Length of the feeder cable.
- C. Lower transmit frequencies.
- D. Higher gain antennas.

25. A 'line of sight' transmission between two stations uses mainly the?

- A. Ionosphere.
- B. Sky wave.
- C. Troposphere.
- D. Ground wave.

26. In the diagram below, which symbol represents an antenna?



- A. 7.
- B. 2 and 3.
- C. 1.
- D. 8 and 4.

27. Which of the following sets of components are used to make RF filters?

- A. Inductor capacitors.
- B. Diodes and resistors.
- C. LEDs and capacitors.
- D. Zener diodes and inductors.

28. An antenna which transmits well in one direction is a?

- A. Dipole with a reflector only
- B. A Yagi.
- C. Quarterwave grounder vertical.
- D. None of the above.

29. Why is it necessary for a 'Directional High-Gain' antenna to be placed higher than the surrounding buildings?
- A. To prevent it from collapsing.
 - B. To avoid the antenna from damaging nearby buildings with its RF power.
 - C. For the antenna to receive greater universal wave and low wave.
 - D. To avoid the antenna from directing its excess RF power to the people in nearby buildings.
30. What is the advantage of a quarter-wave vertical ground-plane antenna for DX working on 21MHz?
- A. Small size.
 - B. All-round radiation.
 - C. Good matching to the feeder.
 - D. Low radiation angle.

[END OF SECTION B MULTIPLE-CHOICE QUESTIONS]