

SAMPLE ASOC EXAM QUESTION PAPER

Time for General Grade : 2 hours

Time for Restricted Grade : 1 hour

Max marks for both grades : 100

Instructions

1. There will be 2 sections in the question paper. Each section contains 50 questions. All questions carry equal marks. All the candidates are required to write the answers for the questions in the box provided for each of the respective questions.
2. Candidates appearing for General grade should answer all the questions.
3. Candidates appearing for Restricted grade should answer only first 25 questions from each of the section.

SECTION-A

1) Parameter that determines lowest signal reception capability of a receiver is

- a) Sensitivity
- b) Fidelity
- c) Selectivity
- d) Squelch

2) TRF stands for

- a) Turning radio frequency
- b) Turning rod frequency
- c) Tuned radio feed
- d) Tuned radio frequency

3) If a super hetero dyne radio receiver is tuned to 1255 KHz & the IF frequency is 455KHz, then the frequency of the local oscillator of the receiver is

- a) 1255 KHz
- b) 800 KHz
- c) 1710 KHz
- d) 455 KHz

4) Kirchhoff's voltage Law states that

- a) The sum of voltages in a loop is zero
- b) The algebraic sum of voltages in a loop is zero
- c) The sum of currents at a junction is zero
- d) The algebraic sum of currents at a junction is zero

5) Among all these materials, which one has poor conductivity ?

- a) Copper
- b) Aluminum
- c) Silicon
- d) Silver

6) A magnet does not attract which one in the following

- a) Nickel
- b) Aluminum
- c) Iron
- d) Cobalt

7) The unit of resistance is

- a) Mho
- b) Volts
- c) Ampere
- d) Ohm

8) The expanded form for 'LDR' is

- a) Light Emitting Display
- b) Low Dependent Reading
- c) Light Emitting Diode
- d) Light Dependent Resistor

9) The three leads of a common transistor are

- a) Base Collector Case
- b) Emitter Collector Bias
- c) Collector Base Omitter
- d) Collector Base Emitter

10) If R is resistance, I is current and V is voltage, then Ohms law states that

- a) $R=V/I$
- b) $I=R/V$
- c) $V=R/I$
- d) $V/(R/I)=1$

11) If two capacitors are placed in series, is the final capacitance will be:

- a) Higher than the sum of the two capacitors
- b) Lower than the least of the two capacitors
- c) The sum of the two capacitors
- d) Cannot be determined the given data.

12) Which is the unit of energy in electronics?

- a) Ohm
- b) Ampere
- c) Joules
- d) Watt

13) The high frequency band (HF) is

- a) 3KHz to 30KHz
- b) 3MHz to 30MHz
- c) 30KHz to 300KHz
- d) 30MHz to 300MHz

14) Among the following which is not a directional antenna

- a) Whip antenna
- b) Yagi-Uda antenna
- c) Loop antenna
- d) Dish antenna

15) The unit of current is

- a) Volts
- b) Ampere
- c) Watt
- d) Hertz

16) If a small value of inductance is connected in parallel with a large value, the combined inductance will be

- a) The same
- b) Higher
- c) Lower
- d) Cannot be determined with the given data.

17) The equivalent capacitance when three capacitors of 150 micro farad are connected in series is

- a) 450 micro farad capacitor
- b) 300 micro farad capacitor
- c) 150 micro farad capacitor
- d) 50 micro farad capacitor

18) A resistor with color bands: Red-Violet-Orange-Silver, has the value of

- a) 23 kilo Ohm , 5% tolerance
- b) 27 kilo Ohm , 5% tolerance
- c) 2.7 kilo Ohm , 10%tolerance
- d) 27 kilo Ohm , 10% tolerance

19) The abbreviation of RMS voltage is

- a) Railway Mail Service voltage
- b) Real Mean Square voltage
- c) Root Mean Square voltage
- d) Root Mean Service voltage

20) If the peak voltage of a sinusoidal ac supply is 150 volts, the RMS value is

- a) Less than peak value
- b) More than peak value
- c) Equal to peak value
- d) Not related to peak value of the voltage

21) A capacitor and inductor in series is called a

- a) Tuned Circuit
- b) Timing Circuit
- c) Delay Circuit
- d) Schmitt Circuit

22) A domestic inverter

- a) Converts ac to ac
- b) Converts ac to dc
- c) Converts dc to ac
- d) Converts dc to dc

23) The current in a circuit is 25mA, then the equivalent value is

- a) 0.00025 Ampere
- b) 0.0025 Ampere
- c) 0.025 Ampere
- d) 0.25 Ampere

24) If 2 mA current flows through a 100 Kohm resistor, then the voltage across it is

- a) 2 volts
- b) 20 volts
- c) 200 volts
- d) 0.2 volts

25) The tolerance bands with colors gold, silver & brown represent

- a) 5%, 10%, 2%
- b) 5%, 10%, 1%
- c) 10%, 5%, 1%
- d) 10%, 5%, 2%

26) India uses which encoding technique for commercial TV broad cast

- a) NTSC
- b) SECAM
- c) PAL
- d) None of the above

27) The video bandwidth in a TV transmission in India is

- a) 455 KHz
- b) 10.7 MHz
- c) 4.2 MHz
- d) 5.5 MHz

28) Sky wave propagation utilizes

- a) Troposphere
- b) Stratosphere
- c) Ionosphere
- d) Exosphere

29) Ionosphere does not have _____ layer.

- a) C
- b) D
- c) E
- d) F

30) Which layer of ionosphere disappears during night time?

- a) C
- b) D
- c) E

- d) F

31) In dealing with sky/ground wave propagation, the area of silence where no signals are received is the

- a) dead zone
- b) skip distance
- c) skip zone
- d) propagation distance.

32) Frequencies lesser than the critical frequency are

- a) passed into space
- b) the most desirable
- c) returned to earth
- d) refracted by the F2 layer

33) For mobile communications, the up-link frequency is _____ down link frequency .

- a) Less than
- b) More than
- c) Equal to
- d) Less or more than the

34) All India Radio (AIR) does not broadcast

- a) Amplitude Modulation transmission
- b) Frequency Modulation transmission
- c) Pulse Modulation transmission
- d) Both a and b

35) A diode can be used in the following stages of a radio receiver

- a) Detector
- b) Mixer
- c) Rectification
- d) All of the above

36) Geo stationary orbit is ___ km away from the earth

- a) 3100
- b) 32786
- c) 36786
- d) 39000

37) Which antenna is used for direction finding purpose?

- a) Loop antenna
- b) Active Whip antenna
- c) Whip antenna
- d) Dipole antenna

38) A transformer converts

- a) AC voltage into DC voltage
- b) DC voltage into AC voltage
- c) AC voltage into different AC voltage
- d) DC voltage into different DC voltage

39) A matching transformer (10:1 turns ratio) is used to match 200 ohms into ___ ohms.

- a) 2
- b) 20
- c) 200
- d) 5

40) The following are transformer losses

- a) Hysteresis losses
- b) Eddy current losses
- c) Copper losses
- d) All of the above

41) Digital modulation techniques are

- a) Amplitude modulation
- b) Frequency modulation
- c) Phase shift keying

d) Phase modulation

42) The following idle component dissipates energy

- a) Capacitor
- b) Inductor
- c) Resistor
- d) All of the above

43) The most common stage used for amplifying an electrical signal is

- a) Common Base
- b) Common collector
- c) Common emitter
- d) Emitter follower

44) The biasing of a transistor is to

- a) To avoid thermal run away
- b) To provide stable operation
- c) To have a stable quiescent point
- d) All of the above

45) The ideal value of ripple factor should be

- a) 0
- b) 1
- c) 0.707
- d) 1.414

46) The full wave rectifier employs

- a) 1 diode
- b) 2 diodes
- c) 3 diodes
- d) 4 diodes

47) The following is used as a Voltage smoothing device

- a) Resistor
- b) Capacitor
- c) Inductor
- d) Both a and b

48) The following modulation is used for audio transmission in TV broadcast

- a) Amplitude modulation
- b) Frequency modulation
- c) Pulse modulation
- d) None of the above

49) NICAM technique is used in TV broadcast

- a) For transmitting video
- b) For transmitting mono aural audio
- c) For transmitting stereo audio
- d) For transmitting timing signals

50) Conventional Facsimile machine sends _____ data over _____ media

- a) Analog, air
- b) Digital, air
- c) Analog, telephone
- d) Digital, telephone

SECTION-B

51) Under Indian Wireless Telegraph rules, 1973, the minimum age to work on a radio transmitting apparatus is _____ years

- a) 12
- b) 15
- c) 18
- d) 21

52) An amateur is forbidden to transmit

- a) communications of business
- b) transmissions of entertainment value or music
- c) advertisements
- d) all the above

53) Log containing chronological record of all transmissions should be preserved for

- a) 1 day
- b) 1 month
- c) 6 months
- d) 12 months

54) Log containing chronological record of all transmissions should contain

- a) Date and time of all transmissions
- b) Call signs intercepted
- c) Summary of communications
- d) All of the above

55) Which of the following should be given top priority?

- a) Safety signal
- b) Routine communication signal
- c) Distress signal
- d) Urgency signal

56) The following is not an amateur call sign of India

- a) VU2XYZ
- b) VU3ABC
- c) VU44AB
- d) VU3RS

57) The standard time & frequency signal in India is

- a) 5 MHz
- b) 10 MHz
- c) 20 MHz
- d) 100 MHz

58) The standard time & frequency signal in India call sign is

- a) VU2
- b) VU3
- c) ATA
- d) ATU

59) The abbreviation for end of message in Morse code is

- a) AA
- b) AR
- c) ED
- d) EN

60) QTR stands for ?

- a) What is the correct time?
- b) What is your position in latitude and longitude?
- c) Thank you for sending
- d) What is Time and Hour?

61) The standard emission designation consists of

- a) 8 letters/numerals
- b) 3 letters/numerals
- c) 6 letters/numerals

d) 2 letters/numerals

62) Metric waves means

- a) 3-30 MHz
- b) 3-30 KHz
- c) 30-300 KHz
- d) 30-300 MHz

63) The standard bandwidth designation consists of

- a) 5 letters/numerals
- b) 3 letters/numerals
- c) 4 letters/numerals
- d) 2 letters/numerals

64) Which should be used as a suffix in call sign for mobile amateur stations

- a) ME
- b) MB
- c) MO
- d) ML

65) The Q code for "What is the correct time" is

- a) QCT
- b) QTM
- c) QRT
- d) QTR

66) The Q code for "Are my signals fading?" is

- a) QSB
- b) QAM
- c) QSI
- d) QSF

67) The Q code QRQ represents

- a) Shall I stop slowing?
- b) Shall I increase power?
- c) Shall I send faster?
- d) Shall I decrease power?

68) The Phonetic alphabet for L is

- a) Lilly
- b) Lima
- c) Limca
- d) Lisa

69) The Phonetic for '3' is

- a) Terra Three
- b) Tele Three
- c) Tango Three
- d) Tango Tree

70) The expanded form for AA in Morse code is

- a) End of line
- b) End of message
- c) End of transmission
- d) End of signal

11) The expanded form for TU in Morse code is

- a) Thank u
- b) Thank you
- c) Thank everyone
- d) None of the above

72) The expanded form for CQ in Morse code is

- a) Calling you
- b) Calling any station
- c) Calling Quebec
- d) Calling none

73) The abbreviation for 'stand by' in Morse code is

- a) SY
- b) AS
- c) SB
- d) AD

74) The Q code for "What is the name of your station ?" is

- a) QNS
- b) QRA
- c) QYS
- d) QNA

75) The Q code for "Are you ready?" is

- a) QRY
- b) QRV
- c) QAR
- d) QRE

76) The expanded form of SOS is

- a) Save our selves
- b) Save one self
- c) Save one souls
- d) Save our souls

77) The distress signal in radio telephony is

- a) Help, Help, Help
- b) May day. May day, May day
- c) Save, Save, Save
- d) Save our souls

78) The phonetic for alphabet 'Y' is

- a) Yardly
- b) Yankee
- c) Yan
- d) Yarn

79) The phonetic for '9' is

- a) New Nine
- b) Nove Nine
- c) Novel Nine
- d) Nine

80) Which one of this is not a standard frequency signal

- a) 15 MHz
- b) 10 MHz
- c) 5 MHz
- d) 1 MHz

81) The renewal fee for General Grade Amateur license under new rules is

- a) Rs 1000
- b) Rs 2000
- c) Rs. 100
- d) Rs.200

82) The fee for mobile endorsement under new rules is

- a) Rs 100
- b) Rs. 200
- c) Rs. 1000
- d) Rs. 2000

83) The maximum DC power permitted under new rules for Restricted grade amateurs

under 144-146 MHz band is

- a) 10 watts
- b) 25 watts
- c) 50 watts
- d) 100 watts

84) The maximum DC power permitted under new rules for General grade amateurs under 7000-7100 KHz band is

- a) 50 watts
- b) 100 watts
- c) 200 watts
- d) 400 watts

85) The permitted emission under new rules for Restricted grade amateurs under 144-146 MHz band is

- a) A3E
- b) J3E
- c) F3E
- d) A1A

86) The first symbol in the designation for classification of emission represents

- a) Nature of signals modulating the main carrier
- b) Type of modulation of the main carrier
- c) Type of information to be transmitted
- d) None of the above

87) Emission designation of commercial FM broadcast transmission in India is

- a) ME
- b) J3E
- c) F3E
- d) R3E

88) Conventional Morse code transmission can be represented by

- a) J3E
- b) F3E
- c) ME
- d) A1A

89) The second symbol in the designation of emission represents

- a) Nature of signals modulating the main carrier
- b) Type of modulation of the main carrier
- c) Type of information to be transmitted
- d) None of the above

90) The following frequency band is permitted for general grade amateurs only

- a) 1820 - 1860 KHz
- b) 3500 - 3700 KHz
- c) 5725 - 5840 MHz
- d) 21000 - 21450 KHz

91) The fee for change of location new rules is

- a) Rs. 100
- b) Rs. 200
- c) Rs. 500
- d) Rs. 1000

92) The maximum DC power permitted under new rules for General grade amateurs under 144-146 MHz band is

- a) 10 watts
- b) 25 watts
- c) 50 watts
- d) 100 watts

93) The standard designation for a bandwidth of 4.8 KHz is

- a) 4800 Hz
- b) 4K8
- c) 4K80
- d) 4800

94) A bandwidth of 402 M represents

- a) 4000 MHz
- b) 402 MHz
- c) 4.2 MHz
- d) 420 MHz

95) The emission C3F denotes

- a) Single side band analog audio emission
- b) Common analog radio emission
- c) Vestigial sideband analog TV emission

d) Vestigial sideband digital TV emission

96) The expanded form for RST is

- a) Readability signal tone
- b) Readability strength tone
- c) Readability strength testing
- d) Readability signal strength tone

97) The phonetic for 'W' is

- a) Wine
- b) White
- c) Whiskey
- d) Wheel

98) The UHF band extends from

- a) 3-30 KHz
- b) 30-300 MHz
- c) 3-30 MHz
- d) 300-3000 MHz

99) Which of the frequency bands was not allocated for Amateur service

- a) 7000 - 7100 KHz
- b) 7100 - 7200 KHz
- c) 10120 - 10240 KHz
- d) 28000 - 29700 KHz

100) 'WPC' stands for

- a) Wireless Planning and Coordination
- b) Wireless Placement cell
- c) Wireless Planning cell
- d) Wireless Placement and Coordination
