Candidate: INTERMEDIATE, Mock ONE
Exam: Amateur Radio Exam Intermediate Level - **Syllabus V1.6b**
Centre: RSGB (RSGB – ONLINE REMOTE INV)
Date: Friday, 17 April 2026

1. You are a passenger onboard a non-UK registered vessel at sea and

1A2-2025-Int'd-8098

A you are licenced to transmit only on the 2m/70cm bands.
B you are permitted to transmit on all UK Amateur bands.
C your Licence does not permit you to transmit any data modes.
D your Licence does not permit you to transmit on Amateur Bands.

2. Who, in the course of their employment, may ask you to send a message?

1C2-2025-Int'd-8076

A The Captain of a tour boat.
B A member of a User Service.
C The Leader of a mountain climbing group.
D A National Express coach driver.

3. An Intermediate licence holder must ensure that his station does NOT cause

1D1-2025-Int'd-899

A undue interference to any electrical equipment.
B undue interference to other radio equipment.
C any interference to any electrical equipment.
D any interference to other radio users.

4. A transceiver controlled remotely at a place other than the Licensees recorded address must have displayed adjacent to it

1E1-2025-Int'd-8105

A A warning not to touch the controls.
B The Licensees callsign.
C The Licensees Licence Number.
D The Licensees name and address.

5. It is necessary to repeat the EMF compliance assessment whenever the

1G1-2025-Int'd-7983

A transmitter has been completely disconnected.
B amateur licence is renewed.
C layout in the shack is changed.
D antenna is replaced with a different type.

6. Which one of the following frequency bands is given secondary status to Intermediate licensees?

1H1-2025-Int'd-1203

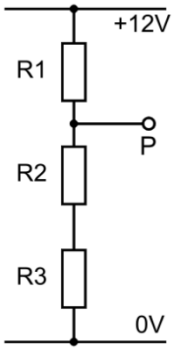
A 3.500-3.800MHz.
B 10.100-10.150MHz.
C 28.000-29.700MHz.
D 21.000-21.450MHz.

7. What is the resistance of a parallel combination of 1.8kΩ , 2.7kΩ , and a 3.3kΩ resistors?

2C1-2025-Int'd-82

A 2.6kΩ.
B 813Ω.
C 7.8kΩ.
D 2.7kΩ.

8. The circuit diagram shows three resistors being used as a potential divider. Each resistor has an identical value, and you may assume that there is no current being drawn from P. The potential at P is



2C2-2025-Int'd-3341

A 4 Volts.
B 36 Volts.
C 0 Volts.
D 8 Volts.

9. A capacitor

2D1-2025-Int'd-1233

A normally consists of a coil formed of a number of turns of wire.
B consists of two metal plates separated by an insulating material.
C can store a charge in its magnetic field.
D often has a ferrite core to concentrate the field.

10. Which ONE of the statements below about an inductor is true?

2D4-2025-Int'd-1234

A It blocks direct current but allows alternating current to flow.
B It consists of two metal plates separated by an insulating material.
C It is able to store an electric charge.
D It is normally a coil of wire with several turns.

11. A capacitor will

2E1-2025-Int'd-1806

A limit direct current to a safe value.
B allow AC to flow but block DC.
C block AC but allow DC to flow.
D charge up on AC but discharge on DC.

12. The Reactance of a capacitor is measured in Ohms because it

2E4-2025-Int'd-2269

A is the relationship of potential difference and current.
B results in the production of heat like a resistor.
C is the relationship of alternating current and heat.
D is the same as resistance which is measured in Ohms.

13. A half wave dipole antenna is 10m long. It is designed to operate at a frequency of

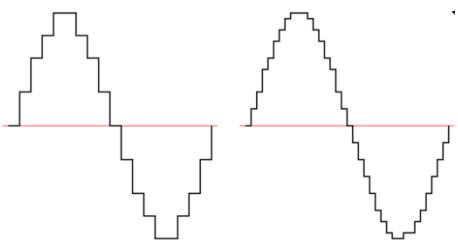
2E7-2025-Int'd-1351

A 3.5MHz.
B 14MHz.
C 29MHz.
D 7MHz.

14. The drawing shows two digitised sine waves. The sine wave on the right

2F1-2025-Int'd-7386

A requires more binary bits to represent it.
B requires fewer binary bits to represent it.
C allows each binary bit to have more levels.
D allows each binary bit to have fewer level.



15. What is the purpose of the iron core in a transformer?

2G1-2025-Int'd-933

A To concentrate the magnetic field.
B To provide stability to the transformer.
C To provide capacitance.
D To reduce the magnetic field.

16. A tuned circuit consists of a

2H1-2025-Int'd-1235

A resistor and an inductor.
B capacitor and a resistor.
C resistor and a transistor.
D capacitor and an inductor.

17. Which one of the following components is used to change alternating current to direct current?

2I1-2025-Int'd-945

A Transformer.
B Diode.
C Polarised capacitor.
D Inductor.

18. Providing a transistor with the correct DC voltages and currents to allow it to function is called

2I4-2025-Int'd-3291

A biasing.
B field effecting.
C switching.
D amplifying.

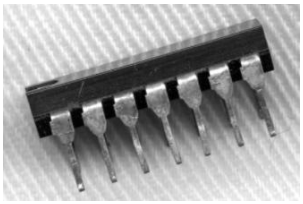
19. Rechargeable batteries are often marked with a value quoted in Ampere-hours. What does this value mean.

2J1-2025-Int'd-7000

A An indication of the stored energy when fully charged.
B The time after which the battery should be recharged.
C The time for which the battery will power the connected device.
D The maximum charging current at which the battery can be safely charged.

20. The photograph shows an electronic component often referred to as a

2I6-2025-Int'd-7003



A semiconductor device.
B integrated circuit.
C surface mount component.
D monolithic device.

21. The Peak Deviation of an FM modulated transmission can be defined as the

3A2-2025-Int'd-379

A frequency of transmission divided by the frequency of the modulating signal.
B maximum change from the centre frequency of transmission at the amplitude peaks of the modulating signal.
C frequency of the modulating signal divided by the frequency of transmission.
D maximum change from the centre frequency of transmission at the maximum frequency of the modulating signal.

22. The output from a balanced modulator contains

3E1-2025-Int'd-7013

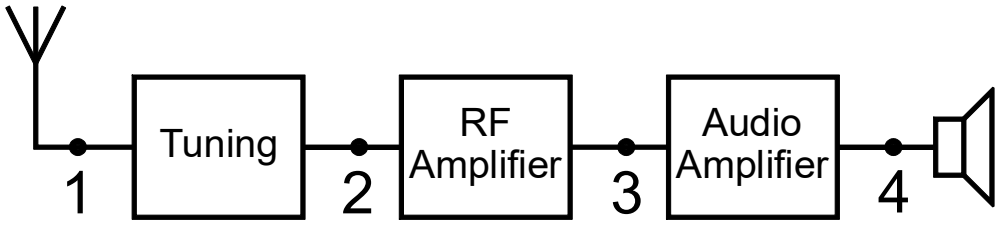
A the carrier modulated with the audio modulating signal.
B two sidebands but with the carrier suppressed.
C two sidebands but only one of which is modulated.
D one modulated sideband with the carrier suppressed.

23. Harmonics are

3G2-2025-Int'd-994

A multiples of the fundamental frequency.
B multiple reflections from the ionosphere.
C interference from natural sources.
D sporadic mixing products in a transmitter.

24. The drawing shows an incomplete block diagram of an analogue receiver. At which point should the detector block be inserted?



3H2-2025-Int'd-1249

A Point 2.
B Point 4.
C Point 3.
D Point 1.

25. In the medium wave band up to 3MHz a crystal diode receiver can work adequately. Above that it is necessary to move to a superhet architecture. Why?

3I1-2025-Int'd-7017

A Achieving sufficient gain at higher frequencies is not easy.
B A crystal diode receiver does not have adequate selectivity at higher frequencies.
C Radio noise gets worse at higher frequencies and needs to be filtered out.
D It is not possible to provide automatic gain control in a crystal diode receiver.

26. The demodulator for a CW receiver requires

3K1-2025-Int'd-1012

A an audio oscillator
B a beat frequency oscillator.
C a frequency discriminator.
D a narrow band pass filter.

27. A receiver can display the spectrum of the amateur band to which it is tuned. This display is produced by

3M1-2025-Int'd-7565

A sampling the audio signal as the receiver is tuned.
B a Fourier transform process within the receiver.
C mixing with the original radio frequency signal.
D variable tuned circuits in the IF stage of the receiver.

28. A balanced feeder does NOT radiate because

4A1-2025-Int'd-1019

A the RF field only exists between the conductors.
B standing waves cannot leave the feeder.
C the equal and opposite RF fields cancel each other out.
D the outer insulation acts as a screen.

29. The beam width of a Yagi antenna is the

4C2-2025-Int'd-7022

A average width of the reflector and director elements.
B thickness of the load bearing pole.
C angle between the half power points of the radiated RF.
D length of the RF driven element.

30. To which element of a Yagi antenna is the feeder connected?

4D1-2025-Int'd-1312

A Dish reflector.
B Director element.
C Colinear element.
D Driven element.

31. A standing wave on a feeder is caused by

4E1-2025-Int'd-1030

A RF power being transmitted from the feeder.
B power being radiated from the antenna.
C a combination of the RF from the transmitter and that reflected from the antenna.
D RF current flowing down the coax braid.

32. Which factor has the greatest effect on the maximum range of ground wave propagation?

5A2-2025-Int'd-669

A Frequency.
B Ducting.
C Sunspot cycle.
D Time of day.

33. The ionisation of layers within the ionosphere is caused by

5B1-2025-Int'd-628

A areas of high pressure.
B solar radiation.
C the rotation of the earth.
D lightning discharges.

34. The four statements below refer to the 'D' layer of the ionosphere. Which statement is correct?

5B4-2025-Int'd-656

A The layer absorbs some HF radio signals during the day.
B The layer disappears after midnight.
C The layer reflects some HF radio signals at night.
D The layer is so weak that it has little effect on HF radio signals at any time.

35. Which one of the following is capable of radiating and absorbing radio frequency energy?

6A1-2025-Int'd-1049

A Only television receivers.
B All electronic equipment.
C Only broadcast radio receivers.
D Only amateur transceivers.

36. Which mode of transmission is most likely to induce speech like sounds in audio equipment or landline phones?

6B1-2025-Int'd-7029

A SSB.
B FM.
C CW.
D PSK.

37. Signals from an HF transmitter can often be prevented from causing interference to a UHF television by fitting a

6D1-2025-Int'd-1070

A low-pass filter at the TV aerial socket.
B high-pass filter at the transmitter.
C high-pass filter at the TV aerial socket.
D low-pass filter to the external TV aerial.

38. The correct cable to use between the microphone and the transmitter would be

6E1-2025-Int'd-1055

A twisted twin flex.
B screened cable.
C 50Ω coaxial cable.
D 3-core twin and earth cable.

39. Which of the following is a call sign prefix of a station in the United States of America?

7A3-2025-Int'd-1445

A VE.
B W.
C I.
D E.

40. The Q code QRT means

7E1-2025-Int'd-1159

A where are you?
B change frequency.
C increase power.
D stop transmitting.

41. What is the purpose of a high value resistor connected across a high voltage capacitor?

8A1-2025-Int'd-102

A To increase the current carrying capacity of the component.
B To dampen any parasitic oscillation.
C To limit the power supply current to a safe value.
D To prevent electric shock after switch off.

42. The most serious result of careless use of a screwdriver is that

8B2-2025-Int'd-1111

A the screw slot may be damaged.
B an injury may be caused.
C the screwdriver may break.
D the work may be scratched.

43. When transmitting from a stationary vehicle it is essential to consider

8D1-2025-Int'd-8095

A the need to give your location correct to within 5km.
B whether pedestrians might be inside the EMF compliance distance.
C the possibility that passengers' voices may also be transmitted.
D the risk of interference from the vehicle's ignition system.

44. When using a multimeter to measure resistance the switch should be set to

9A1-2025-Int'd-952

A volts AC.
B volts DC.
C ohms.
D current.

45. The gain of an antenna can be expressed in

9B1-2025-Int'd-1039

A Volts per metre.
B Amps per metre.
C dB.
D MHz.

46. A resistor is colour coded yellow, violet, orange, silver. What is its nominal resistance?

9C1-2025-Int'd-1469

A 473Ω.
B 47000Ω.
C 4700Ω.
D 47Ω.

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Answers INTERMEDIATE MOCK PAPER 1

Question	Answer	Question	Answer
1	D	24	C
2	B	25	B
3	B	26	B
4	C	27	B
5	D	28	C
6	B	29	C
7	B	30	D
8	D	31	C
9	B	32	A
10	D	33	B
11	B	34	A
12	A	35	B
13	B	36	A
14	A	37	C
15	A	38	B
16	D	39	B
17	B	40	D
18	A	41	D
19	A	42	B
20	B	43	B
21	B	44	C
22	B	45	C
23	A	46	B