BARC
BRIDGERLAND AMATEUR RADIO CLUB

THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

>>>>>>>> http://www.barconline.org <<<<<<<<

June, July, August
Summer 2013

Some Contents…

ARRL Affiliated

PRESIDENT'S MESSAGE

It is June already and Field Day is just weeks away. Our club will be participating in the American Radio Relay League (ARRL) 2013 Field Day event on the 22nd and 23rd of June. Field Day is an annual amateur radio exercise, encouraging emergency communications preparedness among amateur radio operators. It is typically the largest single emergency preparedness exercise in the country, with over 35,000 operators participating each year. Field Day is part educational event, part operating event, part public relations event. But most of all, we have a fun and enjoyable time operating the radios. Anyone can attend and participate, licensed or not, club member or not. You can operate a radio (with a control operator present) in making contacts to other amateur radio operators. If you want to listen and not operate, you can help with logging the radio contacts on a computer. We use this opportunity to let everyone try HF. We will have several radios setup, including one radio for digital mode (PSK) and one for Morse Code (CW).

Our location for Field Day will be the same place as last year, a half mile up the Swan Flat Road. Swan Flat Road is about 30 miles up Logan Canyon just past the State Road Maintenance station after mile marker 490. Swan Flat Road is suitable for automobile travel. The area is open camping so there will be a few of us that will go up early in the week to claim a spot. Others are welcome who would like to arrive early for some radio camping. We should have a radio set up to use so we can enjoy the airwaves with less man made interference that in the valley.

So here is the Field Day schedule:

Friday

Noon - Those that can, arrive at site to help set up antennas until about 6 PM. It takes about 4 to 6 people to set up the antennas.

Saturday

Morning - Setup remaining antennas and radios. Check everything; radios, antennas, computers, etc.

Noon - Contest starts. Anybody who wants to can get on the air or help with logging contacts. Contest lasts for 24 hours.

1 PM until 3:30 PM – The BARC Ladies' Project — UHF Patch Cables and Emergency Communication Book. Those ladies who wish may bring their multi-meters to have some hands on practice (optional).

3:30 PM - Bunny Hunt. We will have a short class and demonstration. Later, the bunny will be hidden and anyone who would like to can try to find it. Hunters don't even need a license to participate, just listening to the radio.

6 to 7 PM - Pot Luck Dinner. The Club will provide Barbecue Pulled Chicken, hotdogs, and drinks. Please bring a large pot luck food item to share (make sure to bring plenty to share--there are lots of mouths to feed), and your own chair and plates/cups/cutlery.

Sunday

Noon - Contest ends. Start taking down antennas, put stuff away, and clean up the camp site.

Come on up and bring your family, camp chair, mosquito repellant, water (no water at the site), and wood for campfire (if campfires are allowed). Stay as long as you can, and enjoy the good food and the fun of Field Day. Talk in frequency 146.720 BARC Mt. Logan Repeater while in Logan Canyon. Once you get close to the site, switch to simplex 147.520.

There will be no club meetings in June, July, and August. However, there will be some bunny hunts during the summer. The date and time of these bunny hunts will be sent out on the BARC e-mail list server.

We will start up our club gatherings again on September 5th with the Fall Pot-Luck Social.

Hope everyone has a fun and safe summer. And be sure to put on your calendar June 22 & 23 for Field Day.

73
Cordell
KE7IK

UPCOMING 2013 ACTIVITIES

20 Jun, 8:00 PM — RACES VHF Net 447.00 IRLP 145.49 Promontory 147.18 Snowbird

20-21 June — Wasatch Back Relay (* Tyler Griffiths)

20-22 June — Bridgerland Radio Rocket Recovery (* Guy Hatch)

22-23 June — Field Day (in place of June Club Meeting) (* Ted McArthur)

28-30 June — ARRL Rocky Mountain Division Convention (Estes Park, CO) Complete details about the 2013 ARRL Rocky Mountain Division Convention, including its lineup of activities, forums, special tours, prizes, special guests, meals, commercial amateur radio exhibitors, vendors, and easy online registration all await you at http://www.hamconcolorado.org/wordpress/

10 July, 7:30 PM — ARRL Rocky Mountain Division Net IRLP Node:9871

20 July 8:00 AM — RACES HF Net 3920 KHz

7 September — LOTOJA Bicycle Race (* Kevin, Tyler and Ted)

14 September — Bike the Bear Bicycle Race More info & to register Scouts
(* Kelly Hadfield) The date was changed do to the fact that bicycle traffic is limited around the lake at certain times of the year

21 September — Top Of Utah Marathon (* Tyler and Guy)

27-28 September — The Bear 100 (* Warren Wilde)

10 October, 7:00 PM — ARRL VEC-listed Local Radio test (Info on web site)
USU's ASTE building (Room 108 @ 1498 North 800 East, Logan, UT 84321)

12 October — Swaproberfest and October Club Meeting (* Bill Neville)

7 December, 7:00 PM — ARRL VEC-listed Local Radio test (Info on web site)

(* Contact for information or to volunteer to help with club involvement)

Local Radio Nets:

The **Weekly BARC net** is for BARC members and anyone else that would like to check in, held **every Tuesday night at 9:00 p.m.** local time on the Mt Logan BARC Repeater and Linked Systems (146.720)
The **BARC Ladies Net** is every **2nd and 4th Tuesday at 8:00 p.m.** on the BARC Repeater and Linked Systems (146.720). All licensed lady amateur radio operators are welcome to check in. Thanks, Shirley Larsen AD7HL

The May BARC Club meeting Report

By Fred Roecker

At BARC's May Club meeting members were privileged to participate in an orientation on Civil Air Patrol (CAP) communications. This presentation was conducted by two of our own Cache Valley Amateur Radio colleagues, Fred Roecker (KF7PKZ) and David Rhodes (N7PEI). Fred and Dave are members of our local CAP Squadron, the Cache Valley Composite Squadron. Our local Squadron consists of between 40-50 members, has a Cessna 182 aircraft stationed at KLGU, and provides aircrews and mission base support for air search mission throughout Northern and Central Utah. BARC members were provided an overview of CAP's missions and emergency services capabilities including detailed information on CAP's communications equipment. Dave and Fred emphasized a number of actual emergency services missions performed locally for Cache Valley.

CAP brought a wealth of equipment to the meeting including their Micom-3F HF-ALE Radio, Motorola PDR-3500 Tactical VHF Repeater, and the EFJohnson 5317 Mobile VHF Radio. In addition to communications equipment, BARC members were briefed on CAP's direction finding equipment and air search techniques. After the presentation many members were treated to an orientation of the communications equipment and capabilities of Cache Valley Composite Squadron's Van - equipped with both HF, VHF and Repeater capabilities.

We are thankful for our CAP volunteer professionals here in Cache Valley who play such a vital role helping to locate downed aircraft and lost citizens, and for being a resource for other Emergency Services missions. In the event of a major emergency in Utah, Cache Valley could be a major staging area for CAP operations and our Squadron would play a key role in any such emergency. Lastly, Fred & Dave outlined the need for additional volunteer members to work in communications, flight crew, mission base, and other roles within CAP. If you are interested in learning more about CAP contact Fred (roeckerswiss@me.com) or Dave (der3113@gmail.com) for more information.

ARRL News and Information
The ARES E-Letter for May 15, 2013
Eastern Massachusetts SM K9HI on Boston Marathon Tragedy and Response

It's been an extraordinary past few weeks for the citizens of Massachusetts as well as for the entire country. The tragic events at the Boston Marathon on Patriot's Day and the weeks following will forever be seared into our collective memories. The bombings, subsequent violence, the lockdown, an historic manhunt, and the eventual capture of a dangerous fugitive not only shook us but led us to summon our most enduring and positive of human qualities. We listened and watched in awe to the stories of first responders (and ordinary citizens) who rushed into harm's way to aid the injured and dying. In the days afterward, we collectively grieved. Slowly, now, we collectively heal.

For the hundreds of Amateur Radio volunteers from across New England who came to serve that day, the Marathon was going to be a fun, routine public service event. Sure, operators at previous Marathons have endured hardships and weather-related challenges. Temperature extremes in years past have resulted in hundreds of requests for ambulance transport to area hospitals. One year, there was even a fatality. But in all of the thirty-plus years of Boston Marathons in which amateurs have served, this one was without precedent.

Amateur Radio volunteers performed admirably during the period where they were covering a normal public service event. BAA officials in Hopkinton successfully ensured a smooth and safe start, thanks in part to efficient communications provided by the hams that shadowed them.

Checkpoints and first aid stations were able to verify and obtain needed supplies, and later, coordinate the transport of runners. Red Cross officials who crisscrossed the course were kept in the loop always, thanks to their Amateur Radio shadows. But then ... 2:50 PM. Initially, rumors and vague reports surfaced. CNN texts and other media alerts began to light up smartphones. Phone call volume increased. In fact, in many locations along the course, cell phone service crashed under the strain. Soon, it was apparent to everyone that a major disaster was unfolding, and amateurs were caught up in the middle of it. The jarring directive went out over the amateur networks to halt all runners.

Stop the Marathon

The BAA's mission abruptly changed, and new priorities were quickly introduced. As Marathon volunteer Tim Carter, W3ATB of Meredith, New Hampshire succinctly puts it, "The bombs created a new set of problems. How do the runners stay warm? How do the runners get fed? How do the runners get to their belongings? How do the runners discover if their loved ones waiting at the finish are okay? How do the runners let their loved ones know where they are? How will thousands of runners be transported to who-knows-where?"

News coverage of the bombings and subsequent capture of the suspects has, of course, been non-stop and numbing. Soon, for the first time the behind-the-scenes story of Amateur Radio at this Boston Marathon will appear in the volunteers' own words in the pages of *QST.* I want to thank our Section Emergency Coordinator Rob Macedo, KD1CY, for helping to pull together much of the material that will appear in these stories. Some of the other contributors include: Paul Topolski, W1SEX, District Emergency Coordinator for Worcester County, Western MA; Steve Schwarm, W3EVE, DEC for Field Operations, Eastern MA; Tim Carter, W3ATB; Carl Aveni, N1FY, Assistant SEC; and Terry Stader, KA8SCP, DEC.

I'm proud of the actions of the section's ARES members and other Marathon Amateur Radio Communications consortium participants during this horrific event. When the shock hit, amateurs shifted gears seamlessly from public service event coverage to full-blown emergency operations. The fact that amateurs are trained and able to make such a profound transition so quickly ensures that our services will always be in demand. You have this Section Manager's sincere gratitude. -- *Phil Temples, K9HI, ARRL Eastern Massachusetts Section Manager*

The ARRL Letter for May 23, 2013
Public Service: Amateurs in Oklahoma Respond to Storm Aftermath

After an EF5 tornado swept through Oklahoma on May 20, radio amateurs in that state assisted the American Red Cross with its communications efforts. "Amateur Radio operators were asked to support voice communications from the American Red Cross Oklahoma City Chapter Headquarters to their feeding station at the Incident Command Post located in Moore," explained ARRL Oklahoma Section Emergency Coordinator Mark Conklin, N7XYO. Moore, located about halfway between Norman and Oklahoma City, suffered the brunt of the tornado damage. As of 8:30 CDT on May 22, all Amateur Radio operations in support of the American Red Cross ceased.

This map -- courtesy of the National Weather Service in Norman, Oklahoma -- shows the track and varying strength of the tornado that swept through Oklahoma on May 20, destroying much of the city of Moore. See a larger version of the map here.

At least 24 people, including nine children, were killed when the 1.3-mile-wide tornado moved through Moore, Oklahoma's seventh largest city. The National Weather Service stated that the tornado traveled an estimated 17-mile-long path for 50 minutes, with an estimated peak wind that ranged from 200-210 miles per hour, making it an EF5 storm, the most powerful category of tornados possible. Read more.

Section News: Section Manager Election Results Announced

This spring, the ARRL held two balloted elections for Section Manager. ARRL members in Nebraska elected a new Section Manager, while members in Utah -- faced with a three-way race -- voted to keep their Section Manager. In addition, ARRL members in New Hampshire and Wisconsin will each get a new Section Manager, and Section Managers in seven Sections ran unopposed and were declared elected for a new two-year term. Ballots were counted and verified at ARRL Headquarters on Tuesday, May 21. Read more.

The ARRL Letter for May 30, 2013
Public Service: Forecasters Calling for "Active or Extremely Active" Atlantic Hurricane Season

Forecasters with the National Oceanic and Atmospheric Administration (NOAA) are calling for an "active or extremely active" 2013 Atlantic hurricane season. In its initial outlook for the 2013 Atlantic hurricane season -- which begins Saturday, June 1 and runs through November 30 -- NOAA's Climate Prediction Center is forecasting a 70 percent likelihood of 13-20 named storms (winds of 39 miles per hour or higher), of which 7-11 could become hurricanes (winds of 74 miles per hour or higher), including 3 to 6 major hurricanes (Category 3, 4 or 5 with winds of 111 miles per hour or higher). These ranges are well above the seasonal average of 12 named storms, 6 hurricanes and 3 major hurricanes. Read more.

Public Service: Amateur Radio and Hurricanes

Rick Palm, K1CE, editor of the ARRL's *ARES E-Letter*, warns that now is the time for ARES members to assess their portfolio of communications equipment and disaster response knowledge. Palm gives several tips for radio amateurs who are involved with hurricane operations:

Hurricane Sandy as seen from NOAA's GOES-13 satellite on October 28, 2012. [Photo courtesy of NOAA]

Monitor major HF hurricane networks during events this season. The Hurricane Watch Net (HWN) on 14.325 MHz is one of several key players. It serves either the Atlantic or Pacific during a watch or warning period and coordinates with the National Hurricane Center (NHC) in Miami. Frequent, detailed information is issued on nets when storms pose a threat to the US mainland. In addition to hurricane spotting, local communicators may announce that residents have evacuated from low-lying flood areas. Other amateurs across the country can help by relaying information, keeping the net frequency clear and by listening. See the HWN's website for more information. The net works closely with WX4NHC, the Amateur Radio station at the NHC.

The SATERN Net (Salvation Army Team Emergency Radio Network) provides emergency communication support to the Salvation Army and populations at large. They also handle health and welfare traffic. SATERN holds high profile nets on 20 meters (14.265 MHz) during major hurricanes and has a long history of excellence, discipline and service. Refer to the SATERN website for more information.

The Maritime Mobile Service Net (MMSN) meets on 14.300 MHz and is composed of hams who serve and assist those in need of communications on the high seas. According to its website, the primary purpose of the net is for handling traffic from maritime mobile stations. The network is recognized by the United States Coast Guard and has an excellent working relationship with that agency. The MMSN has handled hundreds of incidents involving vessels in distress and medical emergencies in remote locations, as well as passing health and welfare traffic in and out of affected areas. They also work closely with the NWS and NHC by relaying weather reports from maritime stations.

The VoIP SKYWARN and Hurricane Net operates by combining both the EchoLink and IRLP linked repeater networks, while handling critical wide area communications during major severe weather and tropical events. These operations have gained national stature in recent years and are a critical partner with WX4NHC. Whenever tropical weather is imposing a threat to the US mainland and certain other areas of interest, the VoIP WX net will be fully operational. See the VoIP SKYWARN website for more information.

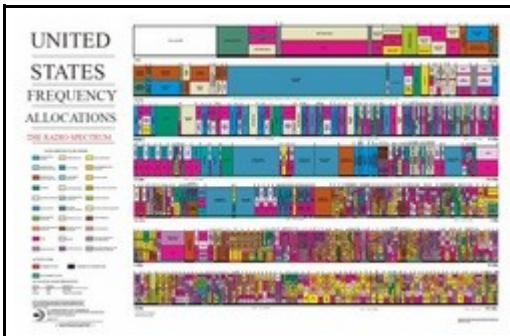
Palm said that during hurricane events, there are usually two or three regional nets (usually on 40 or 20 meters) that are key assets to the disaster response on an ad hoc basis. "Watch for these nets, as well as the nationally recognized networks described above, this season," he advised. "Don't transmit on their frequencies unless you are absolutely sure you have something substantive to add, and then only under the direction of the net control station."

ARRL Emergency Preparedness Manager Mike Corey, KI1U, added that when ARES activates in response to any tropical event, it is crucial that information flows up through the ARRL Section and is reported to ARRL Headquarters. "These reports allow us to develop the situational awareness and disaster intelligence that is required for us as an organization to support the Sections that are impacted." he explained. "In this way, we are able to respond to relevant requests from the media and finally to coordinate with the governmental and non-governmental organizations. This information also allows us to make the decision at Headquarters on whether to activate the ARRL HQ Emergency Response Team to support and coordinate the operations."

Corey noted that in July, the ARRL will host a webinar on the 2013 Atlantic hurricane season. Details will be posted on the ARRL website and in the June issue of the *ARES E-Letter*, as well as here in *The ARRL Letter*. All those interested in public service and disaster communications are invited to participate.

ARRL Comments on Proposed Expansion of 5 GHz Unlicensed Broadband

Observing that "a decision in the near term with respect to the addition of [unlicensed National Information Infrastructure] U-NII devices to the 5.85-5.925 GHz band would be premature," the ARRL has commented in response to an FCC *Notice of Proposed Rule Making* (ET Docket No. 13-49) that proposes to authorize U-NII use of an additional 195 megahertz of spectrum in the 5.35-5.47 GHz and 5.85-5.925 GHz bands. The Commission was obligated, pursuant to Section 6406(a) of the *Middle Class Tax Relief and Job Creation Act of 2012* (Public Law No. 112-96), to begin a proceeding to allow U-NII devices in the 5.35-5.47 GHz band. As the ARRL comments note, "There is *no legislative obligation,* however, to make available the 5.85-5.925 GHz band for U-NII use." Read more.



This chart, published by the National Telecommunications and Information Administration (NTIA), shows the allocation of frequencies in the US. Click here for a larger version.

FCC News: FCC Seeks Small Vanity Call Sign Fee Increase

The FCC released a *Notice of Proposed Rulemaking* on May 23, seeking to raise the fee for Amateur Radio vanity call signs by 20 cents. Currently, a vanity call sign costs $15 and is good for 10 years; the new fee, if approved, will go up to $15.20 for 10 years. The FCC is authorized by the Communications Act of 1934, as amended, to collect vanity call sign fees to recover the costs associated with that program. The vanity call sign regulatory fee is payable not only when applying for a new vanity call sign, but also upon renewing a vanity call sign for a new term.

The ARRL VEC will process license renewals for vanity call sign holders for a modest fee. The service is available to ARRL members and nonmembers, although League members pay less. Routine, non-vanity renewals continue to be free of charge for ARRL members. Trustees of club stations with vanity call signs may renew either via the ULS or through a Club Station Call Sign Administrator, such as the ARRL VEC. Read more.

==========

ARRL Rocky Mountain Division update -- May / June 2013 Division

www.RockyMountainDivision.org

==========

===== ARRL Field Day: This month =====

All the details you need for the 2013 ARRL Field Day is available at http://www.arrl.org/field-day After the dust settles from a fun weekend on the air, please post a summary and pictures of your operation on ARRL's Soapbox (http://www.arrl.org/soapbox) for everybody's enjoyment.

===== July ARRL Board of Directors meeting =====

The ARRL Board of Directors convenes twice a year to represent their Divisions on ARRL policy matters. Our second meeting of the year will take place in mid-July. Your concerns, questions and ideas concerning ARRL policies are always welcome. As always, please help us represent you better by letting us know what's on your mind.

===== Upcoming Hamfests, Tailgates & Conventions =====

Jun 28-30	2013 Rocky Mountain Division Convention (Estes Park, CO)
Jul 27	PPRAA Megafest (Monument, CO)
Aug 9-10	Albuquerque Duke City Hamfest (Albuquerque, NM)
Aug 18	Denver Radio Club Hamfest (Golden, CO)
Aug 31	Alamogordo Hamfest (Alamogordo, NM)
Oct 26	Socorro Hamfest (Socorro, NM)

Links to websites belonging to the above events are found on the Rocky Mountain Division site: www.RockyMountainDivision.org

If you're organizing a Hamfest, convention, or tailgate we encourage you to apply for ARRL-sanctioning. Sanctioning contains many benefits, and details can be found at http://www.arrl.org/hamfest-convention-application

===== Upcoming On-Air Activities =====

In addition to chewing the rag with fellow hams, here are some additional on-air activities which await you on the airwaves.

Upcoming special event stations:http://www.arrl.org/special-event-stations
Upcoming contests: http://www.arrl.org/contest-calendar
Operating awards: http://www.arrl.org/awards

===== Final Note... =====

Please touch base with your Section Manager if he can be of assistance to you:

Jack Ciaccia WM0G (Colorado): http://www.arrl.org/Groups/view/colorado
Bill Kauffman W5YEJ (New Mexico):
http://www.arrl.org/Groups/view/new-mexico
Mel Parkes NM7P (Utah): http://www.arrl.org/Groups/view/utah
Garth Crowe N7XKT (Wyoming): http://www.arrl.org/Groups/view/wyoming
Vice Director Dwayne Allen and I continue to welcome your concerns, questions and ideas regarding ARRL policies. We are grateful for your membership within ARRL, and look forward to working you on the air.

73,
Brian Mileshosky N5ZGT, Rocky Mountain Division Director Dwayne Allen WY7FD, Rocky Mountain Division Vice-Director Division website: www.RockyMountainDivision.org

---

ARRL Rocky Mountain Division
Director: Brian P Mileshosky, N5ZGT
n5zgt@arrl.org

Questions for Extra Class License

1. (E1A07) What is the only amateur band where transmission on specific channels rather than a range of frequencies is permitted?
A. 12 meter band
B. 17 meter band
C. 30 meter band
D. 60 meter band

2. (E2B03) How is an interlaced scanning pattern generated in a fast-scan (NTSC) television system?
A. By scanning two fields simultaneously
B. By scanning each field from bottom to top
C. By scanning lines from left to right in one field and right to left in the next
D. By scanning odd numbered lines in one field and even numbered ones in the next

3. (E3C08) What is the name of the high-angle wave in HF propagation that travels for some distance within the F2 region?
A. Oblique-angle ray
B. Pedersen ray
C. Ordinary ray
D. Heaviside ray

4. (E4C03) What is the term for the blocking of one FM phone signal by another, stronger FM phone signal?
A. Desensitization
B. Cross-modulation interference
C. Capture effect
D. Frequency discrimination

5. (E5C03) In polar coordinates, what is the impedance of a network consisting of a 300-ohm-reactance capacitor, a 600-ohm-reactance inductor, and a 400-ohm resistor, all connected in series?
A. 500 ohms at an angle of 37 degrees
B. 900 ohms at an angle of 53 degrees
C. 400 ohms at an angle of 0 degrees
D. 1300 ohms at an angle of 180 degrees

6. (E6C05) Which of the following is an advantage of CMOS logic devices over TTL devices?
A. Differential output capability
B. Lower distortion
C. Immune to damage from static discharge
D. Lower power consumption

7. (E7E03) How does an analog phase modulator function?
A. By varying the tuning of a microphone preamplifier to produce PM signals
B. By varying the tuning of an amplifier tank circuit to produce AM signals
C. By varying the tuning of an amplifier tank circuit to produce PM signals
D. By varying the tuning of a microphone preamplifier to produce AM signals

8. (E8C08) What term describes a wide-bandwidth communications system in which the transmitted carrier frequency varies according to some predetermined sequence?
A. Amplitude compandored single sideband
B. AMTOR
C. Time-domain frequency modulation
D. Spread-spectrum communication

9. (E9E09) Which of these matching systems is an effective method of connecting a 50-ohm coaxial cable feed line to a grounded tower so it can be used as a vertical antenna?
A. Double-bazooka match
B. Hairpin match
C. Gamma match
D. All of these choices are correct

10. (E0A08) What does SAR measure?
A. Synthetic Aperture Ratio of the human body
B. Signal Amplification Rating
C. The rate at which RF energy is absorbed by the body
D. The rate of RF energy reflected from stationary terrain

(For answers to test questions see page 11)

BARC Club Officers

President
Cordell Smart KE7IK
president@barconline.org
(435)245-4581

Vice President
Ted McArthur AC7II
ac7ii33@gmail.com
(435)770-9169

Secretary
Tammy Stevens N7YTO
secretary@barconline.org
(435)753-2644

Treasurer
Kevin Reeve N7RXE
treasurer@barconline.org
(435)753-1645

Board Members

Tyler Griffiths N7UWX
N7UWX@comcast.net
(435)752-7269

Theo Thomson K7TWT
Theo@tec-electric.com

Jared Smith N7SMI
jared@smithplanet.com
(435)563-3746

Newsletter Editor
Dale Cox KB7UPW
newsletter@barconline.org
(435)563-3836

Web Page Editors
Kevin Reeve N7RXE and Bob Wood WA7MXZ
webmaster@barconline.org

Answers to questions on page 10: 1-D, 2-D, 3-B, 4-C, 5-A, 6-D, 7-C, 8-D, 9-C, 10-C