## **Bangladesh Telecommunication Regulatory Commission (BTRC)**

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## Question Bank for Amateur Radio Licensing Examination -2023 (For reference and guidance only)

| SL No. | Questions  |
|--------|--|
| 1      | What is the main difference between HF and VHF band?   |
|        | a) HF band means ( 3 - 30 ) MHz and VHF band means ( 30 - 300 ) MHz  |
|        | b) HF band means ( 30 - 300 ) MHz and VHF band means ( 3 - 30 ) MHz  |
|        | c) HF band means ( 300 - 3000 ) MHz and VHF band means ( 3 - 30 ) MHz  |
|        | d) HF band means ( 3 - 30 ) MHz and VHF band means ( 300 - 3000 ) MHz  |
| 2      | Which of the following operating restrictions applies to amateur radio stations as a secondary service in the 60 meter band? |
|        | a) They must not cause harmful interference to stations operating in other radio services                                    |
|        | b) They must transmit no more than 30 minutes during each hour to minimize harmful interference to other radio services      |
|        | c) They must use lower sideband, suppressed-carrier only   |
|        | d) They must not exceed 2.0 kHz of bandwidth   |
| 3      | With which of the following conditions must beacon stations comply?  |
|        | a) Identification must be in Morse Code  |
|        | b) The frequency must be coordinated with the National Beacon Organization   |
|        | c) The frequency must be posted on the Internet or published in a national periodical  |
|        | d) There must be no more than one beacon signal in the same band from a single location                                      |
| 4      | Which of the following is a purpose of a beacon station as identified in the Amateur Rules?                                  |
|        | a) Observation of propagation and reception, or other related activities   |
|        | b) Automatic Identification of Repeaters   |
|        | c) Transmission of bulletins of general interest to amateur radio licensees  |
|        | d) Identifying net frequencies   |
| 5      | When may music be transmitted by an amateur station?   |
|        | a) At any time, as long as it produces no spurious emissions   |
|        | b) When it is unintentionally transmitted from the background at the transmitter   |
|        | c) When it is transmitted on frequencies above 1215 MHz  |
|        | d) When it is an incidental part of a space shuttle or ISS retransmission  |
| 6      | When is an amateur station permitted to transmit secret codes?   |
|        | a) During a declared communications emergency  |
|        | b) To control a space station  |
|        | c) Only when the information is of a routine, personal nature  |
|        | d) Only with Special Temporary Authorization from the BTRC   |
| 7      | Which of the following is prohibited by the BTRC Rules for amateur radio stations?   |
|        | a) Transmission of music as the primary program material during a contact  |



ড. মোঁঃ সোহেল রানা পরিচালক স্পেকট্রোম বিভাগ বংলাদেশ টেলিযোগাযোগ নিয়ন্ত্রণ কমিশন

|    | b) The use of obscene or indecent words  |
|----|--|
|    | c) Transmission of false or deceptive messages or signals  |
|    | d) All of these answers are correct  |
| 8  | How does BTRC require an amateur station to be operated in all respects not covered by the rules?  |
|    | a) In conformance with the rules of the IARU   |
|    | b) In conformance with amateur radio custom  |
|    | c) In conformance with good engineering and good amateur practice  |
|    | d) All of these answers are correct  |
| 9  | What is the maximum transmitting power an amateur station may use on 10.140 MHz?   |
|    | a) 200 watts PEP output  |
|    | b) 1000 watts PEP output   |
|    | c) 1500 watts PEP output   |
|    | d) 2000 watts PEP output   |
| 10 | What is the maximum symbol rate permitted for RTTY emissions transmitted on frequency bands below 28 MHz?                                |
|    | a) 56 kilobaud   |
|    | b) 19.6 kilobaud   |
|    | c) 1200 baud   |
|    | d) 300 baud  |
| 11 | What is the maximum symbol rate permitted for packet emission transmissions on the 2 meter band?   |
|    | a) 300 baud  |
|    | b) 1200 baud   |
|    | c) 19.6 kilobaud   |
|    | d) 56 kilobaud   |
| 12 | What is the maximum symbol rate permitted for RTTY or data emission transmissions on the 6 and 2 meter bands?                            |
|    | a) 56 kilobaud   |
|    | b) 19.6 kilobaud   |
|    | c) 1200 baud   |
|    | d) 300 baud  |
| 13 | What is the standard bandwidth for narrow band FM transmission in VHF and UHF  |
|    | a) 20 kHz  |
|    | b) 50 kHz  |
|    | c) 12.5 KHz  |
|    | d) 25 KHz  |
| 14 | What is the maximum bandwidth permitted by BTRC rules for amateur radio stations when operating on USB frequencies in the 60-meter band? |
|    | a) 2.8 kHz   |
|    | b) 5.6 kHz   |
|    | c) +/-2.8 kHz  |
|    | d) 3 kHz   |



| 15 | What kind of amateur station simultaneously retransmits the signals of other stations on another channel?                              |
|----|--|
|    | a) Repeater Station  |
|    | b) Beacon Station  |
|    | c) Telecommmand Station  |
|    | d) Relay Station   |
| 16 | Which of the following conditions require an amateur radio station to take specific steps to avoid harmful interference to other users |
|    | a) When operating within one mile of an BTRC Monitoring Station  |
|    | b) When using a band where the amateur service is secondary  |
|    | c) When a station is transmitting spread spectrum emissions  |
|    | d) All of these answers are correct  |
| 17 | What language must you use when identifying your station if you are using a language other than English in making a contact?           |
|    | a) The language being used for the contact   |
|    | b) Any language if the US has a third party agreement with that country  |
|    | c) English   |
|    | d) Any language of a country that is a member of the ITU   |
| 18 | Which sideband is most commonly used for phone communications on the bands above 20 meters?  |
| 10 | a) Upper Sideband  |
|    | b) Lower Sideband  |
|    | c) Vestigial Sideband  |
|    | d) Double Sideband   |
| 19 | Which sideband is commonly used on the 160, 75, and 40 meter bands?  |
| 13 | a) Upper Sideband  |
|    | b) Lower Sideband  |
|    | c) Vestigial Sideband  |
|    | d) Double Sideband   |
| 20 | Which sideband is commonly used in the VHF and UHF bands?  |
| 20 | a) Upper Sideband  |
|    | b) Lower Sideband  |
|    | c) Vestigial Sideband  |
|    | d) Double Sideband   |
| 21 | Which of the following is an advantage when using single sideband as compared to other voice modes on the HF amateur bands?            |
|    | a) Very high fidelity voice modulation   |
|    | b) Less bandwidth used and high power efficiency   |
|    | c) Ease of tuning on receive   |
|    | d) Less subject to static crashes (atmospherics)   |
| 22 | Which of the following statement is true of single sideband (SSB) voice mode?  |
|    | a) It is a form of amplitude modulation in which one sideband and the carrier are suppressed   |

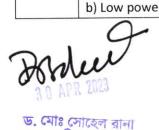


|    | b) It is a form of frequency modulation in which higher frequencies are emphasized                         |
|----|--|
|    | c) It reproduces upper frequencies more efficiently than lower frequencies                                 |
|    | d) It is the only voice mode authorized on the HF bands between 14 and 30 MHz 50.                          |
| 23 | Which of the following statement is true of VOX operation?   |
|    | a) The received signal is more natural sounding  |
|    | b) VOX allows "hands free" operation   |
|    | c) Frequency spectrum is conserved   |
|    | d) The duty cycle of the transmitter is reduced  |
| 24 | Which of the following user adjustable controls are usually associated with VOX circuitry?                 |
|    | a) Anti-VOX  |
|    | b) VOX Delay   |
|    | c) VOX Sensitivity   |
|    | d) All of these choices are correct  |
| 25 | What is the recommended way to break into a conversation when using phone?                                 |
|    | a) Say "QRZ" several times followed by your call sign  |
|    | b) Say your call sign during a break between transmissions from the other stations                         |
|    | c) Say "Break" "Break" "Break" and wait for a response   |
|    | d) Say "CQ" followed by the call sign of either station  |
| 26 | What does the expression "CQ DX" usually indicates?  |
|    | a) A general call for any station  |
|    | b) The caller is listening for a station in Germany  |
|    | c) The caller is looking for any station outside their own country   |
|    | d) This is a form of distress call   |
| 27 | What should you do if you notice increasing interference from other activity on a frequency you are using? |
|    | a) Tell the interfering stations to change frequency since you were there first                            |
|    | b) Report the interference to your local Amateur Auxiliary Coordinator                                     |
|    | c) Move your contact to another frequency  |
|    | d) Turn on your amplifier  |
| 28 | What minimum frequency separation between CW signals should be allowed to minimize interference            |
|    | a) 5 to 50 Hz  |
|    | b) 150 to 500 Hz   |
|    | c) 1 to 3 kHz  |
|    | d) 3 to 6 kHz  |
| 29 | What minimum frequency separation between SSB signals should be allowed to minimize interference           |
|    | a) Between 150 and 500 Hz  |
|    | b) Approximately 3 kHz   |
|    | c) Approximately 6 kHz   |
|    | d) Approximately 10 kHz  |





| 30 | What minimum frequency separation between 170 Hz shift RTTY signals should be allowed to minimize interference?                |
|----|--|
|    | a) 60 Hz   |
|    | b) 250 to 500 Hz   |
|    | c) Approximately 3 kHz   |
|    | d) 170 Hz  |
| 31 | What is a band plan?   |
|    | a) A voluntary guideline for band use beyond the divisions established by the BTRC   |
|    | b) A guideline from the BTRC for making amateur frequency band allocations   |
|    | c) A guideline from the ITU for making amateur frequency band allocations  |
|    | d) A plan devised by a club to best use a frequency band during a contest  |
| 32 | Who may be the control operator of an amateur station transmitting in assisting emergency relief operations during a disaster? |
|    | a) Only a person holding an BTRC issued amateur operator license   |
|    | b) Only a RACES net control operator   |
|    | c) Only official emergency stations may transmit during a disaster   |
|    | d) Any control operator when normal communication systems are operational  |
| 33 | When may the BTRC restrict normal frequency operations of amateur stations?  |
|    | a) When they declare a temporary state of communication emergency  |
|    | b) When they seize your equipment for use in disaster communications   |
|    | c) Only when all amateur stations are instructed to stop transmitting  |
|    | d) When the country goes under a WAR   |
| 34 | Which emission mode must be used to obtain assistance during a disaster?   |
|    | a) Only SSB  |
|    | b) Only SSB and CW   |
|    | c) Any mode  |
|    | d) Only CW   |
| 35 | What frequency should be used to send a distress call?   |
|    | a) Whatever frequency has the best chance of communicating the distress message  |
|    | b) 3873 kHz at night or 7285 kHz during the day  |
|    | c) Only frequencies that are within your operating privileges  |
|    | d) Only frequencies used by police, fire or emergency medical services   |
| 36 | What is the most useful type of map to use when orienting a directional HF antenna toward a distant station?                   |
|    | a) Azimuthal projection  |
|    | b) Mercator projection   |
|    | c) Polar projection  |
|    | d) Stereographic projection  |
| 37 | What is QRP operation?   |
|    | a) Remote Piloted Model control  |
|    | b) Low power transmit operation, typically about 5 watts   |





|    | c) Transmission using Quick Response Protocol   |
|----|---|
|    | d) Traffic Relay Procedure net operation  |
| 38 | Which HF antenna would be the best to use for minimizing interference?  |
|    | a) A bi-directional antenna   |
|    | b) An isotropic antenna   |
|    | c) A unidirectional antenna   |
|    | d) An omnidirectional antenna   |
| 39 | Which mode should be selected when using a SSB transmitter with an Audio Frequency Shift Keying (AFSK) RTTY signal? |
|    | a) USB  |
|    | b) DSB  |
|    | c) CW   |
|    | d) LSB  |
| 40 | How many data bits are sent in a single PSK31 character?  |
|    | a) The number varies  |
|    | b) 5  |
|    | c) 7  |
|    | d) 8  |
| 41 | What part of a data packet contains the routing and handling information?   |
|    | a) Directory  |
|    | b) Preamble   |
|    | c) Header   |
|    | d) Footer   |
| 42 | Which of the following 20 meter band segments is most often used for most data transmissions?                       |
|    | a) 14.000 - 14.050 MHz  |
|    | b) 14.070 - 14.100 MHz  |
|    | c) 14.150 - 14.225 MHz  |
|    | d) 14.275 - 14.350 MHz  |
| 43 | Which of the following describes Baudot RTTY?   |
|    | a) 7-bit code, with start, stop and parity bits   |
|    | b) Utilizes error detection and correction  |
|    | c) 5-bit code, with additional start and stop bits  |
|    | d) Two major operating modes are SELCAL and LISTEN  |
| 44 | What is the most common frequency shift for RTTY emissions in the amateur HF bands?                                 |
|    | a) 85 Hz  |
|    | b) 170 Hz   |
|    | c) 425 Hz   |
|    | d) 850 Hz   |
| 45 | Where PSK signals are generally found on the 20 meter band?   |
|    | a) In the low end of the phone band   |
|    | b) In the high end of the phone band  |
|    | a) in the man end of the priorie sails  |



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|    | c) In the weak signal portion of the band   |
|----|---|
|    | d) Around 14.070 MHz  |
| 46 | What is a major advantage of MFSK16 compared to other digital modes?                          |
|    | a) It is much higher speed than RTTY  |
|    | b) It is much narrower bandwidth than most digital modes                                      |
|    | c) It has built-in error correction   |
|    | d) It offers good performance in weak signal environment without error correction             |
| 47 | What does the abbreviation "MFSK" stand for?  |
|    | a) Manual Frequency Shift Keying  |
|    | b) Multi (or Multiple) Frequency Shift Keying   |
|    | c) Manual Frequency Sideband Keying   |
|    | d) Multi (or Multiple) Frequency Sideband Keying  |
| 48 | Which of the following describes full break-in telegraphy (QSK)?                              |
|    | a) Breaking stations send the Morse code prosign BK   |
|    | b) Automatic keyers are used to send Morse code instead of hand keys                          |
|    | c) An operator must activate a manual send/receive switch before and after every transmission |
|    | d) Incoming signals are received between transmitted code character elements                  |
| 49 | What should you do if a CW station sends "QRS" when using Morse code?                         |
|    | a) Send slower  |
|    | b) Change frequency   |
|    | c) Increase your power  |
|    | d) Repeat everything twice.   |
| 50 | What does it mean when a CW operator sends "KN" at the end of a transmission?                 |
|    | a) Listening for novice stations  |
|    | b) Operating full break-in  |
|    | c) Listening only for a specific station or stations  |
|    | d) Closing station now  |
| 51 | What does it mean when a CW operator sends "CL" at the end of a transmission?                 |
|    | a) Keep frequency clear   |
|    | b) Operating full break-in  |
|    | c) Listening only for a specific station or stations  |
|    | d) Closing station  |
| 52 | What is the best speed to use answering a CQ in Morse Code?                                   |
|    | a) The speed at which you are most comfortable copying  |
|    | b) The speed at which the CQ was sent   |
|    | c) A slow speed until contact is established  |
|    | d) 5 wpm, as all operators licensed to operate CW can copy this speed                         |
| 53 | What does the term zero beat mean in CW operation?  |
|    | a) Matching the speed of the transmitting station   |
|    | b) Operating split to avoid interference on frequency   |
|    | c) Sending without error  |





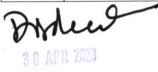
| 54 | What prosign is sent using CW to indicate the end of a formal message?                                     |
|----|--|
|    | a) SK  |
|    | b) BK  |
|    | c) AR  |
|    | d) KN  |
| 55 | What does the Q signal "QSL" mean when operating CW?   |
|    | a) Send slower   |
|    | b) We have already confirmed by card   |
|    | c) I acknowledge receipt   |
|    | d) We have worked before   |
| 56 | What does the Q signal "QRQ" mean when operating CW?   |
|    | a) Slow down   |
|    | b) Send faster   |
|    | c) Zero beat my signal   |
|    | d) Quitting operation  |
| 57 | What does the Q signal "QRV" mean when operating CW?   |
|    | a) You are sending too fast  |
|    | b) There is interference on the frequency  |
|    | c) I am quitting for the day   |
|    | d) I am ready to receive messages  |
| 58 | What can be done at an amateur station to continue communications during a sudden ionospheric disturbance? |
|    | a) Try a higher frequency  |
|    | b) Try the other sideband  |
|    | c) Try a different antenna polarization  |
|    | d) Try a different frequency shift   |
| 59 | What is measured by the solar flux index?  |
|    | a) The density of the sun's magnetic field   |
|    | b) The radio energy emitted by the sun   |
|    | c) The number of sunspots on the side of the sun facing the Earth  |
|    | d) A measure of the tilt of the Earth's ionosphere on the side toward the sun                              |
| 60 | How long is the typical sunspot cycle?   |
|    | a) Approximately 8 minutes   |
|    | b) Between 20 and 40 hours   |
|    | c) Approximately 28 days   |
|    | d) Approximately 11 years  |
| 61 | What is the K-index?   |
|    | a) An index of the relative position of sunspots on the surface of the sun                                 |
|    | b) A measure of the short term stability of the Earth's magnetic field                                     |
|    | c) A measure of the stability of the sun's magnetic field  |



| 62 | d) An index of solar radio flux measured at Boulder, Colorado  How radio communications are usually affected by the charged particles that reach the Earth from sola coronal holes? |
|----|---|
|    | a) HF communications are improved   |
|    | b) HF communications are disturbed  |
|    | c) VHF/UHF ducting is improved  |
|    | d) VHF/UHF ducting is disturbed   |
| 63 | How long does it take charged particles from Coronal Mass Ejections to affect radio-wave propagation on the Earth?  |
|    | a) 28 days  |
|    | b) 14 days  |
|    | c) The effect is instantaneous  |
|    | d) 20 to 40 hours   |
| 64 | At what point in the solar cycle does the 20 meter band usually support worldwide propagation during daylight hours?  |
|    | a) At the summer solstice   |
|    | b) Only at the maximum point of the solar cycle   |
|    | c) Only at the minimum point of the solar cycle   |
|    | d) At any point in the solar cycle  |
| 65 | If the HF radio-wave propagation (skip) is generally good on the 24-MHz and 28-MHz bands for several days, when might you expect a similar condition to occur?                      |
|    | a) 7 days later   |
|    | b) 14 days later  |
|    | c) 28 days later  |
|    | d) 90 days later  |
| 66 | Which frequencies are least reliable for long distance communications during periods of low solar activity?   |
|    | a) Frequencies below 3.5 MHz  |
|    | b) Frequencies near 3.5 MHz   |
|    | c) Frequencies at or above 10 MHz   |
|    | d) Frequencies above 20 MHz   |
| 67 | Which band should offer the best chance for a successful contact if the maximum usable frequency  |
|    | (MUF) between the two stations is 22 MHz?   |
|    | a) 10 meters  |
|    | b) 15 meters  |
|    | c) 20 meters  |
|    | d) 40 meters  |
| 68 | Which band should offer the best chance for a successful contact if the maximum usable frequency (MUF) between the two stations s 16 MHz?   |
|    | a) 80 meters  |
|    | b) 40 meters  |
|    | c) 20 meters  |



| 69  | What usually happens to radio waves with frequencies below the lowest usable frequency (LUF)?                   |
|-----|---|
|     |   |
| ,   | a) They are bent back to the Earth  |
|     | b) They pass through the ionosphere   |
|     | c) They are completely absorbed by the ionosphere   |
|     | d) They are bent and trapped in the ionosphere to circle the Earth  |
| 70  | What does LUF stand for?  |
|     | a) The Lowest Usable Frequency for communications between two points  |
|     | b) The Longest Universal Function for communications between two points   |
|     | c) The Lowest Usable Frequency during a 24 hour period  |
|     | d) The Longest Universal Function during a 24 hour period   |
| 71  | What does MUF stand for?  |
|     | a) The Minimum Usable Frequency for communications between two points   |
|     | b) The Maximum Usable Frequency for communications between two points   |
|     | c) The Minimum Usable Frequency during a 24 hour period   |
|     | d) The Maximum Usable Frequency during a 24 hour period   |
| 72  | What is the maximum distance along the Earth's surface that is normally covered in one hop using the F2 region? |
|     | a) 180 miles  |
|     | b) 1,200 miles  |
|     | c) 2,500 miles  |
|     | d) 12,000 miles   |
| 73  | What is the maximum distance along the Earth's surface that is normally covered in one hop using the            |
| /3  | region?   |
|     | a) 180 miles  |
|     | b) 1,200 miles  |
|     | c) 2,500 miles  |
|     | d) 12,000 miles   |
| 74  | What are the propagation path or wave for HF radio contact?   |
|     | a) Only ground wave propagation   |
|     | b) Only sky wave propagation  |
|     | c) Both ground wave and sky wave propagation  |
|     | d) None of the above  |
| 75  | Which of the following ionospheric layers is closest to the surface of the Earth?                               |
|     | a) The D layer  |
|     | b) The E layer  |
|     | c) The F1 layer   |
|     | d) The F2 layer   |
| 76  | When can the F2 region be expected to reach its maximum height at your location?                                |
| 3 A | a) At noon during the summer  |
|     | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |



ভ. মৌঃ সোহেল রানা পরিচালক স্পেক্টাম বিভাগ বাংলাদেশ টেলিযোগাযোগ নিয়ন্ত্রণ কমিশন

|    | c) At dusk in the spring and fall d) At noon during the winter  |
|----|---|
| 77 | What type of radio wave propagation allows a signal to be detected at a distance too far for ground                   |
|    | wave propagation but too near for normal sky wave propagation?  |
|    | a) Ground wave  |
|    | b) Scatter  |
|    | c) Sporadic-E skip  |
|    | d) Short-path skip  |
| 78 | Which ionospheric layer is the most absorbent of long skip signals during daylight hours on frequencial below 10 MHz? |
|    | a) The F2 layer   |
|    | b) The F1 layer   |
|    | c) The E layer  |
|    | d) The D layer  |
| 79 | What are the two types of transistor we use in general?   |
|    | a) NPN and PNP  |
|    | b) NPP and PNP  |
|    | c) NPP and NPN  |
|    | d) PNP and PMP  |
| 80 | Why we use a linear RF amplifier?   |
|    | a) To decrease the out put RF power of the transmitter  |
|    | b) To increase the out put RF power of the transmitter  |
|    | c) To fine tune the out put RF power of the transmitter   |
|    | d) To increase the out put RF power of the antenna  |
| 81 | Which of the following techniques is used to neutralize an RF amplifier?  |
|    | a) Feed-forward compensation  |
|    | b) Feed-forward cancellation  |
|    | c) Negative feedback  |
|    | d) Positive feedback  |
| 82 | What item of test equipment contains horizontal and vertical channel amplifiers?                                      |
|    | a) An ohmmeter  |
|    | b) A signal generator   |
|    | c) An ammeter   |
|    | d) An oscilloscope  |
| 83 | What we can do by a Spectrum Analyzer?  |
|    | a) We can measure the RF power  |
|    | b) We can measure a single frequency  |
|    | c) We can measure multiple frequency at the same time   |
|    | d) We can locate a hidden transmitter   |

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ভ. মোঃ সোহেল রানা পরিচালক স্পেকট্রাম বিভাগ গংলাদেশ টেলিয়োগাযোগ নিয়ন্ত্রণ কমিশন

|    | a) A monitoring oscilloscope   |
|----|--|
|    | b) A field-strength meter  |
|    | c) A sidetone monitor  |
|    | d) A wavemeter   |
| 35 | What signal source is connected to the vertical input of a monitoring oscilloscope when checking the                           |
|    | quality of a transmitted signal?   |
|    | a) The local oscillator of the transmitter   |
|    | b) The audio input of the transmitter  |
|    | c) The transmitter balanced mixer output   |
|    | d) The attenuated RF output of the transmitter   |
| 36 | How much must the power output of a transmitter be raised to change the "S" meter reading on a distant receiver from S8 to S9? |
|    | a) Approximately 2 times   |
|    | b) Approximately 3 times   |
|    | c) Approximately 4 times   |
|    | d) Approximately 5 times   |
| 37 | Which of the following might be useful in reducing RF interference to audio-frequency devices?                                 |
|    | a) Bypass inductor   |
|    | b) Bypass capacitor  |
|    | c) Forward-biased diode  |
|    | d) Reverse-biased diode  |
| 38 | What does an S-meter measure?  |
|    | a) Conductance   |
|    | b) Impedance   |
|    | c) Received signal strength  |
|    | d) Transmitter power output  |
| 39 | Where an S-meter is generally found?   |
|    | a) In a receiver   |
|    | b) In a SWR bridge   |
|    | c) In a transmitter  |
|    | d) In a conductance bridge   |
| 90 | Which of the following connectors would be a good choice for a serial data port?   |
|    | a) PL-259  |
|    | b) Type N  |
|    | c) Type SMA  |
|    | d) DB-9  |
| 91 | Which of these connector types is commonly used for RF service at frequencies up to 150 MHz?                                   |
|    | a) Octal   |
|    | b) RJ-11   |
|    | c) PL-259  |
|    | d) DB-25   |

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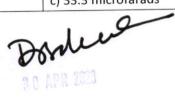
ড. মোঃ সোহেল রানা পরিচালক স্পেক্ট্রাম বিভাগ বংলাদেশ টেলিযোগাযোগ বিয়ন্ত্রণ কৃত্রিপন

| 92 | Which of the following emission types are permissible while operating HF mobile?            |
|----|---|
|    | a) CW   |
|    | b) SSB  |
|    | c) FM   |
|    | d) All of these choices are correct   |
| 93 | What is the name of the process by which sunlight is changed directly into electricity?     |
|    | a) Photovoltaic conversion  |
|    | b) Photon emission  |
|    | c) Photosynthesis   |
|    | d) Photon decomposition   |
| 94 | Which of these materials is used as the active element of a solar cell?                     |
|    | a) Doped Silicon  |
|    | b) Nickel Hydride   |
|    | c) Doped Platinum   |
|    | d) Aluminum nitride   |
| 95 | Which of the following causes opposition to the flow of alternating current in an inductor? |
|    | a) Conductance  |
|    | b) Reluctance   |
|    | c) Admittance   |
|    | d) Reactance  |
| 96 | Which of the following causes opposition to the flow of alternating current in a capacitor? |
|    | a) Conductance  |
|    | b) Reluctance   |
|    | c) Reactance  |
|    | d) Admittance   |
| 97 | What unit is used to measure reactance?   |
|    | a) Farad  |
|    | b) Ohm  |
|    | c) Ampere   |
|    | d) Siemens  |
| 98 | What unit is used to measure impedance?   |
|    | a) Volt   |
|    | b) Ohm  |
|    | c) Ampere   |
|    | d) Watt   |
| 99 | What is one reason to use an impedance matching transformer?                                |
|    | a) To reduce power dissipation in the transmitter   |
|    | b) To maximize the transfer of power  |
|    | c) To minimize SWR at the antenna   |
|    | d) To minimize SWR in the transmission line   |

Donles

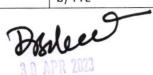
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| 100        | Which of the following devices can be used for impedance matching at radio frequencies?   |
|------------|---|
|            | a) A transformer  |
|            | b) A Pi-network   |
|            | c) A length of transmission line  |
|            | d) All of these choices are correct   |
| 101        | What is the correct formula for Ohms law  |
|            | a) V=R*I  |
|            | b) R=V*I  |
|            | c) I=V*R  |
|            | d) None of the above  |
| 102        | Which measurement of an AC signal is equivalent to a DC voltage of the same value?  |
|            | a) The peak-to-peak value   |
|            | b) The peak value   |
|            | c) The RMS value  |
|            | d) The reciprocal of the RMS value  |
| 103        | What is current in the primary winding of a transformer called if no load is attached to the secondary?   |
|            | a) Magnetizing current  |
|            | b) Direct current   |
|            | c) Excitation current   |
|            | d) Stabilizing current  |
| 104        | What is the total resistance of three 100-ohm resistors in parallel?  |
|            | a) 0.30 ohms  |
|            | b) 0.33 ohms  |
|            | c) 33.3 ohms  |
|            | d) 300 ohms   |
| 105        | What is the value of each resistor if three equal value resistors in parallel produce 50 ohms of resistance, and the same three resistors in series produce 450 ohms? |
|            | a) 1500 ohms  |
|            | b) 90 ohms  |
|            | c) 150 ohms   |
|            | d) 175 ohms   |
| 106        | What is the turns ratio of a transformer used to match an audio amplifier having a 600-ohm output   |
|            | impedance to a speaker having a 4-ohm impedance   |
|            | a) 12.2 to 1  |
|            | b) 24.4 to 1  |
|            | c) 150 to 1   |
|            | d) 300 to 1   |
| 107        | What is the capacitance of three 100 microfarad capacitors connected in series?   |
| www.TibStl | a) 0.30 microfarads   |
|            | b) 0.33 microfarads   |
|            | c) 33.3 microfarads   |



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|     | d) 300 microfarads   |
|-----|--|
| 108 | What component should be added to a capacitor in a circuit to increase the circuit capacitance?            |
|     | a) An inductor in series   |
|     | b) A resistor in series  |
|     | c) A capacitor in parallel   |
|     | d) A capacitor in series   |
| 109 | What component should be added to an inductor in a circuit to increase the circuit inductance?             |
|     | a) A capacitor in series   |
|     | b) A resistor in parallel  |
|     | c) An inductor in parallel   |
|     | d) An inductor in series   |
| 110 | What is the total resistance of a 10 ohm, a 20 ohm, and a 50 ohm resistor in parallel?                     |
|     | a) 5.9 ohms  |
|     | b) 0.17 ohms   |
|     | c) 10000 ohms  |
|     | d) 80 ohms   |
| 111 | What is the approximate junction threshold voltage of a silicon diode?                                     |
|     | a) 0.1 volt  |
|     | b) 0.3 volts   |
|     | c) 0.7 volts   |
|     | d) 1.0 volts   |
| 112 | Which element of a triode vacuum tube is used to regulate the flow of electrons between cathode and plate? |
|     | a) Control grid  |
|     | b) Heater  |
|     | c) Screen grid   |
|     | d) Suppressor grid   |
| 113 | Which of the following Solid state devices are most like a vacuum tube in its general characteristics?     |
|     | a) A bipolar transistor  |
|     | b) An FET  |
|     | c) A tunnel diode  |
|     | d) A varistor  |
| 114 | What is the minimum allowable discharge voltage for maximum life of a standard 12 volt lead acid battery?  |
|     | a) 6 volts   |
|     | b) 8.5 volts   |
|     | c) 10.5 volts  |
|     | d) 12 volts  |
| 115 | Which of the following is the most commonly used digital logic family of integrated circuits?              |
|     | a) RTL   |
|     | b) TTL   |



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|     | c) CMOS  |
|-----|--|
|     | d) PMOS  |
| 116 | Which type of integrated circuit is an operational amplifier?  |
|     | a) Digital   |
|     | b) MMIC  |
|     | c) Programmable  |
|     | d) Analog  |
| 117 | Which of the following might be used to process signals from the balanced modulator and send them to the mixer in a single-sideband phone transmitter? |
|     | a) Carrier oscillator  |
|     | b) Filter  |
|     | c) IF amplifier  |
|     | d) RF amplifier  |
| 118 | What portion of the AC cycle is converted to DC by a half-wave rectifier?  |
|     | a) 90 degrees  |
|     | b) 180 degrees   |
|     | c) 270 degrees   |
|     | d) 360 degrees   |
| 119 | What portion of the AC cycle is converted to DC by a full-wave rectifier?  |
|     | a) 90 degrees  |
|     | b) 180 degrees   |
|     | c) 270 degrees   |
|     | d) 360 degrees   |
| 120 | What is the output of a two-input NAND gate, given both inputs are "one"?  |
|     | a) Two   |
|     | b) One   |
|     | c) Zero  |
|     | d) Minus One   |
| 121 | What is the output of a NOR gate given that both inputs are "zero"?  |
|     | a) Zero  |
|     | b) One   |
|     | c) Minus one   |
|     | d) The opposite from the previous state  |
| 122 | How many states are there in a 3-bit binary counter?   |
|     | a) 3   |
|     | b) 6   |
|     | c) 8   |
|     | d) 16  |
| 123 | Which of the following is a characteristic of a Class A amplifier?   |

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|     | a) Low standby power   |
|-----|--|
|     | b) High efficiency   |
|     | c) No need for bias  |
|     | d) Low distortion  |
| 124 | Which of the following is an advantage of a Class C amplifier?   |
|     | a) High efficiency   |
|     | b) Linear operation  |
|     | c) No need for tuned circuits  |
|     | d) All of these answers are correct  |
| 125 | What is the name of the process which changes the frequency of an RF wave to convey information?               |
|     | a) Frequency convolution   |
|     | b) Frequency transformation  |
|     | c) Frequency conversion  |
|     | d) Frequency modulation  |
| 126 | What emission is produced by a reactance modulator connected to an RF power amplifier?                         |
|     | a) Multiplex modulation  |
|     | b) Phase modulation  |
|     | c) Amplitude modulation  |
|     | d) Pulse modulation  |
| 127 | What is another term for the mixing of two RF signals?   |
|     | a) Heterodyning  |
|     | b) Synthesizing  |
|     | c) Cancellation  |
|     | d) Multiplying   |
| 128 | What is the typical characteristic impedance of coaxial cables used for antenna feedlines at amateur stations? |
|     | a) 25 and 30 ohms  |
|     | b) 50 and 75 ohms  |
|     | c) 80 and 100 ohms   |
|     | d) 500 and 750 ohms  |
| 129 | What is the characteristic impedance of flat ribbon TV type twin lead?   |
|     | a) 50 ohms   |
|     | b) 75 ohms   |
|     | c) 100 ohms  |
|     | d) 300 ohms  |
| 130 | How does the attenuation of coaxial cable change as the frequency of the signal it is carrying increases?      |
|     | a) It is independent of frequency  |
|     | b) It increases  |

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|     | c) It decreases  |
|-----|--|
|     | d) It reaches a maximum at approximately 18 MHz  |
| 131 | In what values are RF feed line losses usually expressed?                                |
|     | a) ohms per 1000 ft  |
|     | b) dB per 1000 ft  |
|     | c) ohms per 100 ft   |
|     | d) dB per 100 ft   |
| 132 | What is the approximate length for a 1/2-wave dipole antenna cut for 14.250 MHz?         |
|     | a) 8.2 feet  |
|     | b) 16.4 feet   |
|     | c) 24.6 feet   |
|     | d) 32.8 feet   |
| 133 | What is the approximate length for a 1/2-wave dipole antenna cut for 3.550 MHz?          |
|     | a) 42.2 feet   |
|     | b) 84.5 feet   |
|     | c) 131.8 feet  |
|     | d) 263.6 feet  |
| 134 | What is the approximate length for a 1/4-wave vertical antenna cut for 28.5 MHz?         |
|     | a) 8.2 feet  |
|     | b) 10.5 feet   |
|     | c) 16.4 feet   |
|     | d) 21.0 feet   |
| 135 | What is the approximate length of the driven element of a Yagi antenna?                  |
|     | a) 1/4 wavelength  |
|     | b) 1/2 wavelength  |
|     | c) 3/4 wavelength  |
|     | d) 1 wavelength  |
| 136 | What is one effect of increasing the boom length and adding directors to a Yagi antenna? |
|     | a) Gain increases  |
|     | b) SWR increases   |
|     | c) Weight decreases  |
|     | d) Wind load decreases   |
| 137 | Approximately how long is each side of a cubical-quad antenna driven element?            |
|     | a) 1/4 wavelength  |
|     | b) 1/2 wavelength  |
|     | c) 3/4 wavelength  |
|     | d) 1 wavelength  |
| 138 | Approximately how long is each leg of a symmetrical delta-loop antenna Driven element?   |
|     | a) 1/4 wavelength  |
|     | b) 1/3 wavelength  |
|     | c) 1/2 wavelength  |

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|     | d) 2/3 wavelength   |
|-----|---|
| 139 | What is the minimum wire size that may be safely used for a circuit that draws up to 20 amperes of                          |
|     | continuous current?   |
|     | a) AWG number 20  |
|     | b) AWG number 16  |
|     | c) AWG number 12  |
|     | d) AWG number 8   |
| 140 | Which size of fuse or circuit breaker would be appropriate to use with a circuit that uses AWG number 14 wiring?            |
|     | a) 100 amperes  |
|     | b) 60 amperes   |
|     | c) 30 amperes   |
|     | d) 15 amperes   |
| 141 | A station that is intended to be operated while it is in motion or while it is stationary at an unspecified place is called |
|     | a) A removable radio station  |
|     | b) An amateur radio station   |
|     | c) A mobile station   |
|     | d) A portable station   |
| 142 | Amateur radio stations do not have to keep a log book:  |
|     | a) For 20m transmissions  |
|     | b) For 10m transmissions  |
|     | c) For 144 MHz or 430 MHz transmissions   |
|     | d) For 80m transmissions  |
| 143 | What are the upper and lower frequencies in the 20m amateur band?   |
|     | a) 14450-14150 kHz  |
|     | b) 14000-14350 kHz  |
|     | c) 14350-14250 kHz  |
|     | d) 14300-14000 kHz  |
| 144 | What are the lower and upper frequencies in the 40m amateur band?   |
|     | a) 7000-7350 kHz  |
|     | b) 7000-7150 kHz  |
|     | c) 7000-7100 kHz  |
|     | d) 14000-14350 kHz  |
| 145 | What are the lower and upper frequencies in the 2m amateur band?  |
|     | a) 145000-145995 kHz  |
|     | b) 142000-146000 kHz  |
|     | c) 144000-145000 kHz  |
|     | d) 144000-146000 kHz  |
| 146 | What are the lower and upper frequencies in the 80m amateur band?   |
|     | a) 3000-3800 kHz  |

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|       | b) 3500-3600 kHz  |
|-------|---|
|       | c) 3500-3800 kHz  |
|       | d) 3400-3700 kHz  |
| 147   | What are the lower and upper frequencies of the 15m amateur band? |
| -5.05 | a) 21.100-21.350 MHz  |
|       | b) 21.000-21.350 MHz  |
|       | c) 21.350-21.450 MHz  |
|       | d) 21.000-21.450 MHz  |
| 148   | The frequency of 21.250 is in the radio amateur:                  |
|       | a) 21 meter band  |
|       | b) 15 meter band  |
|       | c) 40 meter band  |
|       | d) 30 meter band  |
| 149   | The term "5 and 9" used to describe a signal, is in which code?   |
|       | a) Q code   |
|       | b) RST code   |
|       | c) Morse code   |
|       | d) Color code   |
| 150   | Identify the correct Q code for "your signals are fading"         |
|       | a) QSL  |
|       | b) QRN  |
|       | c) QSB  |
|       | d) QRO  |
| 151   | Identify the correct Q code for "are you being interfered with?"  |
|       | a) QRN  |
|       | b) QSL  |
|       | c) QRM  |
|       | d) QRX  |
| 152   | Identify the correct Q code for "Send slower"                     |
|       | a) QSP  |
|       | b) QRS  |
|       | c) QRO  |
|       | d) QRQ  |
| 153   | The Q code for "standby" is:                                      |
|       | a) QRN  |
|       | b) QRM  |
|       | c) QRS  |
|       | d) QRX  |
| 154   | QRP means:  |
|       | a) Close down   |
|       | b) Address is   |

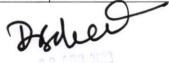
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|     | d) Low Power   |
|-----|--|
| 155 | QRT means:   |
|     | a) Close down  |
|     | b) Stand By  |
|     | c) Fading  |
|     | d) Low Power   |
| 156 | Will you tell me my exact frequency may be transmitted as:     |
|     | a) QSL   |
|     | b) QRG   |
|     | c) QRI   |
|     | d) QRU   |
| 157 | The correct Q Code for "change frequency to" is:               |
|     | a) QSR   |
|     | b) QSX   |
|     | c) QSY   |
|     | d) QTH   |
| 158 | What is the correct Q Code for "what is your location?"        |
|     | a) QSY   |
|     | b) QSP   |
|     | c) QRP   |
|     | d) QTH   |
| 159 | Which is the correct Q Code for "shall I stop sending?"        |
|     | a) QRL   |
|     | b) QRK   |
|     | c) QRV   |
|     | d) QRT   |
| 160 | Which is the correct Q Code for "when will you call me again?" |
|     | a) QSD   |
|     | b) QSB   |
|     | c) QRX   |
|     | d) QRH   |
| 161 | Which the correct Q Code is for "are my signals fading?"       |
|     | a) QSD   |
|     | b) QSB   |
|     | c) QRN   |
|     | d) QRH   |
| 162 | Which the correct Q-code is for "Are you ready?"               |
|     | a) QRL   |
|     | b) QRK   |
|     | Dobalus C) QRV   |
|     |  |

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| Which is the correct Q Code for "can you acknowledge receipt?"   a) QRL  |     | d) QRG  |
|--|-----|---|
| b) QRK   c) QRV   d) QSL   | 163 | Which is the correct Q Code for "can you acknowledge receipt?"  |
| C) QRV   d) QSL   Repeaters only normally operate on which mode:   a) AM   b) FM   c) SSB   d) CW   Copper   d) Mica   d) Copper   d) Mica   |     | a) QRL  |
| d) QSL   Repeaters only normally operate on which mode:  |     | b) QRK  |
| Repeaters only normally operate on which mode:   a) AM   b) FM   c) SSB   d) CW  |     | c) QRV  |
| a) AM b) FM c) SSB d) CW  165 One of the following is not a conductor: a) Silver b) Aluminum c) Copper d) Mica  166 One of the following is not an insulator: a) Mica b) Ceramic c) Plastic d) Copper d) Copper d) Copper 177 The opposition to the flow of current in a circuit is called: a) Resistance b) Inductance c) Emission d) Capacitance A potentiometer is a: a) Meter b) Variable resistor c) Battery d) Capacitor  169 The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt d) 12 volt The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms   |     | d) QSL  |
| b) FM c) SSB d) CW  One of the following is not a conductor: a) Silver b) Aluminum c) Copper d) Mica One of the following is not an insulator: a) Mica b) Ceramic c) Plastic d) Copper d) Copper d) Mica b) Ceramic c) Plastic d) Copper The opposition to the flow of current in a circuit is called: a) Resistance b) Inductance c) Emission d) Capacitance A potentiometer is a: a) Meter b) Variable resistor c) Battery d) Capacitor  The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt c) 83,33 volt d) 12 volt The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms  | 164 | Repeaters only normally operate on which mode:  |
| c) SSB d) CW One of the following is not a conductor: a) Silver b) Aluminum c) Copper d) Mica  Cone of the following is not an insulator: a) Mica Done of the following is not an insulator: a) Mica b) Ceramic c) Plastic d) Copper  The opposition to the flow of current in a circuit is called: a) Resistance b) Inductance c) Emission d) Capacitance A potentiometer is a: a) Meter b) Variable resistor c) Battery d) Capacitor  The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt c) 83,33 volt d) 12 volt The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms   |     | a) AM   |
| d) CW  One of the following is not a conductor: a) Silver b) Aluminum c) Copper d) Mica  166 One of the following is not an insulator: a) Mica b) Ceramic c) Plastic d) Copper  167 The opposition to the flow of current in a circuit is called: a) Resistance b) Inductance c) Emission d) Capacitance A potentiometer is a: a) Meter b) Variable resistor c) Battery d) Capacitor  The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt c) 83,33 volt d) 12 volt The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms b) 1.2 kilo ohms   |     | b) FM   |
| Display of the following is not a conductor:   a) Silver   b) Aluminum   c) Copper     d) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not a conductor:   b) Comper   Doe of the following is not an insulator:   a) Mica   Doe of the following is not a conductor:   b) Comper   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   b) Inductance   Doe of the following is not an insulator:   c) Plastic   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   b) Comper   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   b) Comper   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   b) Aluminum   Doe of the following is not an insulator:   a) Mica   Doe of the following is not an insulator:   b) Aluminum   Doe of the following is not an insulator:   a) Aluminum   Doe of the following is not an insulator:   c) Plastic   Doe of the following is not an insulator:   d) Copper   Doe of the following is not an insulator:   d) Copper   Doe of the following is not an insulator:   d) Copper   Doe of the following is not an insulator:   d) Copper   Doe of the following is not an insulator:   d) Copper   Doe of the following is not an insulator:   d) Copper   Doe of the foll |     | c) SSB  |
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| c) Copper d) Mica  One of the following is not an insulator: a) Mica b) Ceramic c) Plastic d) Copper  The opposition to the flow of current in a circuit is called: a) Resistance b) Inductance c) Emission d) Capacitance  A potentiometer is a: a) Meter b) Variable resistor c) Battery d) Capacitor  The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt d) 12 volt  The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms  |     | a) Silver   |
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| b) Inductance c) Emission d) Capacitance  168  | 167 | The opposition to the flow of current in a circuit is called:   |
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| d) Capacitance  A potentiometer is a:  a) Meter b) Variable resistor c) Battery d) Capacitor  The current through a 100 ohm resistor is to 120ma. What is the potential difference across the resistor? a) 120 volt b) 8,33 volt c) 83,33 volt d) 12 volt  The resistance value of 1200 ohms can be expressed as: a) 12 kilo ohms b) 1.2 kilo ohms   |     | b) Inductance   |
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| The resistance value of 1200 ohms can be expressed as:  a) 12 kilo ohms b) 1.2 kilo ohms   |     |   |
| a) 12 kilo ohms b) 1.2 kilo ohms   |     | d) 12 volt  |
| a) 12 kilo ohms b) 1.2 kilo ohms   | 170 |   |
| b) 1.2 kilo ohms   |     |   |
|  |     |   |
|  |     |   |



|     | d) 0.12 Mega ohms   |
|-----|---|
| 171 | How can the current be calculated when the voltage and resistance in a dc circuit is known?   |
|     | a) I = E / R  |
|     | b) P = I x E  |
|     | c) I = R x E  |
|     | d) I = E x R  |
| 172 | A 12 volt battery supplies a current of 0.25 ampere to a load. What is the input resistance of this load?   |
|     | a) 0.02 ohm   |
|     | b) 3 ohm  |
|     | c) 48 ohm   |
|     | d) 480 ohm  |
| 173 | If 120 volt is measured across a 470 ohm resistor, approximately how much current is flowing through this resistor?   |
|     | a) 56.40 ampere   |
|     | b) 5.64 ampere  |
|     | c) 3.92 ampere  |
|     | d) 0.25 ampere  |
| 174 | Two resistors are connected in series. The combined resistance is 1200 ohm. If one of the resistors is  |
|     | 800 ohm, what is the value of the other?  |
|     | a) 1000 ohm   |
|     | b) 800 ohm  |
|     | c) 400 ohm  |
|     | d) 1200 ohm   |
| 175 | Two 10 kilo ohm resistors are connected in parallel. If the voltage from a battery across the resistors sets up a current of 5mA in the one resistor, how much current flows in the second? |
|     | a) 10 mA  |
|     | b) 2 mA   |
|     | c) 20 mA  |
|     | d) 5 mA   |
| 176 | A light bulb draws 0.5 A from a 12 V battery when lit. How much power does it consume?  |
| ,   | a) 3 W  |
|     | b) 6 W  |
|     | c) 0.03 W   |
|     | d) 24 W   |
| 177 | The DC current drawn by the final stage of a linear amplifier is 100 mA at 100 V. How much power is consumed?   |
|     | a) 100 watt   |
|     | b) 1 kilo watt  |
|     | c) 10 watt  |
|     | d) 1 watt   |

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ড. মোঃ সোহেল রানা পরিচালক স্পেকট্রাম বিভাগ বাংলাদেশ টেলিযোগাযোগ নিয়ন্ত্রণ কমিশন

|     | a) RMS value  |
|-----|---|
|     | b) Average value  |
|     | c) Peak value   |
|     | d) Corrected value  |
| 179 |   |
| 1/9 | Two 500 pF capacitors in series produce an equivalent capacitance of:  a) 1000 pF                             |
|     | b) 2000 pF  |
|     | c) 250 pF   |
|     | d) 1 nF   |
| 180 | Three capacitors of 1 mF are connected in parallel. The equivalent capacitance is:                            |
| 100 | a) 0.33 mF  |
|     | b) 3.0 mF   |
|     | c) 0.3 mF   |
|     | d) 33.33 mF   |
| 181 | BTRC is the abbreviation of:  |
| 101 | a) Bangladesh Telecom Regulator's Council   |
|     | b) Bangladesh Telecommunication and Radio Commission  |
|     | c) Bangladesh Telecommunication and Radio Commission  |
|     | d) Bangladesh Telecommunication Regulatory Commission   |
| 102 |   |
| 182 | What kind of amateur station simultaneously retransmits the signals of other stations on a different channel? |
|     | a) Repeater station   |
|     | b) Space station  |
|     | c) Telecommand station  |
|     | d) Relay station  |
| 183 | Which sideband is most commonly used for voice communications on frequencies of 14 MHz or higher              |
|     | a) Upper sideband   |
|     | b) Lower sideband   |
|     | c) Vestigial sideband   |
|     | d) Double sideband  |
| 184 | Which of the following modes is most commonly used for voice communications on the 160, 75 and 4 meter bands? |
|     | a) Upper sideband   |
|     | b) Lower sideband   |
|     | c) Vestigial sideband   |
|     | d) Double sideband  |
| 185 | The abbreviation using the Q code for high power is:  |
|     | a) QRP  |

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|     | b) QRH  |
|-----|---|
|     | c) QRI  |
|     | d) QRO  |
| 186 | You are having trouble with reception due to interference from another station. The Q code to be used     |
|     | would be:   |
|     | a) QRM  |
|     | b) QRH  |
|     | c) QRI  |
|     | d) QRO  |
| 187 | The frequency limits of the UHF spectrum are  |
|     | a) 300 to 3000 MHz  |
|     | b) 30 to 100 MHz  |
|     | c) 100 to 3000 MHz  |
|     | d) 3 to 300 MHz   |
| 188 | Which of the following frequencies is in the 12 meter band?   |
|     | a) 14.100 MHz   |
|     | b) 12.940 MHz   |
|     | c) 17.940 MHz   |
|     | d) 24.940 MHz   |
| 189 | Which, if any, amateur band is shared with the Citizens Radio Service?                                    |
|     | a) 10 meters  |
|     | b) 12 meters  |
|     | c) 15 meters  |
|     | d) None   |
| 190 | What is the frequency corresponding to a wavelength of 300 mm in vacuam                                   |
|     | a) 100 kHz  |
|     | b) 1 MHz  |
|     | c) 100 MHz  |
|     | d) 1 GHz  |
| 191 | The approximate amount of change, measured in decibels (dB), of a power decrease from 12 watts to 3 watts |
|     | a) is 0 dB  |
|     | b) is 6 dB  |
|     | c) is 12 dB   |
|     | d) is 3 dB  |
| 192 | What is the maximum symbol rate permitted for RTTY or data transmission on 20 meter band?                 |
|     | a) 56 kilobaud  |
|     | b) 19.6 kilobaud  |
|     | c) 1200 baud  |
|     | d) 300 baud   |
| 193 | In a capacitor, what causes opposition to the flow of AC?   |

In a capacitor, what cau

|     | a) Resistance b) Reluctance   |
|-----|---|
|     | c) Reactance  |
|     |   |
| 194 | d) Admittance   |
| 134 | How can the current (I) be calculated when the voltage (E) and resistance (R) in a DC circuit is known?                       |
|     | a) I = E / R  |
|     | b) P = I x E  |
|     | c) I = R x E  |
|     | d) I = E x R  |
| 195 | How can the power (W) be calculated when the voltage (V) and current (I) in a DC circuit is known?                            |
|     | a) W = V x I  |
|     | b) W = V + I  |
|     | c) W = V / I  |
|     | d) W = I^2 x R  |
| 196 | What circuit passes electrical energy below a certain frequency and blocks electrical energy above that frequency?            |
|     | a) a band-pass filter   |
|     | b) a high-pass filter   |
|     | c) an input filter  |
|     | d) a low-pass filter  |
| 197 | The phase difference between voltage and current in a purely inductive circuit is:  |
| 7   | a) 0 deg  |
|     | b) 45 deg   |
|     | c) 90 deg   |
|     | d) 180 deg  |
| 198 | The phase difference between voltage and current in a purely capacitive circuit is:   |
|     | a) 0 deg  |
|     | b) 45 deg   |
|     | c) 90 deg   |
|     | d) 180 deg  |
| 199 | The phase difference between voltage and current in a purely resistive circuit is:  |
|     | a) 0 deg  |
|     | b) 45 deg   |
|     | c) 90 deg   |
|     | d) 180 deg  |
| 200 | What is the maximum bandwidth permitted for Amateur Radio stations when transmitting on USB frequencies in the 60 meter band? |
|     | a) 2.8 kHz  |
|     | b) 5.6 kHz  |
|     | c) 1.8 kHz  |

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|     | d) 3 kHz   |
|-----|--|
| 201 | Which of the following band is most commonly used for SSB voice communications in the VHF and UHI bands?               |
|     | a) Upper sideband  |
|     | b) Lower sideband  |
|     | c) Vestigial sideband  |
|     | d) Double sideband   |
| 202 | Which band is most commonly used for voice communications on the 17 and 12 meter bands?                                |
|     | a) Upper sideband  |
|     | b) Lower sideband  |
|     | c) Vestigial sideband  |
|     | d) Double sideband   |
| 203 | What prosign is sent to indicate the end of a formal message when using CW?  |
|     | a) SK  |
|     | b) BK  |
|     | c) AR  |
|     | d) KN  |
| 204 | Which mode is normally used when sending an RTTY signal via AFSK with an SSB transmitter?                              |
|     | a) USB   |
|     | b) DSB   |
|     | c) CW  |
|     | d) LSB   |
| 205 | What is the name of the process which changes the frequency of an RF wave to convey information?                       |
|     | a) Frequency convolution   |
|     | b) Frequency transformation  |
|     | c) Frequency conversion  |
|     | d) Frequency modulation  |
| 206 | What type of device is often used to enable the matching of the transmitter output to an Impedance other than 50 ohms? |
|     | a) Balanced modulator  |
|     | b) SWR Bridge  |
|     | c) Antenna coupler   |
|     | d) Q Multiplier  |
| 207 | Which of the following must be connected to an antenna analyzer when it is being used for SWR                          |
|     | measurements?  |
|     | a) Receiver  |
|     | b) Transmitter   |
|     | c) Antenna and feed line   |
|     | d) All of these choices are correct  |
| 208 | How many dB change is resulted from a two-times increase or decrease in power?   |
|     | a) Approximately 2 dB  |

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|           | b) Approximately 3 dB  |
|-----------|--|
|           | c) Approximately 6 dB  |
| 200       | d) Approximately 12 dB   |
| 209       | What is the approximate junction threshold voltage of a germanium diode?   |
|           | a) 0.1 volt  |
|           | b) 0.3 volts   |
|           | c) 0.7 volts   |
|           | d) 1.0 volts   |
| 210       | What is the approximate junction threshold voltage of a conventional silicon diode?                              |
|           | a) 0.1 volt  |
|           | b) 0.3 volts   |
|           | c) 0.7 volts   |
|           | d) 1.0 volts   |
| 211       | For which of the following modes of a Class C power stage is appropriate for amplifying a modulated signal?      |
|           | a) SSB   |
|           | b) CW  |
|           | c) AM  |
|           | d) All of these choices are correct  |
| 212       | Which of these classes of amplifiers has the highest efficiency?   |
|           | a) Class A   |
|           | b) Class B   |
|           | c) Class AB  |
|           | d) Class C   |
| 213       | Which of the following technique uses the narrowest frequency bandwidth?   |
|           | a) Single sideband   |
|           | b) Double sideband   |
|           | c) Phase modulation  |
|           | d) Frequency modulation  |
| 214       | Which of the following is an effect of over-modulation?  |
|           | a) Insufficient audio  |
|           | b) Insufficient bandwidth  |
|           | c) Frequency drift   |
|           | d) Excessive bandwidth   |
| 215       | What are the typical characteristic impedances of coaxial cables used for antenna feed lines at amateu stations? |
|           | a) 25 and 30 ohms  |
|           | b) 50 and 75 ohms  |
|           | c) 80 and 100 ohms   |
|           | d) 500 and 750 ohms  |
| 216       | What is the approximate length of each side of a quad antenna driven element?                                    |
| 216<br>Do | What is the approximate length of each side of a quad antenna driven element?                                    |



|     | a) 1/4 wavelength  |
|-----|--|
|     | b) 1/2 wavelength  |
|     | c) 3/4 wavelength  |
|     | d) 1 wavelength  |
| 217 | How does the gain of a two-element delta-loop beam compare to the gain of a two-element quad                                     |
|     | antenna?   |
|     | a) 3 dB higher   |
|     | b) 3 dB lower  |
|     | c) 2.54 dB higher  |
|     | d) About the same  |
| 218 | What standing wave ratio will result from the connection of a 50-ohm feed line to a non-reactive load having a 50-ohm impedance? |
|     | a) 2:1   |
|     | b) 1:1   |
|     | c) 50:50   |
|     | d) 0:0   |
| 219 | What is the approximate length of each leg of a symmetrical delta-loop antenna?  |
|     | a) 1/4 wavelength  |
|     | b) 1/3 wavelength  |
|     | c) 1/2 wavelength  |
|     | d) 2/3 wavelength  |
| 220 | Which part of the atmosphere enables the propagation of radio signals around the world?  |
|     | a) The stratosphere  |
|     | b) The troposphere   |
|     | c) The ionosphere  |
|     | d) The magnetosphere   |
| 221 | What antenna polarization is normally used for long-distance weak-signal CW and SSB contacts using the VHF and UHF bands?        |
|     | a) Right-hand circular   |
|     | b) Left-hand circular  |
|     | c) Horizontal  |
|     | d) Vertical  |
| 222 | What type of wave carries radio signals between transmitting and receiving stations?   |
|     | a) Electromagnetic   |
|     | b) Electrostatic   |
|     | c) Surface acoustic  |
|     | d) Magnetostrictive  |
| 223 | Which of the following is an appropriate receive filter bandwidth in order to minimize noise and interference for CW reception?  |
|     | a) 500 Hz  |
|     | b) 1000 Hz   |
|     | c) 2400 Hz   |



| 225 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | of a microphone cable?  a) Band-pass filter  b) Low-pass filter  c) Preamplifier  d) Ferrite choke  What is the electrical term for the electromotive force (EMF) that causes electron flow?  a) Voltage  b) Ampere-hours  c) Capacitance  d) Inductance |
|--|--|
| 225 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\    | b) Low-pass filter c) Preamplifier d) Ferrite choke What is the electrical term for the electromotive force (EMF) that causes electron flow? a) Voltage b) Ampere-hours c) Capacitance d) Inductance   |
| 225 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | c) Preamplifier d) Ferrite choke What is the electrical term for the electromotive force (EMF) that causes electron flow? a) Voltage b) Ampere-hours c) Capacitance d) Inductance  |
| 225 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | d) Ferrite choke What is the electrical term for the electromotive force (EMF) that causes electron flow? a) Voltage b) Ampere-hours c) Capacitance d) Inductance  |
| 225 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\    | What is the electrical term for the electromotive force (EMF) that causes electron flow?  a) Voltage b) Ampere-hours c) Capacitance d) Inductance  |
| 226  | a) Voltage b) Ampere-hours c) Capacitance d) Inductance  |
| 226  | b) Ampere-hours<br>c) Capacitance<br>d) Inductance   |
| 226  | c) Capacitance<br>d) Inductance  |
| 226  | d) Inductance  |
| 226 \                                      | ACM CONTROL AND LAND MINE STORM  |
|  |  |
|  | What name is given to an amateur radio station that is used to connect other amateur stations to the Internet?   |
| á  | a) gateway   |
| ŀ  | b) repeater  |
| (  | c) digipeater  |
|  | d) beacon  |
| 227 \                                      | Who must designate the station control operator?   |
| 6  | a) The station licensee  |
| I  | b) The FCC   |
| (  | c) The frequency coordinator   |
|  | d) The ITU   |
| 228 I                                      | Under what type of control do APRS network digipeaters operate?  |
| ā  | a) Automatic   |
| I  | b) Remote  |
|  | c) Local   |
| -  | d) Manual  |
|  | What is the impedance of the most commonly used coaxial cable in typical amateur raio installation?  |
| -  | a) 8 ohms  |
| 1  | b) 50 ohms   |
| -  | c) 600 ohms  |
| _  | d) 12 ohms   |
|  | What electrical component is usually composed of a coil of wire?   |
| -  | a) Switch  |
| 1  | b) Capacitor   |
| _  | c) Diode   |
|  | d) Inductor  |
| 231  | Which amateur band are you using when your station is transmitting on 146.52 MHz?  |
| ļ.   | a) 2 meter band  |

ড, মোঃ সোহেল রানা পরিচালক স্পেকট্রোম বিভাগ াংলাদেশ টেলিয়োগাযোগ নিয়ন্ত্রণ কমিশন

| 232 | d) 6 meter band  What type of amateur station simultaneously retransmits the signal of another amateur station on a                                |
|-----|--|
| 232 |  |
|     | different channel or channels?   |
|     | a) Beacon station  |
|     | b) Earth station   |
|     | c) Repeater station  |
|     | d) Message forwarding station  |
| 233 | What is the name for the distance a radio wave travels during one complete cycle?  |
|     | a) Wave speed  |
|     | b) Waveform  |
|     | c) Wavelength  |
|     | d) Wave spread   |
| 234 | What are the frequency limits of the VHF spectrum?   |
|     | a) 30 to 300 kHz   |
|     | b) 30 to 300 MHz   |
|     | c) 300 to 3000 kHz   |
|     | d) 300 to 3000 MHz   |
| 235 | What frequency range is referred to as HF?   |
|     | a) 300 to 3000 MHz   |
|     | b) 30 to 300 MHz   |
|     | c) 3 to 30 MHz   |
|     | d) 300 to 3000 kHz   |
| 236 | According to 'Instructions for Amateur Radio Usages and Procedures in Bangladesh' maximum allowable output power for VHF/UHF Radio set is          |
|     | a) 25 Watt   |
|     | b) 30 Watt   |
|     | c) 35 Watt   |
|     | d) 40 Watt   |
| 237 | According to 'Instructions for Amateur Radio Usages and Procedures in Bangladesh' maximum allowable output power for VHF/UHF Walkie-Talkie set is? |
|     | a) 5 Watt  |
|     | b) 4 Watt  |
|     | c) 3 Watt  |
|     | d) 2 Watt  |
| 238 | Amateur satellites afford an opportunity to use frequencies above for long-distance communications   |
|     | a) LF  |
|     | b) HF  |
| 1   | c) UVF   |
|     | wheel  |

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| 239 | d) Ku The VHF frequency range that is authorized to Amateurs is                      |
|-----|--|
|     | a) 140-146MHz  |
|     | b) 144-146MHz  |
|     | c) 140-144MHz  |
|     | d) 142-146MHz  |
| 240 | The resistance value of an Insulator is  |
|     | a) Zero  |
|     | b) Very High   |
|     | c) Less than Unity   |
|     | d) None  |
| 241 | The power can be expressed as  |
|     | a) V=IR  |
|     | b) P=VI  |
|     | c) P=12R   |
|     | d) Both b & c  |
| 242 | The Phonetic used to represent alphabet L is   |
|     | a) LEEMA   |
|     | b) LEEMAH  |
|     | c) LEMA  |
|     | d) LIMA  |
| 243 | Which of the following is the HF frequency range allotted for Amateur service?       |
|     | a) 28-28.4MHz  |
|     | b) 28-28.7MHz  |
|     | c) 28-29.4MHz  |
|     | d) 28-29.7MHz  |
| 244 | Which of the following is the HF frequency range allotted for Amateur service?       |
|     | a) 24 890-24 990KHz  |
|     | b) 24 880-24 990KHz  |
|     | c) 24 800-24 990KHz  |
|     | d) 24 890-24 995KHz  |
| 245 | In Region 3, 5 830-5 850MHz band is allotted for Amateur-satellite for communication |
|     | a) Earth-to-space  |
|     | b) Space-to-earth  |
|     | c) Both a & b  |
|     | d) None of these   |
| 246 | If you move towards West from the Prime Meridian then the time will                  |
|     | a) Increase  |
|     | b) Decrease  |
|     | c) Remain same   |
|     | d) All of them   |
|     | Well   |

শোঃ সোহেল রানা
পরিচালক
স্পেকট্রাম বিভাগ
াংলাদেশ টেলিবোগাযোগ নিয়য়্রণ কমিশন

| 247 | For Bangladeshi Amateur Radio License Holder, the applicable call sign charges (for once) is BDT:                                |
|-----|--|
|     | a) 1000  |
|     | b) 1500  |
|     | c) 2500  |
|     | d) 5000  |
| 248 | A method of multiplexing in which the total frequency spectrum available is used by each channel, but only for part of the time: |
|     | a) FDM   |
|     | b) TDM   |
|     | c) SDM   |
|     | d) GSM   |
| 249 |  |
| 243 | The number to be dialed or called to reach a subscriber in the same local network of numbering area is                           |
|     | a) Local code  |
|     | b) Area code   |
|     | c) Toll access code  |
|     | d) Subscriber No.  |
| 250 | Radar altimeter is used for measurement of :   |
|     | a) Height  |
|     | b) Speed   |
|     | c) Range   |
|     | d) Bearing   |
| 251 | Resolution of laser printer is specified in terms of :   |
|     | a) DPI   |
|     | b) LPM   |
|     | c) CPM   |
|     | d) PPM   |
| 252 | The filament of an electric bulb is made of :  |
|     | a) Tungsten  |
|     | b) Nichrome  |
|     | c) Graphite  |
|     | d) None of these   |
| 253 | Balloons are filled with :   |
|     | a) Nitrogen  |
|     | b) Helium  |
|     | c) Oxygen  |
|     | d) Argon   |
| 254 | Washing soda is the common name for :  |
|     | a) Sodium carbonate  |
|     | b) Calcium bicarbonate   |
|     | c) Sodium bicarbonate  |

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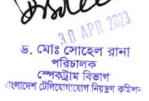
|     | d) Calcium carbonate   |
|-----|--|
| 255 | A fax transmission is usually at a mode.   |
|     | a) Simplex   |
|     | b) Half-duplex   |
|     | c) Full-duplex   |
|     | d) Multiplex.  |
| 256 | The speed of light is:   |
|     | a) 300,000,000 mi/s  |
|     | b) 300,000,000 mm/s  |
|     | c) 300,000,000 m/s   |
|     | d) 300,000,000 km/s  |
| 257 | What is the name for the flow of electrons in an electric circuit?               |
|     | a) Capacitance   |
|     | b) Resistance  |
|     | c) Current   |
|     | d) Voltage   |
| 258 | Electrical current is measured in which of the following units?                  |
|     | a) Amperes   |
|     | b) Ohms  |
|     | c) Volts   |
|     | d) Watts   |
| 259 | What electrical component is used to oppose the flow of current in a DC circuit? |
|     | a) Transformer   |
|     | b) Voltmeter   |
|     | c) Resistor  |
|     | d) Inductor  |
| 260 | Which of the following is a good electrical conductor?                           |
|     | a) Wood  |
|     | b) Copper  |
|     | c) Rubber  |
|     | d) Glass   |
| 261 | Which of the following is a good electrical insulator?                           |
|     | a) Wood  |
|     | b) Copper  |
|     | c) Rubber  |
|     | d)Glass  |
| 262 | For avoiding ground losses, better is the surface conductivity, less is the      |
|     | a) Attenuation   |
|     | b) Phase velocity  |
|     | c) Propagation constant  |
|     | d) Tilt angle  |

ভ. মোঃ সোহেল রানা পরিচালক স্পেকট্রাম বিভাগ ংলাদেশ টেলিযোগাযোগ নিয়ন্ত্রণ কমিশন

| 263 | What is the functioning role of an antenna in receiving mode?                                      |
|-----|--|
|     | a) Radiator  |
|     | b) Converter   |
|     | c) Sensor  |
|     | d) Inverter  |
| 264 | In radio communication link, what is the shape/nature of waves generated by transmitting antenna?  |
|     | a) Spherical   |
|     | b) Plane   |
|     | c) Triangular  |
|     | d) Square  |
| 265 | Which among the following elucidate the generation of electromagnetic waves?                       |
|     | A) Ampere's law  |
|     | B) Faraday's law   |
|     | C) Gauss's law   |
|     | D) Kirchoff's law  |
| 266 | A device that converts high frequency current into electromagnetic wave is called                  |
|     | a) Antenna   |
|     | b) Loudspeaker   |
|     | c) Microphone  |
|     | d) Transducer  |
| 267 | What are the two common polarization types for antenna?  |
|     | a) Horizontal & Vertical   |
|     | b) Horizontal & Lateral  |
|     | c) Vertical & Lateral  |
|     | d) All of the above  |
| 268 | The relation between $\beta$ and $\alpha$ is   |
|     | a) $\beta = 1/(1-\alpha)$  |
|     | b) $\beta = (1 - \alpha) / \alpha$   |
|     | c) $\beta = \alpha / (1 - \alpha)$   |
|     | d) $\beta = \alpha / (1 + \alpha)$   |
| 269 | What brief statement is often transmitted in place of "CQ" to indicate that you are listening on a |
| 203 | repeater?  |
|     | a) The words "Hello test" followed by your call sign   |
|     | b) Your call sign  |
|     | c) The repeater call sign followed by your call sign   |
|     | d) The letters "QSY" followed by your call sign  |
| 270 | What is the Amateur Radio Emergency Service (ARES)?  |
|     | a) Licensed amateurs who have voluntarily registered their qualifications and equipment for        |
|     | communications duty in the public service  |

ড. মোঃ সোহেল রানা
 পরিচালক
 স্পেকট্রাম বিভাগ
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|     | c) A training program that provides licensing courses for those interested in obtaining an amateur license to use during emergencies                             |
|-----|--|
|     | d)A training program that certifies amateur operators for membership in the Radio Amateur Civil<br>Emergency Service   |
| 271 | Frequency does not change in a transformer. (True/ False   |
| 272 | A transformer core is laminated to reduce eddy current losses. (True/ False)   |
| 273 | NFAP Means National Frequency Allocation Plan. (True/ False  |
| 274 | ITU Means International Telecommunication Union. (True/ False) Answer: True  |
| 275 | Bangladesh is in ITU Region 4. (True/ False)   |
| 276 | The frequency range of the VHF spectrum is 3-300 MHz. (True/ False)  |
| 277 | Capacitor is used together with an inductor to make a tuned circuit. (True/ False)   |
| 278 | A unit combining the functions of a transmitter and a receiver is called transmitter. (True/ False)  |
| 279 | Mixer is used to convert a radio signal from one frequency to another. (True/ False)   |
| 280 | Upper sideband is normally used for 10 meter HF, VHF and UHF single-sideband communications. (True/ False)   |
| 281 | BTRC provides licenses and call-signs for amateur radio operators in the VHF and UHF bands. (True/False)   |
| 282 | Amateur Radio Licensee can also use the equipment of Amateur Radio society/ clubs with the prior permission from BTRC. (True/ False)                             |
| 281 | A Mayday radio call should be reserved for life threatening situations.  |
| 282 | A Pan-Pan call should be used for urgent situations that are immediately life threatening and require assistance. (True/ False)                                  |
| 283 | The log book should be maintained in loose sheets. (True / False)  |
| 284 | In Bangladesh the minimum age of holding an Amateur Radio License is 18 years. (True / False)  |
| 285 | The licensee shall not transmit a message on behalf of a third party, unless the message relates to a natural disaster. (True / False)                           |
| 286 | The Duration of the License shall be of 1 (One) year initially which will be counted after receiving the approval of License from the Commission. (True / False) |
| 287 | A licensee can move his/her Amateur Radio anywhere without notifying the Commission(True/ False  |
| 288 | Current that flows only in one direction is called Direct Current. (True/ False)   |
| 289 | Current that reverses direction on a regular basis is called Alternate Current. (True/ False)  |
| 290 | Pulse Rate describes the number of times per second that an alternating current reverses direction. (True/ False)  |
| 291 | The ability to store energy in an electric field is called "Inductance".(True/ False)  |
| 292 | The ability to store energy in an magnetic field is called "Inductance".(True/ False)  |
| 293 | "Farad" is the basic unit of inductance.(True/ False)  |
| 294 | Impedence is a measure of the opposition to AC current flow in a circuit.(True/ False)   |
|     | Inductor is used to oppose the flow of current in a DC circuit(True/ False).   |



| 296 | A device that combines several semiconductors and other components into one package is called an "Integrated Circuit". (True/ False)  |
|-----|---|
| 297 | The radio club - International Amateur Radio Club (IARC) using the call sign 4U1ITU. (True/ False)  |
| 298 | High speed telegraphy (HST) challenges operators to correctly copy Morse code at the highest possible speeds. (True/ False)   |
| 299 | HAZMAT stands for Hundreds of Materials. (True/ False)  |
| 300 | DRM stands for Hundreds of Digital Radio Mechanism. (True/ False)   |
| 301 | Radio amateurs have developed full-motion digital television using digital compression techniques in bandwidths of 1.5 Mbit/s to 2 Mbit/s in frequencies above 420 MHz. (True/ False) |
| 302 | D-Star — is a digital voice and data system developed by the Japan Amateur Radio League (JARL) in cooperation with the administration and industry. (True/ False)                     |
| 303 | The International Amateur Radio Union (IARU) provides advice and frequency co-ordination to assist amateur satellite builders and prospective builders. (True/ False)                 |
| 304 | For sharing studies, characteristics of typical amateur systems are documented in Recommendation ITU R M.1732. (True/ False)  |
| 305 | RR No. 25.7 provides that "The maximum power of amateur stations shall be fixed by the administrations concerned".(True/ False)   |

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