

Department of Examinations, Sri Lanka

EXAMINATION FOR THE AMATEUR RADIO OPERATORS' CERTIFICATE OF PROFECIENCY
ISSUED BY THE DIRECTOR GENERAL OF TELECOMMUNICATIONS, SRI LANKA – (1999)
(ADVANCE CLASS)

Licensing Conditions, Operating Practices and Procedures *Two hours*

Answer all questions on this paper itself.

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Pick out the correct answer and underline it.

1. SSB suppressed carrier is denoted
(a) A3E (b) F3E (c) R3E (d) J3E
2. Double side band full carrier is denoted
(a) A3E (b) F3E (c) R3E (d) J3E
3. The call sign for India is
(a) VE (b) VU (c) VK (d) VP
4. The call sign for Canada is
(a) VE (b) VU (c) VK (d) VP
5. The call sign for Bermuda is
(a) VE (b) VU (c) VK (d) VP
6. The call sign for Australia is
(a) VE (b) VU (c) VK (d) VP
7. Morse telegraphy using on/off keying without modulation is designated as
(a) A1A (b) J3E (c) H3E (d) R3E
8. Single Side Band without carrier is designated as
(a) A1A (b) J3E (c) H3E (d) R3E
9. Single Side Band with reduced carrier is designated as
(a) A1A (b) J3E (c) H3E (d) R3E
10. Single Side Band with full carrier is designated as
(a) A1A (b) J3E (c) H3E (d) R3E

11. An Amateur station is located about half a kilo meter from the boundary of an airport. The antenna system should be erected so that
- (a) it does not exceed 15 meters from the ground.
 - (b) it cannot be seen from the air
 - (c) it does not exceed 15 meters from roof of it the building, housing the station.
 - (d) it is within the building housing the station.
12. What does the term 73 mean
- (a) Love and kisses.
 - (b) Wife.
 - (c) Keep out.
 - (d) Kind Regards.
13. What does 88 mean
- (a) Love and kisses.
 - (b) Wife.
 - (c) Keep out.
 - (d) Kind Regards.
14. What does XYL mean
- (a) Love and kisses.
 - (b) Wife.
 - (c) Keep out.
 - (d) Kind Regards.
15. What type of messages are permitted to communicated by Radio Amateurs?
- (a) SOS
 - (b) May Day
 - (c) Messages of Technical nature
 - (d) Messages relating to third parties
16. What frequency is used as a “tone burst” in most Amateur Repeaters?
- (a) 1850 Hz
 - (b) 1700 Hz
 - (c) 1750 Hz
 - (d) 1725Hz
17. Which of the following represents a fairly good signal strength using RST code?
- (a) R5
 - (b) S2
 - (c) S8
 - (d) S5
18. Q code for ‘stand by’ is
- (a) QRX
 - (b) QRS
 - (c) QRL
 - (d) QRN
19. Q code for “send slowly” is
- (a) QRX
 - (b) QRS
 - (c) QRL
 - (d) QRN
20. Q code for “I am busy” is
- (a) QRX
 - (b) QRS
 - (c) QRL
 - (d) QRN
21. Having established contact on a calling frequency it is good practice to
- (a) Stay on the same frequency
 - (b) Protest to all others who are calling
 - (c) Move to another frequency.
 - (d) Get others to join the same frequency.
22. The purpose of a terrestrial repeater is to
- (a) Minimize local contacts.
 - (b) Increase coverage on satellite communication.
 - (c) Increase the range of fixed stations.
 - (d) Increase the range of mobile stations

23. The Q-code for affected by static
(a) QRX. (b) QRS. (c) QRL. (d) QRN.
24. What is the phonetic alphabet for "COIL"
(a) charlie, oscar, italy, london (b) coil, oscar, inductance, london
(c) charlie, oscar, india, lima (d) charlie, ocean, italy, lima
25. The Band Plans should be observed because
(a) they are mandatory. (b) they are intended to aid operating.
(c) they are only for novices. (d) they are governed by international Regulations.
26. It is a safety practice to
(a) use all mains power via a master switch. (b) unearth all metal cases.
(c) use plastic piping for earthing (d) have no master switch.
27. The best method by which spurious emissions from a VHF transmitter can be detected is by using
(a) a SWR bridge (b) a heterodyne wave meter.
(c) an absorption wave meter (d) a frequency counter.
28. In the RST code "T" is for
(a) transmitter type (b) tone
(c) temperature of final stage. (d) time of transmission.
29. To prevent interference to other users of the band it is a good practice to tune a transmitter initially
(a) on a harmonic outside the band. (b) into an antenna.
(c) into a dipole (d) into a dummy load.
30. When calling a station it is good practice to
(a) use the call sign of the other station only.
(b) put your call sign first
(c) put the call sign of the station being called first.
(d) use only your call sign.
31. 4X4 is the call sign for
(a) USA. (b) Sri Lanka. (c) Australia. (d) Israel.
32. The call letters starting with K, N, W have been allocated to
(a) Russia. (b) USA. (c) Japan. (d) England.
33. The 'Golden Rule' in Morse Telegraphy is
(a) keep at 12 WPM (b) never send faster than a person can receive.
(c) send slower than a person can receive (d) use maximum speed on the keyer.

34. Which of the following bands are used by Sri Lankan Amateurs on a secondary basis?
(a) 1.8 - 1.850 MHz (b) 10.1 – 10.150 MHz
(c) 14.0 – 14.350 MHz (d) 21.0 – 21.450MHz
35. Fast scan TV transmissions are permitted on
(a) 14 MHz (b) 21 MHz (c) 144 MHz (d) 10 GHz
36. The bandwidth of a data transmission should be kept to that of telephony in order to
(a) reduce self oscillation. (b) reduce transmitter power.
(c) help demodulation. (d) conserve bandwidth.
37. When using voice which of the following transmission will occupy the largest bandwidth?
(a) SSB (b) FM (c) PM (d) AM
38. A small ferrite bead is sometimes put on a transistor lead. Its purpose is to
(a) space the transistor above the printed circuit board.
(b) give a matching to 50 Ohms.
(c) screen the lead.
(d) prevent parasitic oscillations.
39. In Telegraphy “WX” stands for
(a) How many watts. (b) Weather. (c) How do you copy. (d) Wife.
40. Power supplies for RF power Amplifier should
(a) be inductive coupled. (b) be AF filtered.
(c) be RF filtered (d) be open wires.
41. Over modulation of an AM signal likely to cause
(a) severe splatter on adjacent frequencies. (b) minimum interference.
(c) radiation of side bands. (d) excessive deviation.
42. An RF choke is connected between the Antenna and Earth. The purpose of this Choke is to
(a) reject some interference.
(b) provide a DC path to prevent high voltage static build up.
(c) prevent power being radiated from local oscillations.
(d) to obtain more gain on the receiver.

43. A transmitter operates on a frequency of 145 MHz. Interference is caused to a receiver on the VHF broadcast band (88 – 108 MHz) due to the close proximity to the transmitting antenna and the relative weak signal strength of the broadcasting station. The type of filter that may be used to eliminate the interference is a

- (a) filter in the mains supply lead to the transmitter.
- (b) low pass filter in the receiver antenna feeder.
- (c) low pass filter in the transmitter antenna feeder.
- (d) high pass filter in the receiver antenna feeder.

44. In order to avoid an unnecessary wide radiated bandwidth from an amateur radio telephony transmitter while still maintaining adequate intelligibility of speech. The most suitable audio bandwidth would be

- (a) 300 – 34000 Hz
- (b) 300 – 3400 Hz.
- (c) 3 – 30,000 Hz
- (d) 3 – 340 Hz