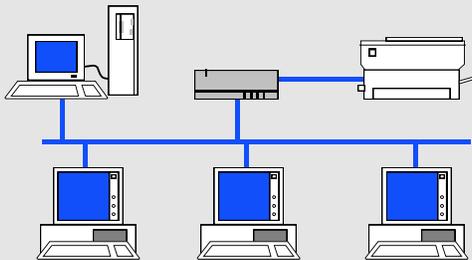


## **GENERAL INSTRUCTIONS**



## **STATE INTERNETWORKING TECHNOLOGY**

## **INSTRUCTIONS**

**OPEN THIS BOOKLET IMMEDIATELY  
AND READ THE INSTRUCTIONS  
THOROUGHLY.**

**CONTEST DESCRIPTION**

The contest consists of SIX (6) parts. You will have a specific time to finish each part. When time is called, you should *immediately* stop and wait for a Judge to collect or evaluate your work. Failure to stop immediately may result in disqualification, at the Judges' option. **Highlighted items will be taken on-line prior to coming to the conference.**

<b>PART ONE, WRITTEN PDP TEST</b>	Tie Breaker	15 Minutes
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You will be required to complete a TWENTY question, multiple-choice test covering SkillsUSA knowledge.

<b>PART TWO, WRITTEN TECHNICAL TEST</b>	25 PERCENT	30 Minutes
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You will be required to complete a FIFTY question, multiple-choice test covering aspects of computers, networks, and the internet.

<b>PART THREE, CABLE BUILDING</b>	10 PERCENT	50
Minutes		

You will be required to build a variety of common cables.

- Eye protection must be worn at all times.
- Contestants will be asked to build cables for specific purposes to specific standards. Example: "Construct a T568A patch cable."
- Contestants will be asked to terminate cables on 66 and/or 110 blocks.
- Contestants will be required to label their cables as directed and to test them as appropriate.
- Re-dos are permitted as long as time remains

You will be graded on the overall craftsmanship used in the construction including adherence to standards, use of equipment, economy of materials, and a functional test of the cables when complete. A copy of the tally sheet that judges will use to grade your project will be included so you can see how you will be judged.

<b>PART FOUR, INTERNETWORK CONFIGURATION</b>	45 PERCENT	150 Minutes
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You will be required to configure routers, hosts, switches, and HTTP server to specifications the judges will provide. This will be divided into two parts, routing and switching, as follows:

**ROUTING: 25% of total score**

- Contestants will be asked to build a network core consisting of 3 or 4 routers to given specifications. Routers may connect to each other over serial and/or Ethernet circuits.
- Routing protocols from CCNA3 (OSPF/SA and EIGRP) will be used.
- Contestants may be asked to display functional information about the protocols used (e.g. show adjacencies, DR/BDR information, etc.)
- Contestants may have to calculate subnet ranges as part of the configuration exercise.
- Access lists may be used to manage network traffic.
- Static routing and route redistribution may be specified over parts of the network.

**SWITCHING: 20% of total score**

- Contestants will configure advanced switching features in the previously-constructed network. These may include in-band and out-of-band switch management features, VLANs, trunking and inter-VLAN routing.
- Contestants will configure host terminals and demonstrate network functionality. An example could be to open (or be denied access to) a router's HTTP configuration screen from a host terminal on a given VLAN.

The scores from the Routing and Switching elements will be combined and reported as the "Internetwork Configuration" score. In case of a tie in the TOTAL contest score, the COMBINED configuration score will be second tiebreaker used (after the Professional Development score.)

You will be graded on accuracy, demonstration of your understanding of router setup and configuration, and operation of your internetwork once it has been completed. A copy of the tally sheet that judges will use to grade your project will be included so you can see how you will be judged.

**PART FIVE, CUSTOMER DESIGN PROJECT** *10 PERCENT* *45 Minutes*

**PART SIX, SUBNET PROBLEM** *10 PERCENT* *45 Minutes*

These will be combined into one extended problem with a 90-minute time limit. Scores for each element will be reported separately.

This is a scenario-based paper exercise in which contestants will analyze information and demonstrate their mastery of IP addressing and design considerations.

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- Contestants should be familiar with CIDR, VLSM and global router commands such as IP subnet-zero and IP unnumbered.
- Contestants should be familiar with NAT concepts and configuration commands.
- Contestants must be able to perform subnet calculations using paper and pencil only. Calculators will not be permitted.
- Contestants must be familiar with hardware slot/interface nomenclature conventions.

Expect the problem to consist of a large network spread over multiple locations with a number of departments.

### ***PART SEVEN, RESUME***

**Part of Skills**

**N/A**

You will be required to present a resume to the judges upon entering the contest area. A deduction to your total score will be applied if you do not have a resume.

**TIE BREAKERS:** In the event of a tie, the high score on the following will break the tie: (in order) configure routers, written test, subnetting problem, design problem, cable building.

### GENERAL INSTRUCTIONS

1. You should read the instructions on the front of each section of the contest carefully. Wait until the judges tell you to begin. Further instructions are inside each test. Read these carefully, all the way through, before beginning.
  2. Make sure you have completed all parts of each section before stopping. It never hurts to read the instructions again after you have finished to see if you remember doing everything.
  3. Since mistakes in industry cost money, you will always be encouraged to check your work before using it in production or saving it in the device. High quality takes a little longer, but pays off in the long run. SkillsUSA-VICA stresses high quality. For these reasons, if you accidentally damage a device during testing of your network, you will not be allowed to replace it with another device. If you complete your network and it doesn't work, ask the judge to help verify your work **before you change anything**. If the judge can verify that you were issued a bad device and your cabling and configurations are correct, you will be allowed to substitute a good device.
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4. **Judges devote their time and, in many cases, money to see that the contest is successful.** While every effort is made before the contest to see that all contingencies are covered, some still may occur. That is why **the judges' decisions, in all cases, are final.**
  
5. Please follow all rules of the contest. You are all here in a spirit of **honest** competition. If you observe a contestant breaking a rule, please bring the infraction to the attention of a judge immediately. They cannot be everywhere at once. You may file a grievance after the contest if you feel something is out of order, but in most cases, to be effective, the infraction must have been brought to the attention of the judges during the contest. They will usually take action immediately to correct the situation.
  
6. **We all want to have a good time, play fair, and go home happy.**
  
7. **If you compete fairly, honestly, and give it your best shot, you are a winner.**