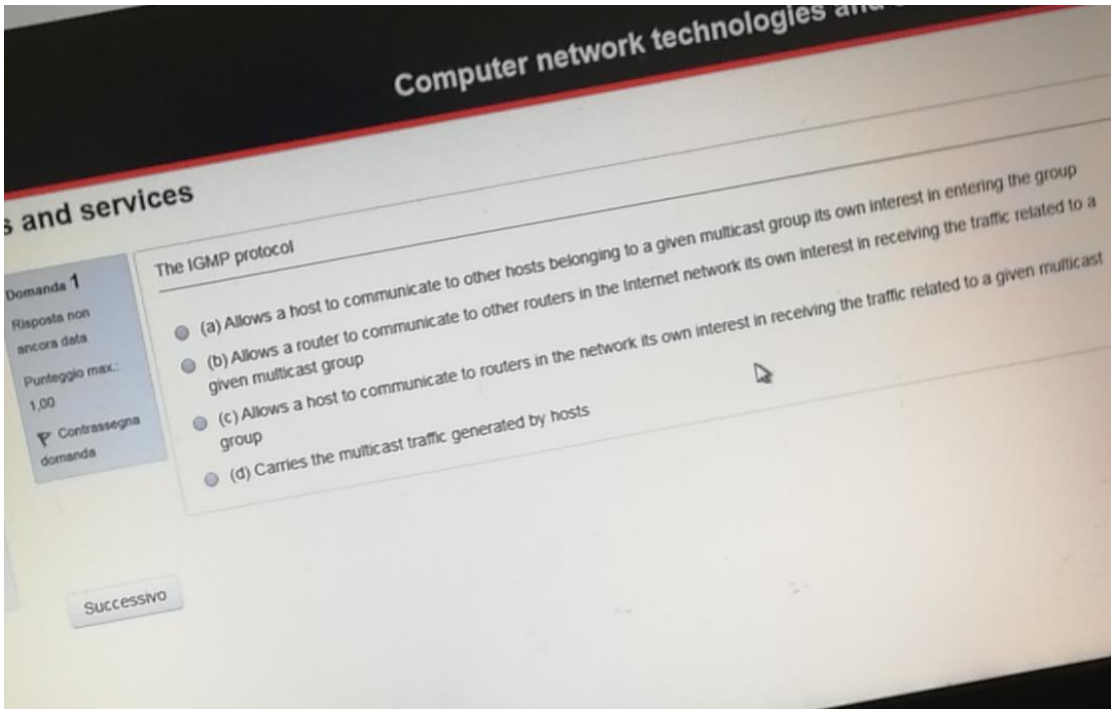
1-C


Computer network technologies
and services
Domanda 1
Risposta non ancora data
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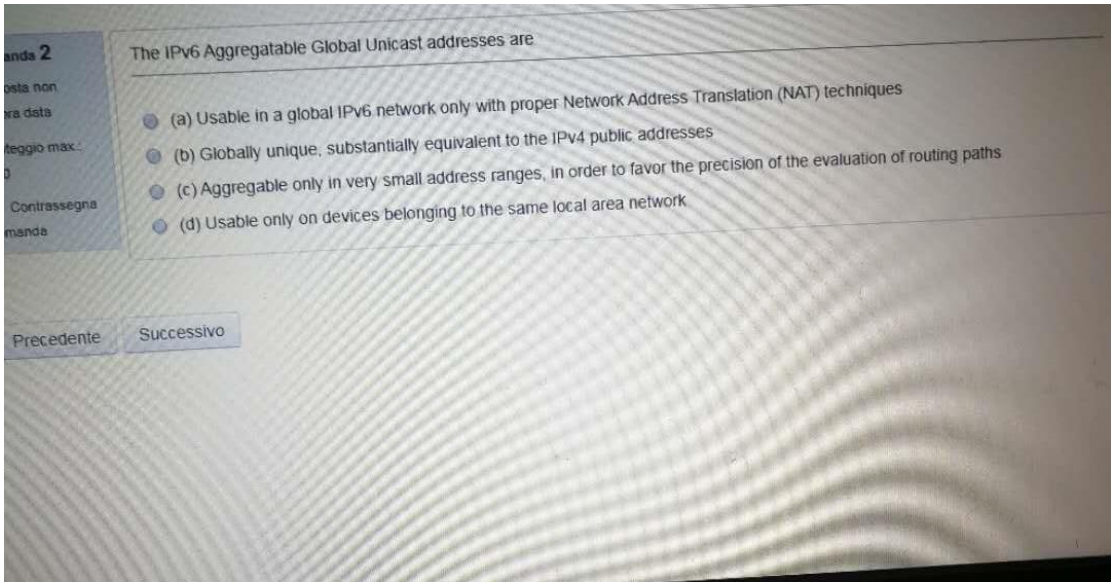
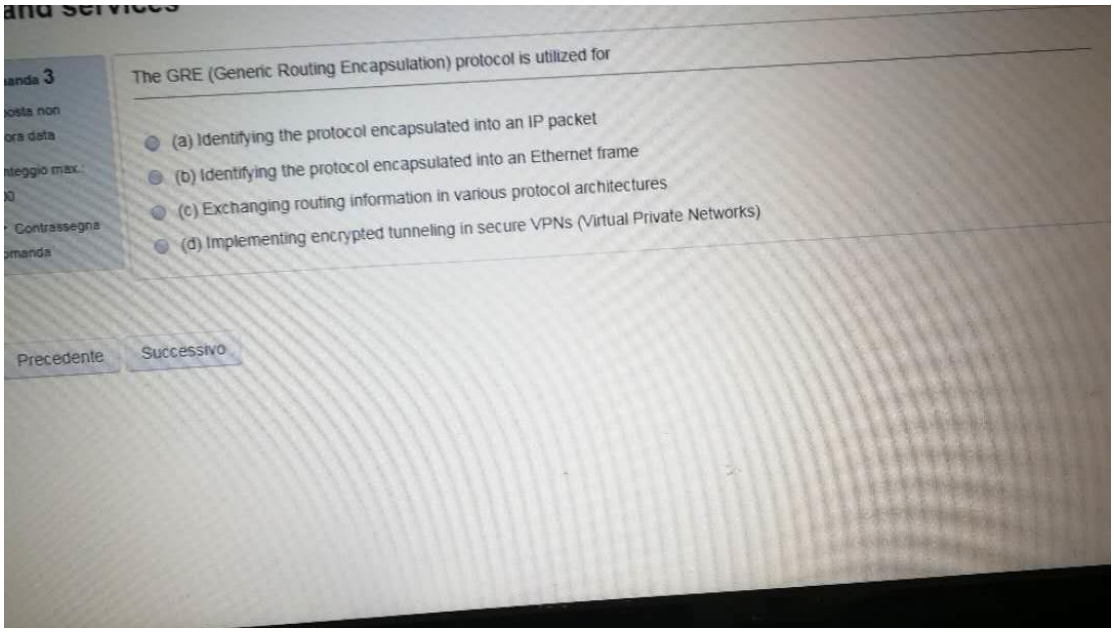
Contrassegna domanda
The IGMP protocol
(a) Allows a host to communicate to other hosts belonging to a given multicast group its own interest in entering the group
(b) Allows a router to communicate to other routers in the Internet network its own interest in receiving the traffic related to a given multicast group
(c) Allows a host to communicate to routers in the network its own interest in receiving the traffic related to a given multicast group
(d) Carries the multicast traffic generated by hosts
Successivo

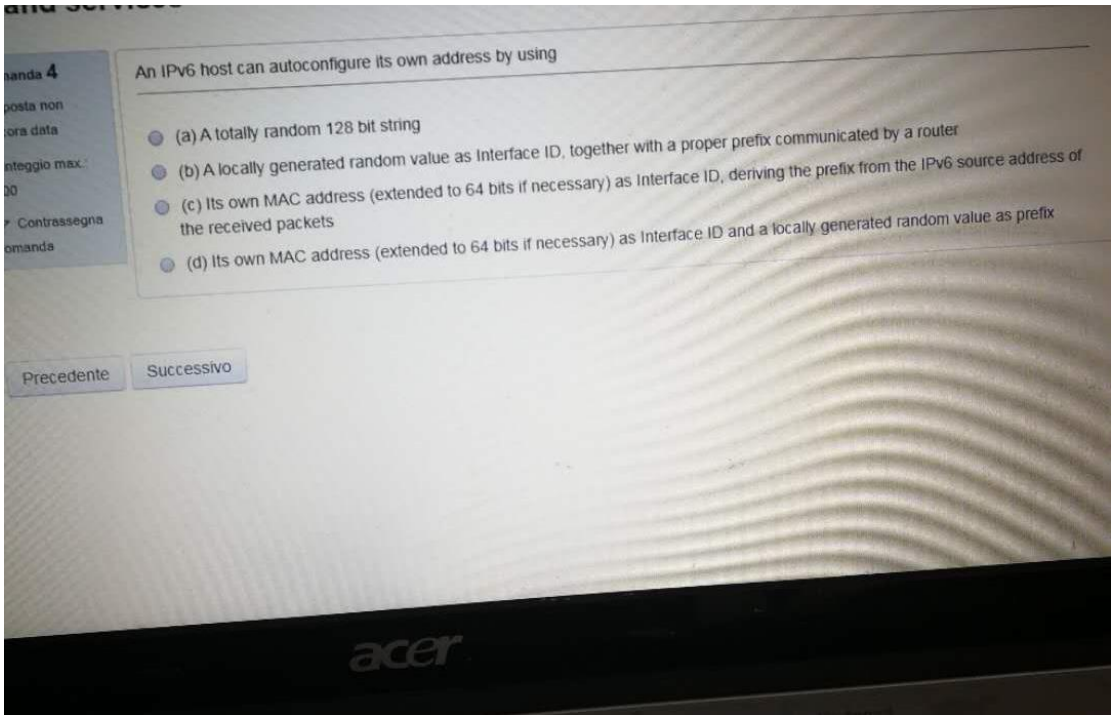
2-B


The IPv6 Aggregatable Global Unicast addresses are
(a) Usable in a global IPv6 network only with proper Network Address Translation (NAT) techniques
(b) Globally unique, substantially equivalent to the IPv4 public addresses
(c) Aggregable only in very small address ranges, in order to favor the precision of the evaluation of routing paths
(d) Usable only on devices belonging to the same local area network
Precedente
Successivo

3-A


The GRE (Generic Routing Encapsulation) protocol is utilized for
(a) Identifying the protocol encapsulated into an IP packet
(b) Identifying the protocol encapsulated into an Ethernet frame
(c) Exchanging routing information in various protocol architectures
(d) Implementing encrypted tunneling in secure VPNs (Virtual Private Networks)
Precedente
Successivo

4-B


An IPv6 host can autoconfigure its own address by using
(a) A totally random 128 bit string
(b) A locally generated random value as Interface ID, together with a proper prefix communicated by a router
(c) Its own MAC address (extended to 64 bits if necessary) as Interface ID, deriving the prefix from the IPv6 source address of the received packets
(d) Its own MAC address (extended to 64 bits if necessary) as Interface ID and a locally generated random value as prefix
Precedente
Successivo
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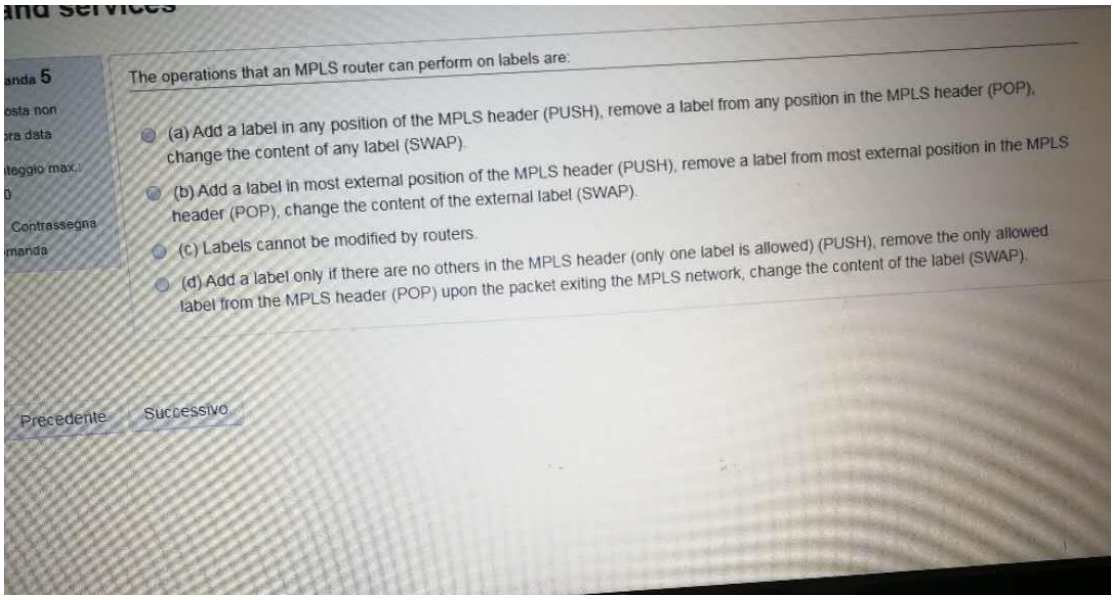
5.B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Contrassegna
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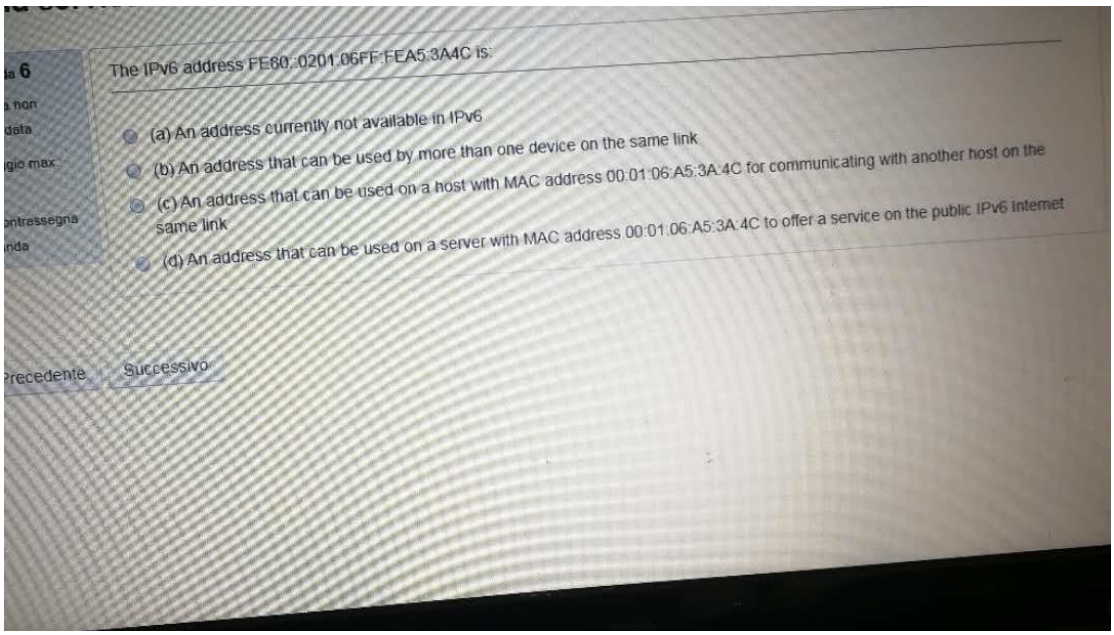
The operations that an MPLS router can perform on labels are:
(a) Add a label in any position of the MPLS header (PUSH), remove a label from any position in the MPLS header (POP), change the content of any label (SWAP).
(b) Add a label in most external position of the MPLS header (PUSH), remove a label from most external position in the MPLS header (POP), change the content of the external label (SWAP).
(c) Labels cannot be modified by routers.
(d) Add a label only if there are no others in the MPLS header (only one label is allowed) (PUSH), remove the only allowed label from the MPLS header (POP) upon the packet exiting the MPLS network, change the content of the label (SWAP).
Precedente
Successivo

6-C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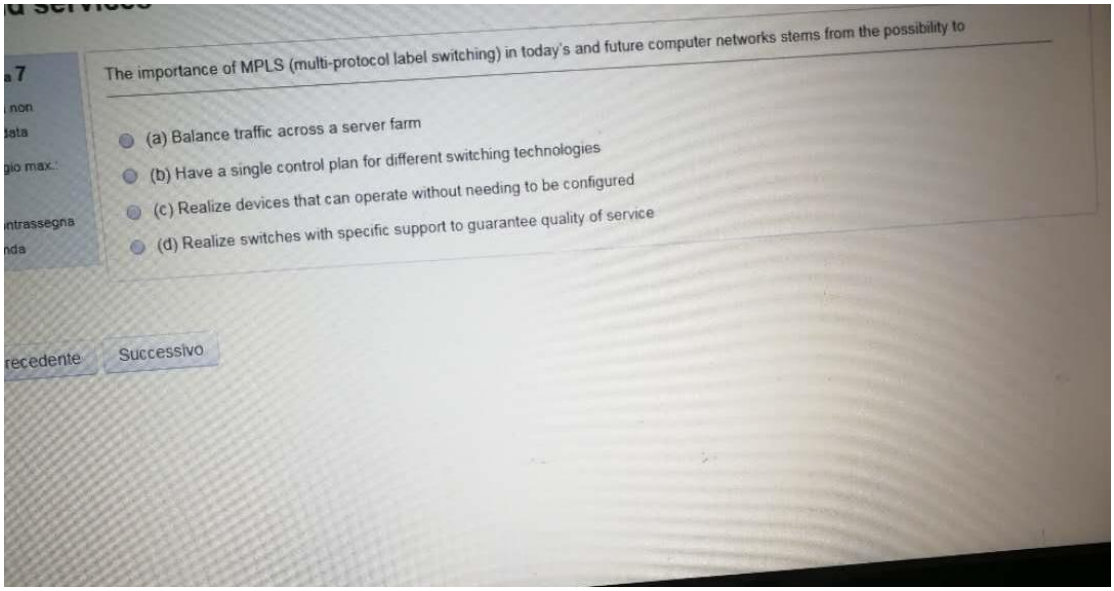
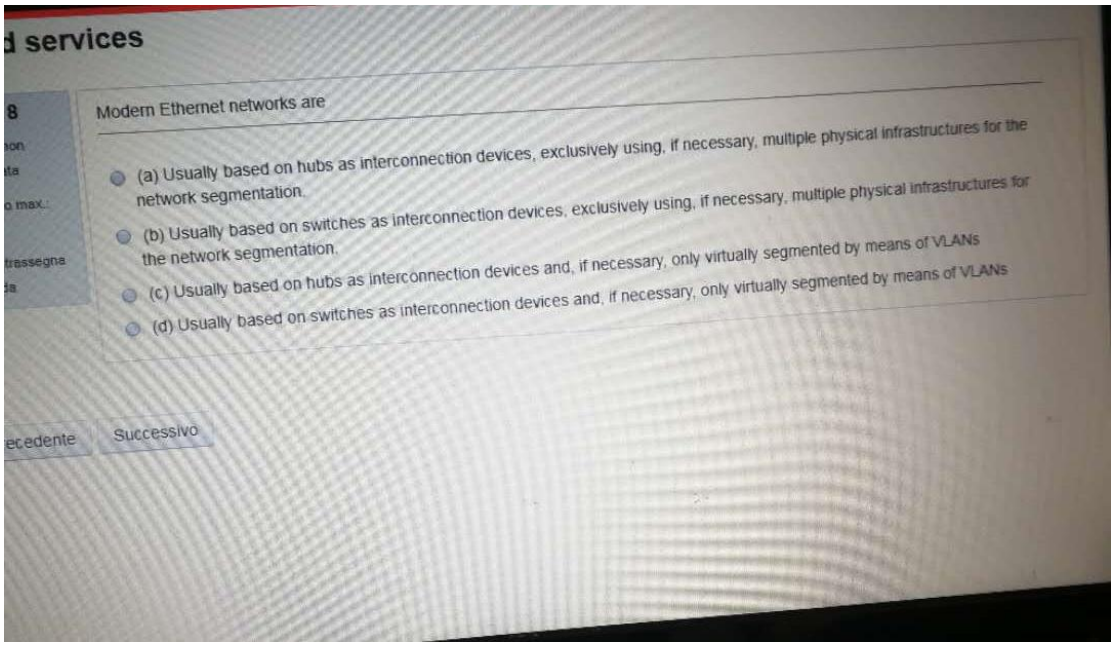
The IPv6 address FE80::0201:06FF:FEA5:3A4C is:
(a) An address currently not available in IPv6
(b) An address that can be used by more than one device on the same link
(c) An address that can be used on a host with MAC address 00:01:06:A5:3A:4C for communicating with another host on the same link
(d) An address that can be used on a server with MAC address 00:01:06:A5:3A:4C to offer a service on the public IPv6 Internet
Precedente
Successivo

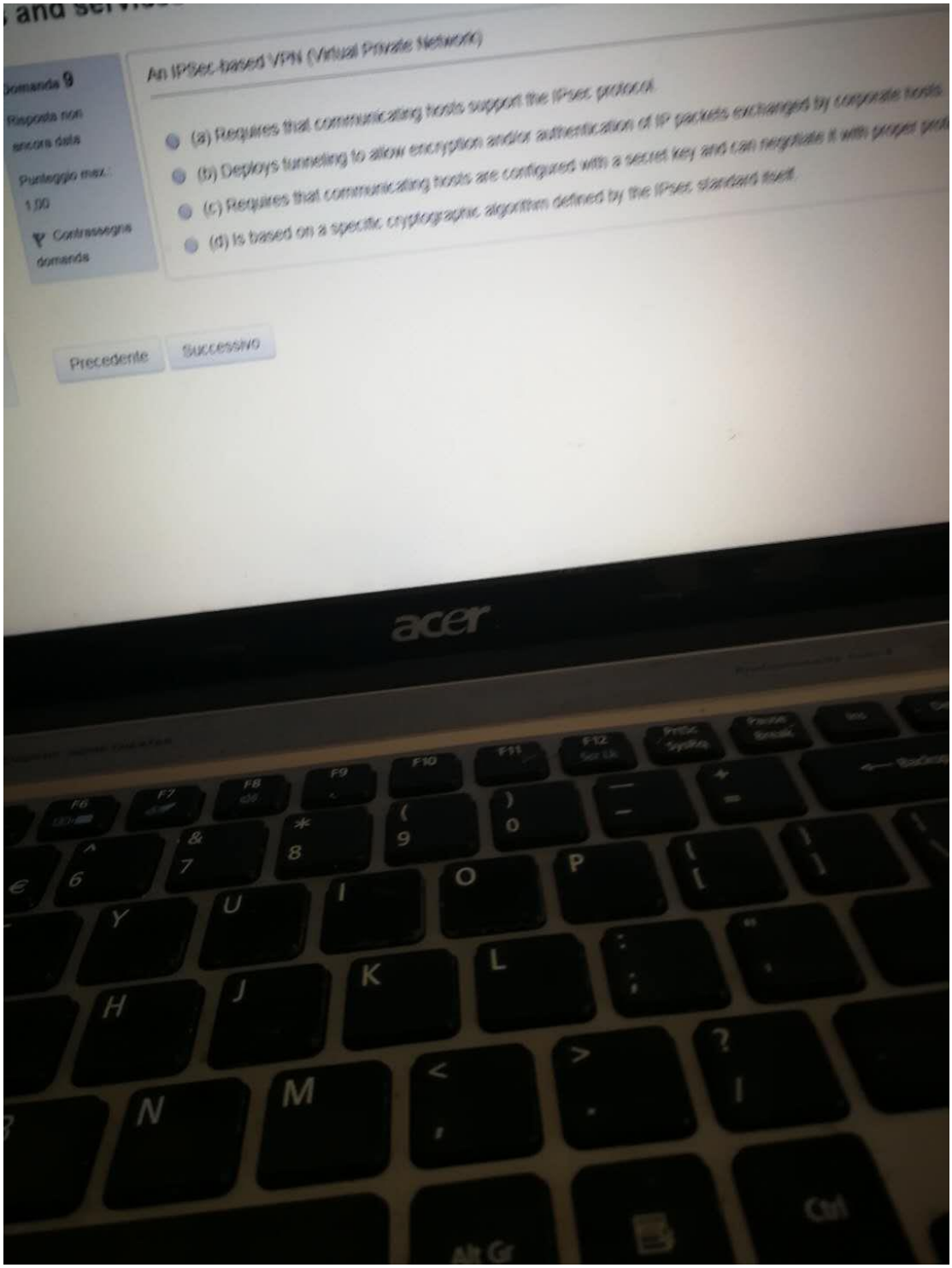
7.B


The importance of MPLS (multi-protocol label switching) in today's and future computer networks stems from the possibility to
(a) Balance traffic across a server farm
(b) Have a single control plan for different switching technologies
(c) Realize devices that can operate without needing to be configured
(d) Realize switches with specific support to guarantee quality of service
Successivo

8-D


services
Modern Ethernet networks are
(a) Usually based on hubs as interconnection devices, exclusively using, if necessary, multiple physical infrastructures for the network segmentation.
(b) Usually based on switches as interconnection devices, exclusively using, if necessary, multiple physical infrastructures for the network segmentation.
(c) Usually based on hubs as interconnection devices and, if necessary, only virtually segmented by means of VLANs
(d) Usually based on switches as interconnection devices and, if necessary, only virtually segmented by means of VLANs
Successivo

9-B or C


An IPSec-based VPN (Virtual Private Network)
(a) Requires that communicating hosts support the IPsec protocol
(b) Deploys tunneling to allow encryption and/or authentication of IP packets exchanged by corporate hosts
(c) Requires that communicating hosts are configured with a secret key and can negotiate it with proper pro
(d) Is based on a specific cryptographic algorithm defined by the IPsec standard itself.
Precedente
Successivo
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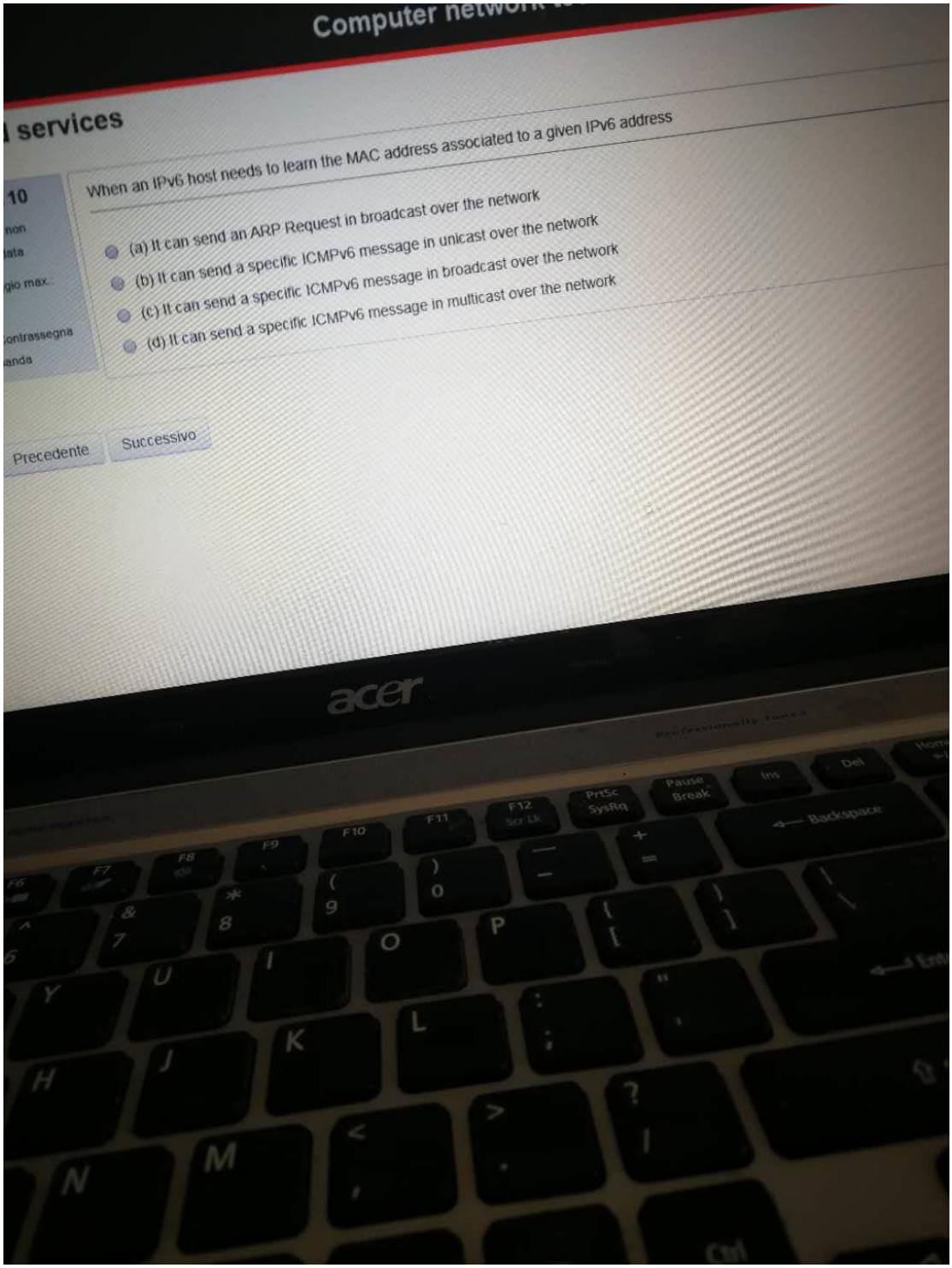
10B


Computer network
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When an IPv6 host needs to learn the MAC address associated to a given IPv6 address
(a) It can send an ARP Request in broadcast over the network
(b) It can send a specific ICMPv6 message in unicast over the network
(c) It can send a specific ICMPv6 message in broadcast over the network
(d) It can send a specific ICMPv6 message in multicast over the network
Precedente
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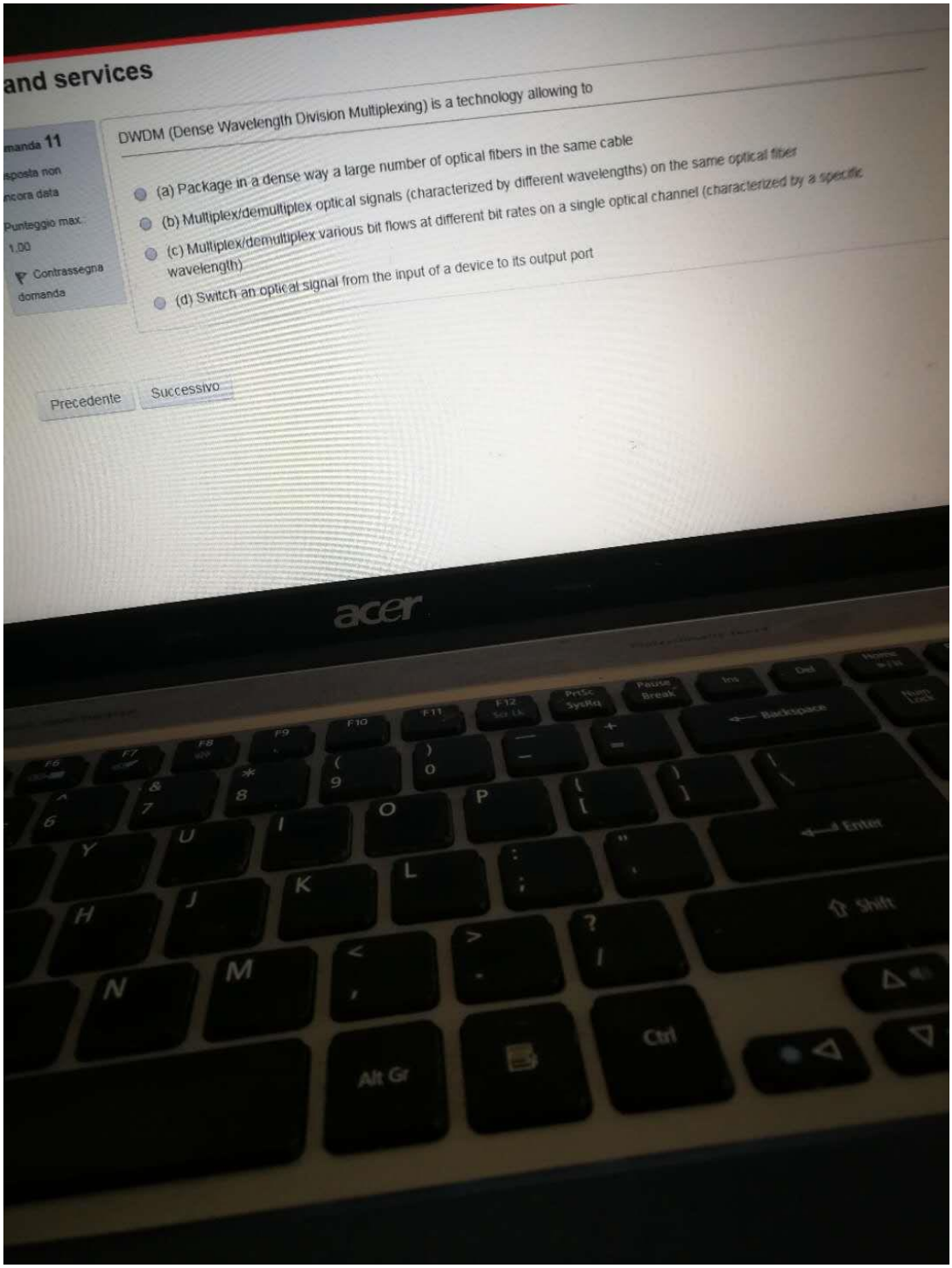
11-B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DWDM (Dense Wavelength Division Multiplexing) is a technology allowing to
(a) Package in a dense way a large number of optical fibers in the same cable
(b) Multiplex/demultiplex optical signals (characterized by different wavelengths) on the same optical fiber
(c) Multiplex/demultiplex various bit flows at different bit rates on a single optical channel (characterized by a specific wavelength)
(d) Switch an optical signal from the input of a device to its output port
Precedente
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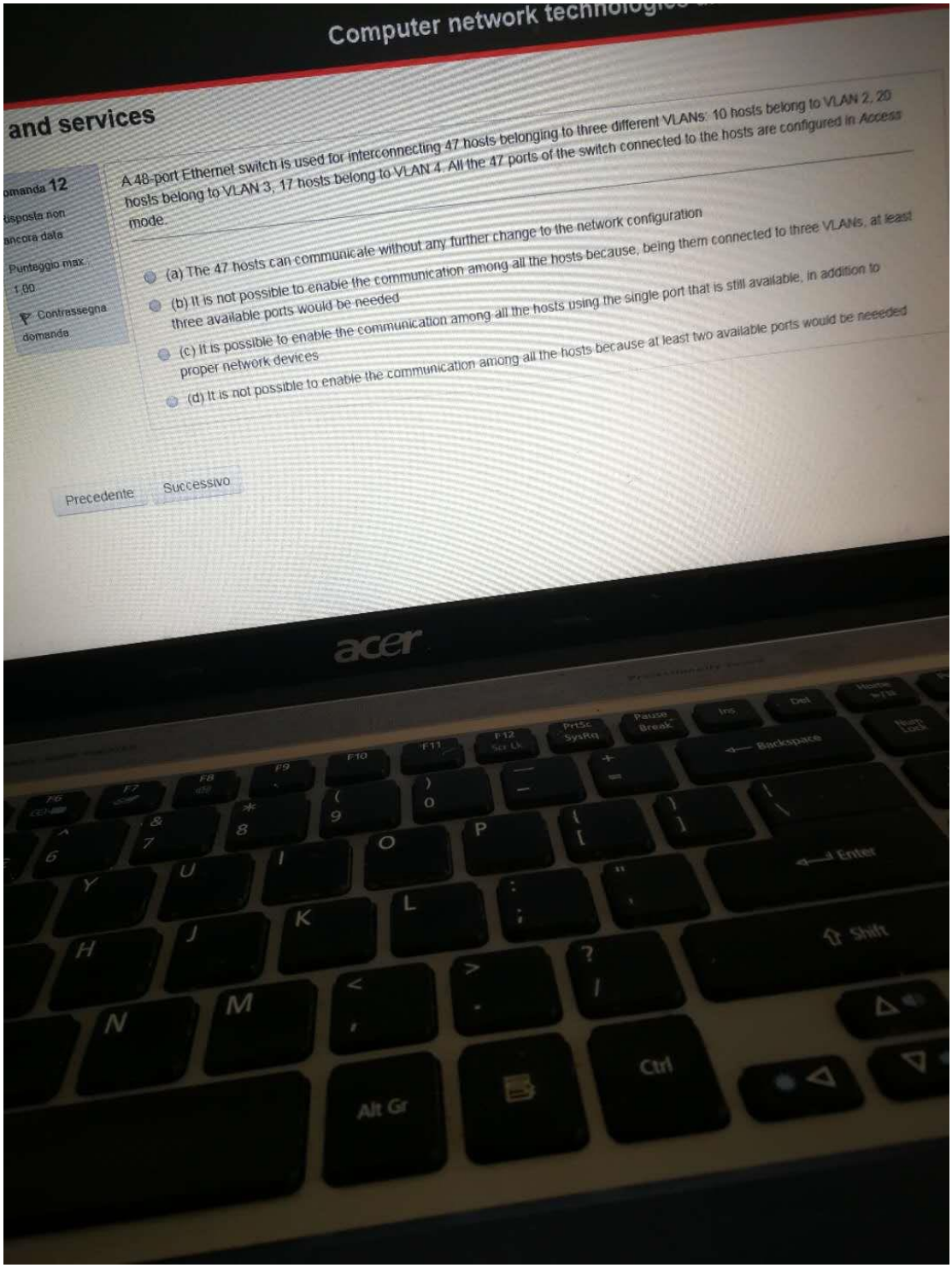
12 C


Computer network technologie
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A 48-port Ethernet switch is used for interconnecting 47 hosts belonging to three different VLANs: 10 hosts belong to VLAN 2, 20 hosts belong to VLAN 3, 17 hosts belong to VLAN 4. All the 47 ports of the switch connected to the hosts are configured in Access mode.
(a) The 47 hosts can communicate without any further change to the network configuration
(b) It is not possible to enable the communication among all the hosts because, being them connected to three VLANs, at least three available ports would be needed
(c) It is possible to enable the communication among all the hosts using the single port that is still available, in addition to proper network devices
(d) It is not possible to enable the communication among all the hosts because at least two available ports would be neeeded
Precedente
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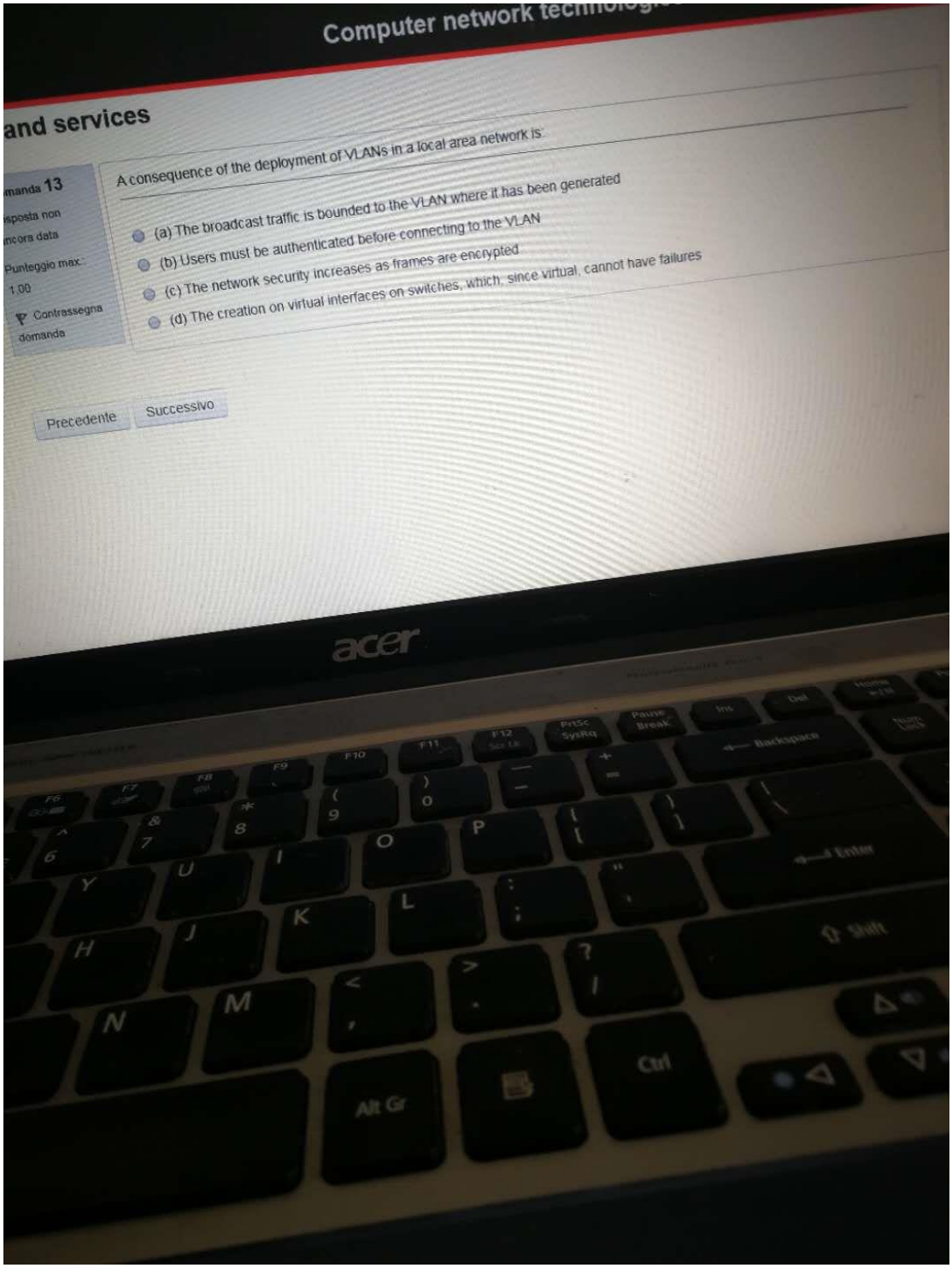
13 A


Computer network
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domanda
A consequence of the deployment of VLANs in a local area network is:
(a) The broadcast traffic is bounded to the VLAN where it has been generated
(b) Users must be authenticated before connecting to the VLAN
(c) The network security increases as frames are encrypted
(d) The creation on virtual interfaces on switches, which, since virtual, cannot have failures
Precedente
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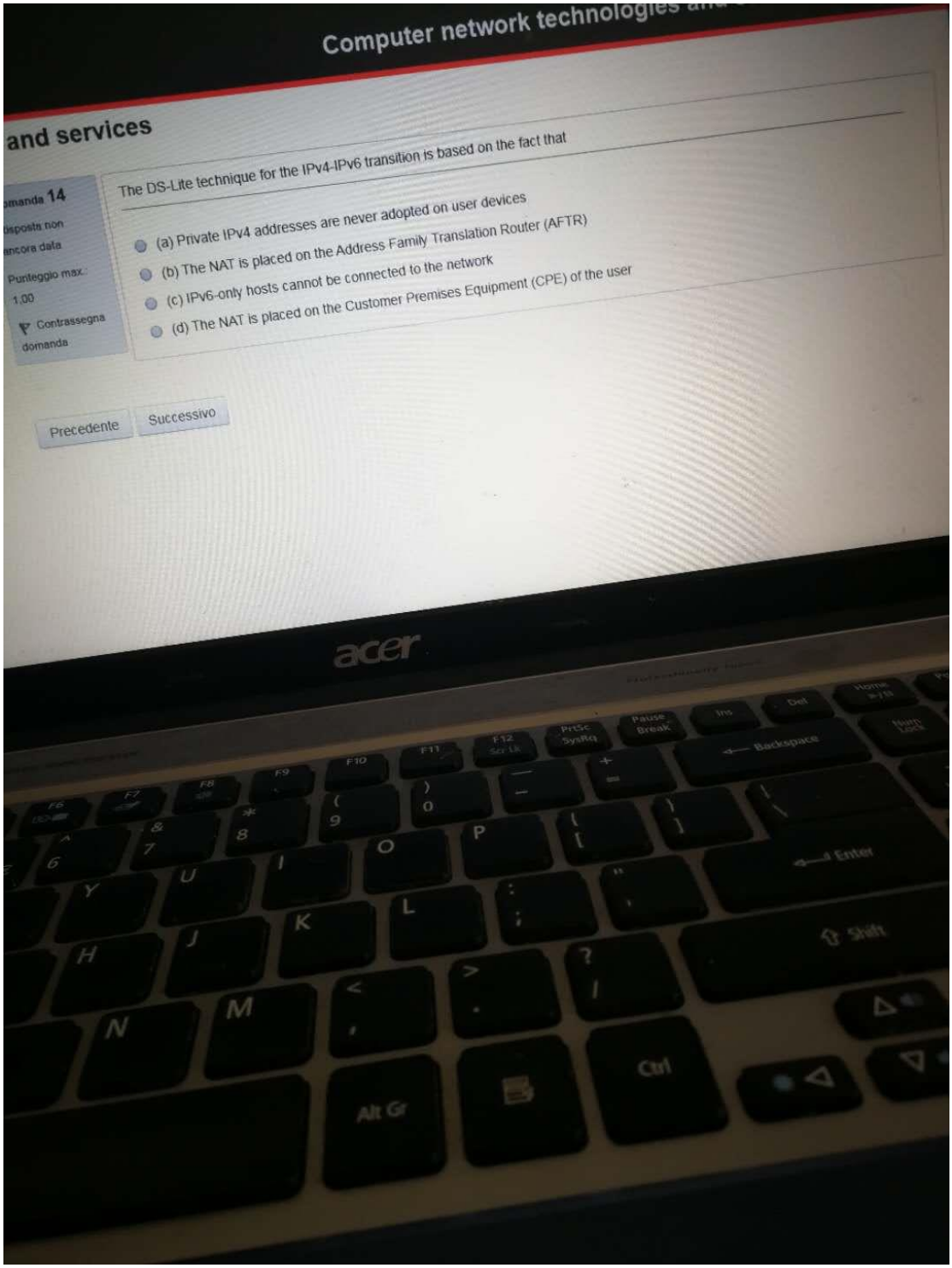
14 B


Computer network technologies
and services
The DS-Lite technique for the IPv4-IPv6 transition is based on the fact that
(a) Private IPv4 addresses are never adopted on user devices
(b) The NAT is placed on the Address Family Translation Router (AFTR)
(c) IPv6-only hosts cannot be connected to the network
(d) The NAT is placed on the Customer Premises Equipment (CPE) of the user
Precedente
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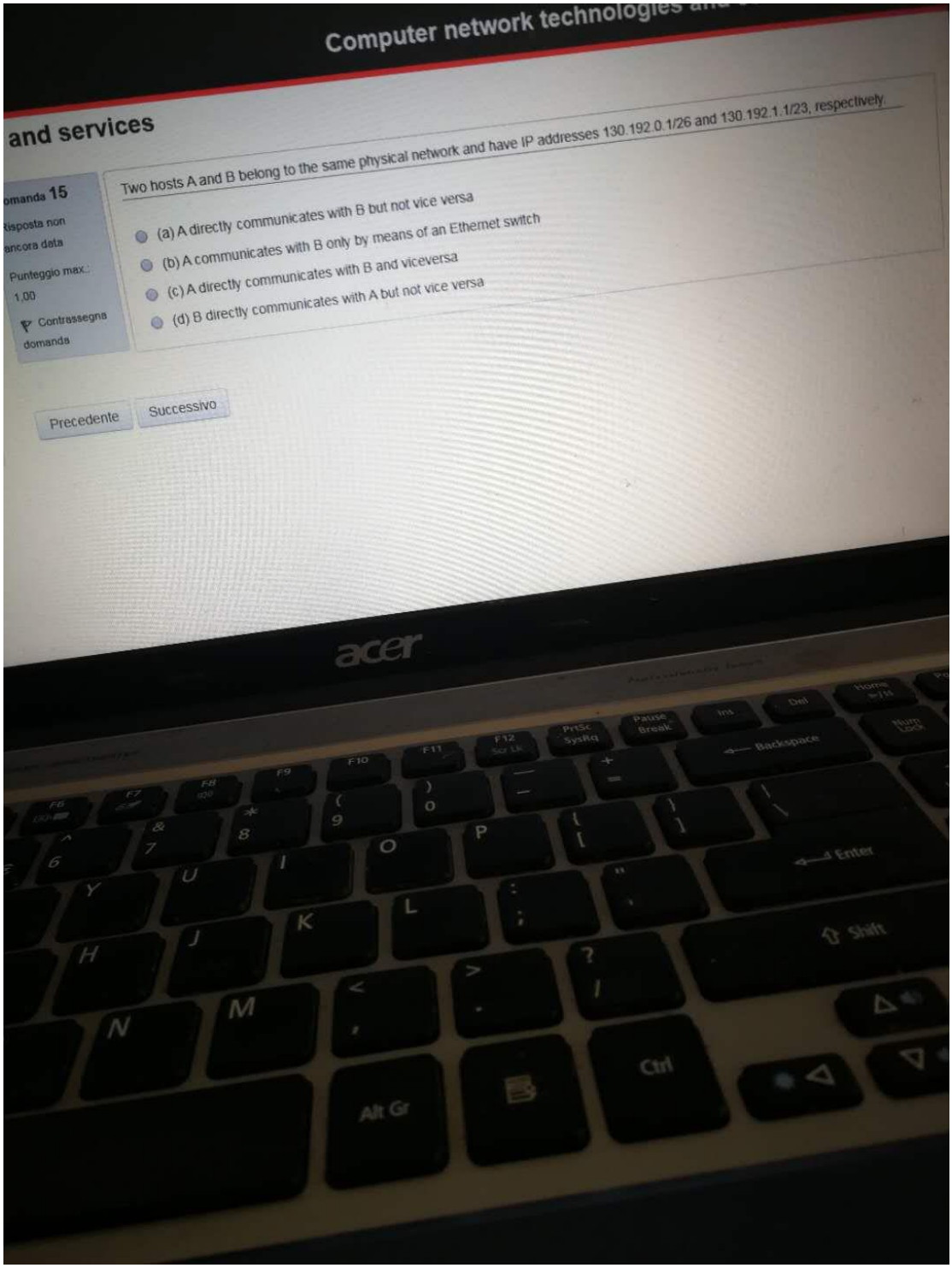
15-D


Computer network technologies
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Two hosts A and B belong to the same physical network and have IP addresses 130.192.0.1/26 and 130.192.1.1/23, respectively.
(a) A directly communicates with B but not vice versa
(b) A communicates with B only by means of an Ethernet switch
(c) A directly communicates with B and viceversa
(d) B directly communicates with A but not vice versa
Precedente
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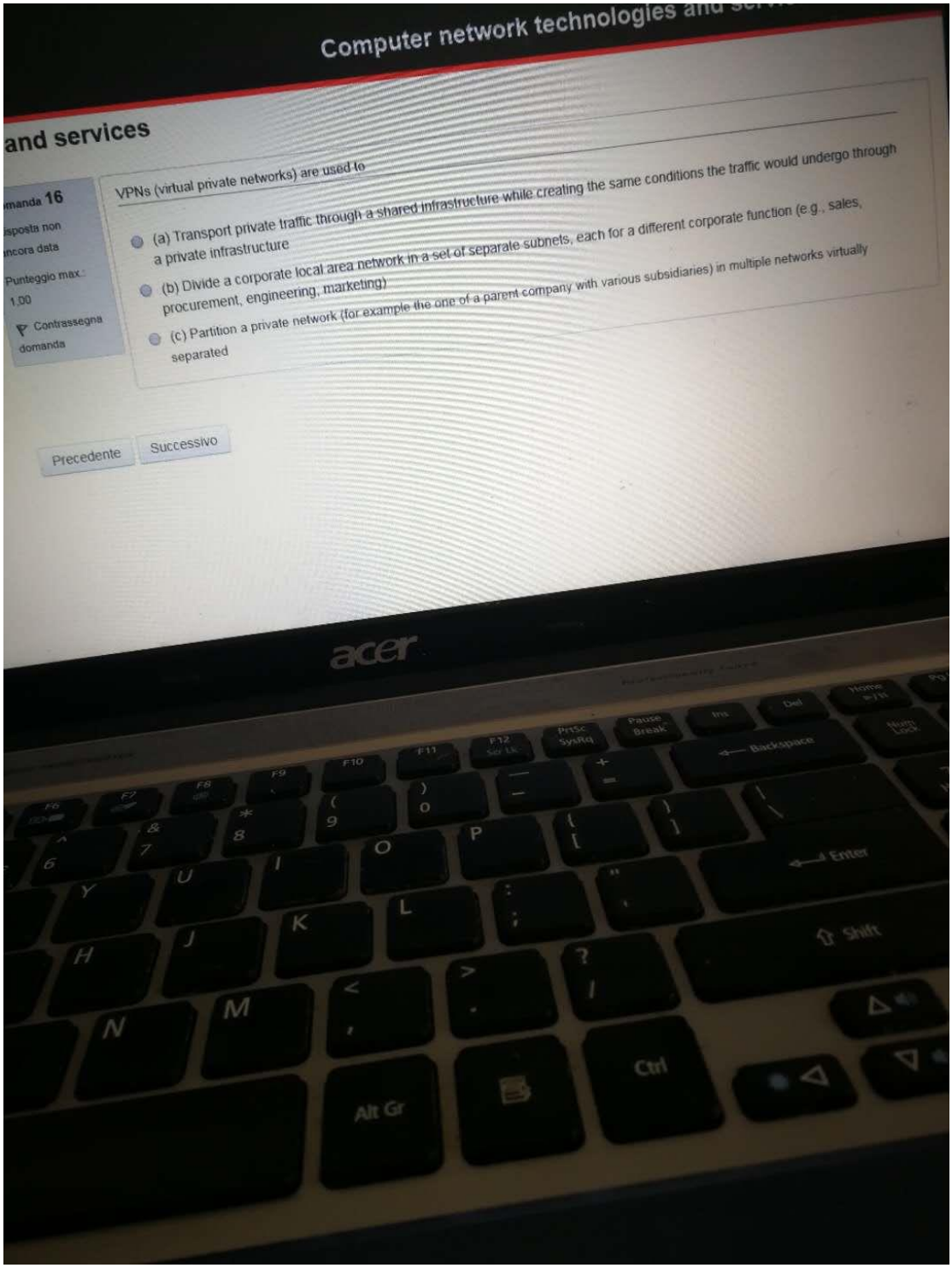
16 A


Computer network technologies and
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VPNs (virtual private networks) are used to
(a) Transport private traffic through a shared infrastructure while creating the same conditions the traffic would undergo through a private infrastructure
(b) Divide a corporate local area network in a set of separate subnets, each for a different corporate function (e.g., sales, procurement, engineering, marketing)
(c) Partition a private network (for example the one of a parent company with various subsidiaries) in multiple networks virtually separated
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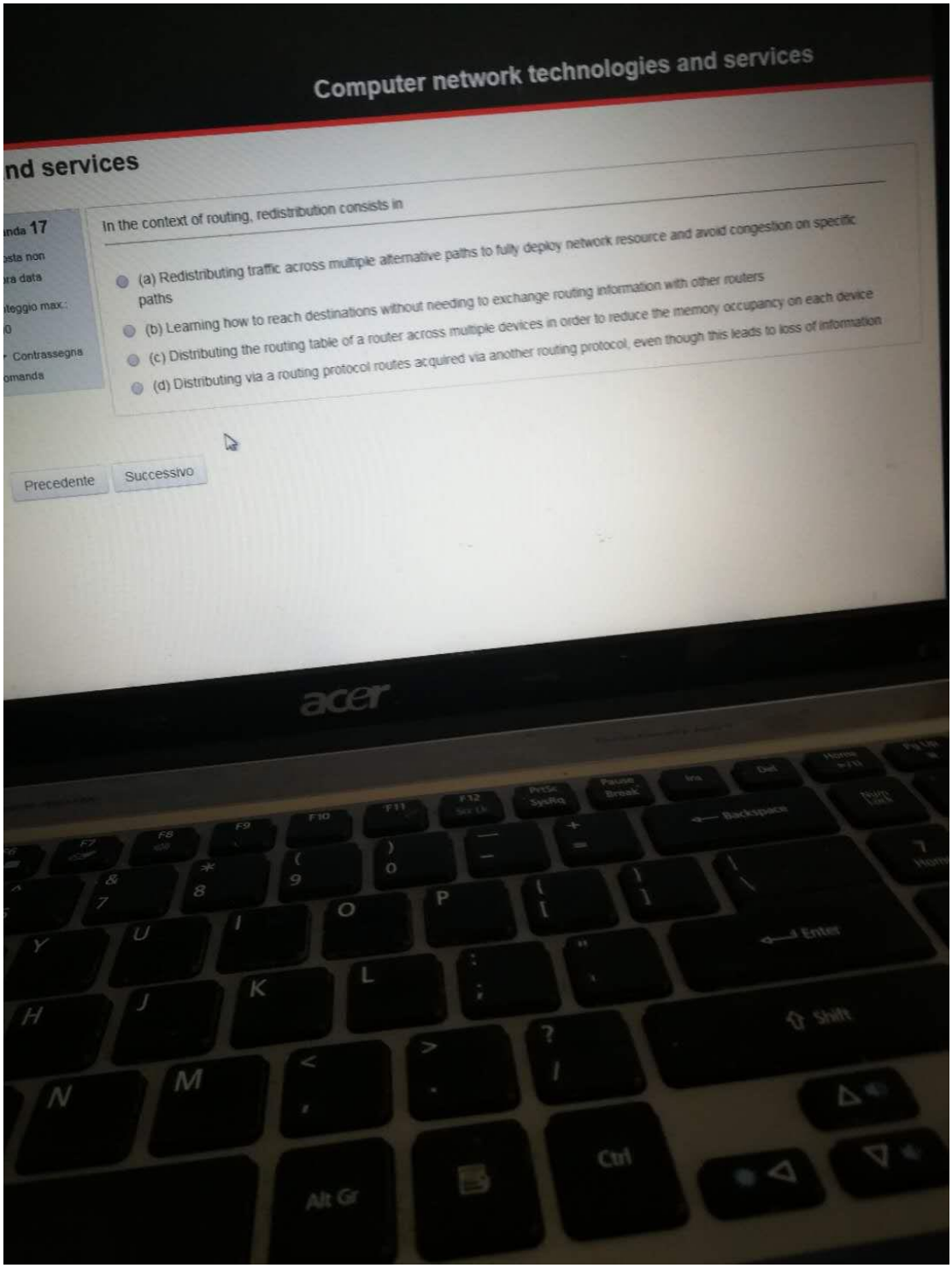
17-D


Computer network technologies and services
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In the context of routing, redistribution consists in
(a) Redistributing traffic across multiple alternative paths to fully deploy network resource and avoid congestion on specific paths
(b) Learning how to reach destinations without needing to exchange routing information with other routers
(c) Distributing the routing table of a router across multiple devices in order to reduce the memory occupancy on each device
(d) Distributing via a routing protocol routes acquired via another routing protocol, even though this leads to loss of information
Precedente
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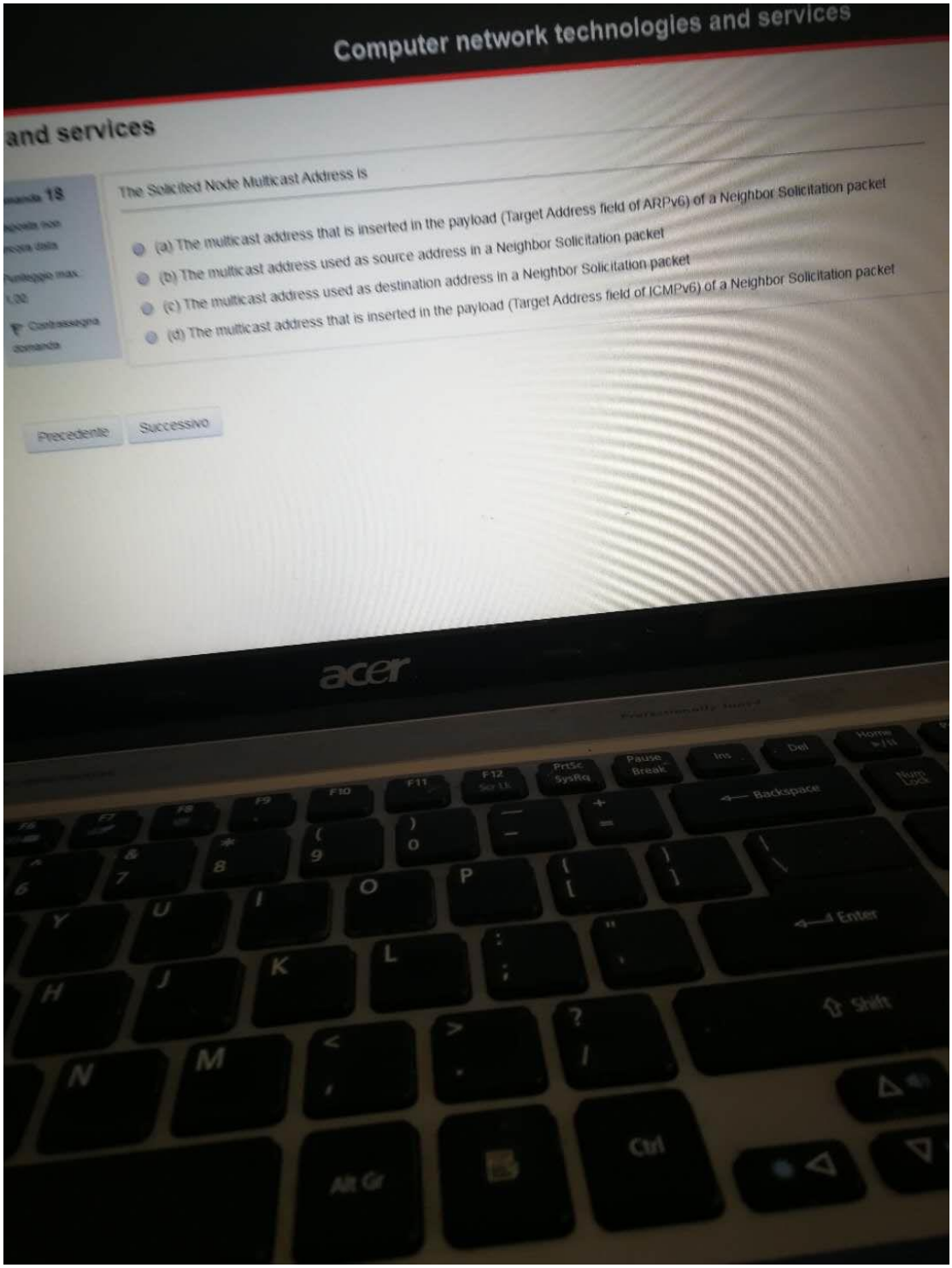
18 C


Computer network technologies and services
and services
The Solicited Node Multicast Address is
(a) The multicast address that is inserted in the payload (Target Address field of ARPv6) of a Neighbor Solicitation packet
(b) The multicast address used as source address in a Neighbor Solicitation packet
(c) The multicast address used as destination address in a Neighbor Solicitation packet
(d) The multicast address that is inserted in the payload (Target Address field of ICMPv6) of a Neighbor Solicitation packet
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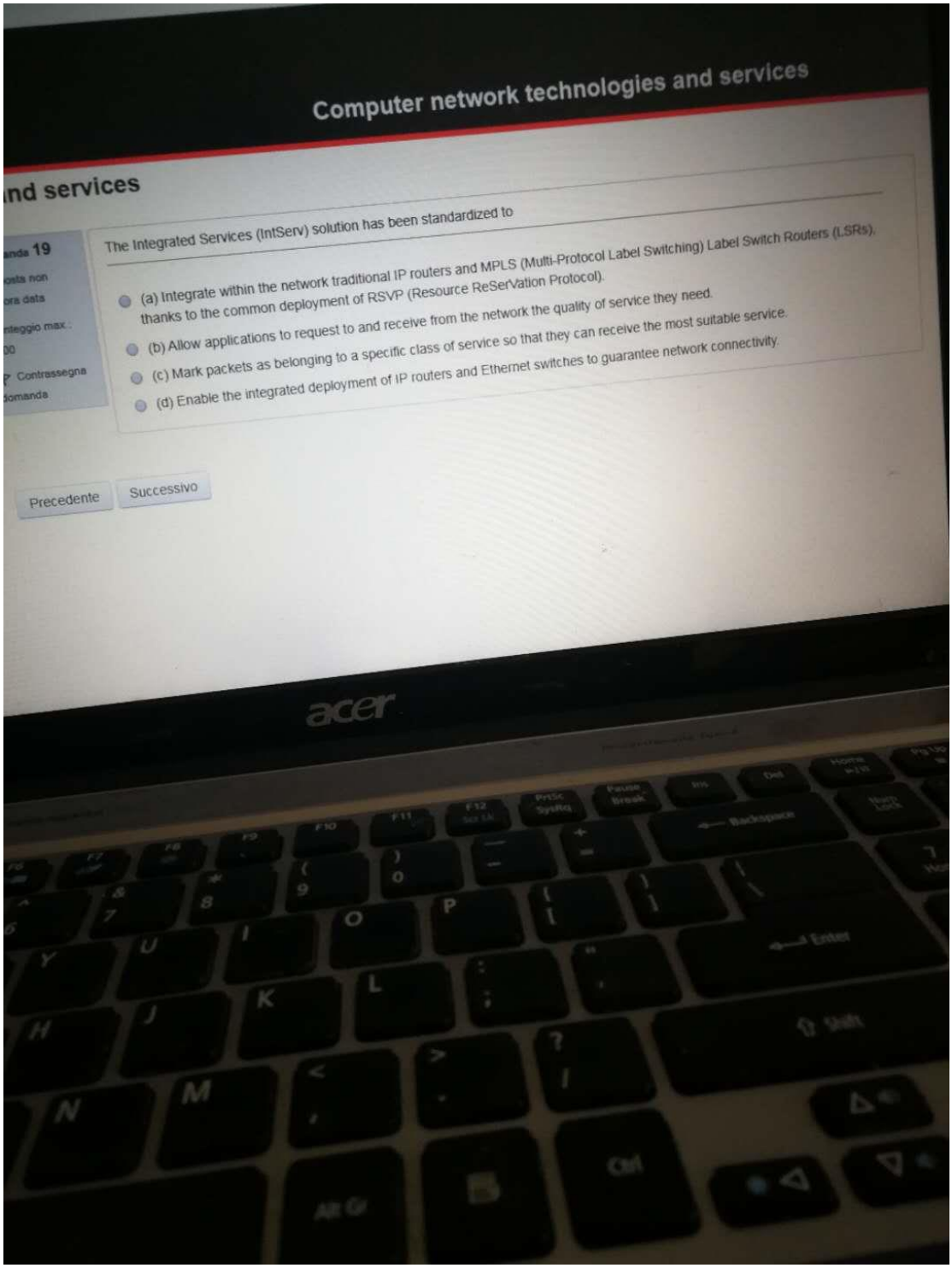
Computer network technologies and services
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The Integrated Services (IntServ) solution has been standardized to
(a) Integrate within the network traditional IP routers and MPLS (Multi-Protocol Label Switching) Label Switch Routers (LSRs), thanks to the common deployment of RSVP (Resource ReSerVation Protocol).
(b) Allow applications to request to and receive from the network the quality of service they need.
(c) Mark packets as belonging to a specific class of service so that they can receive the most suitable service.
(d) Enable the integrated deployment of IP routers and Ethernet switches to guarantee network connectivity.
Precedente
Successivo
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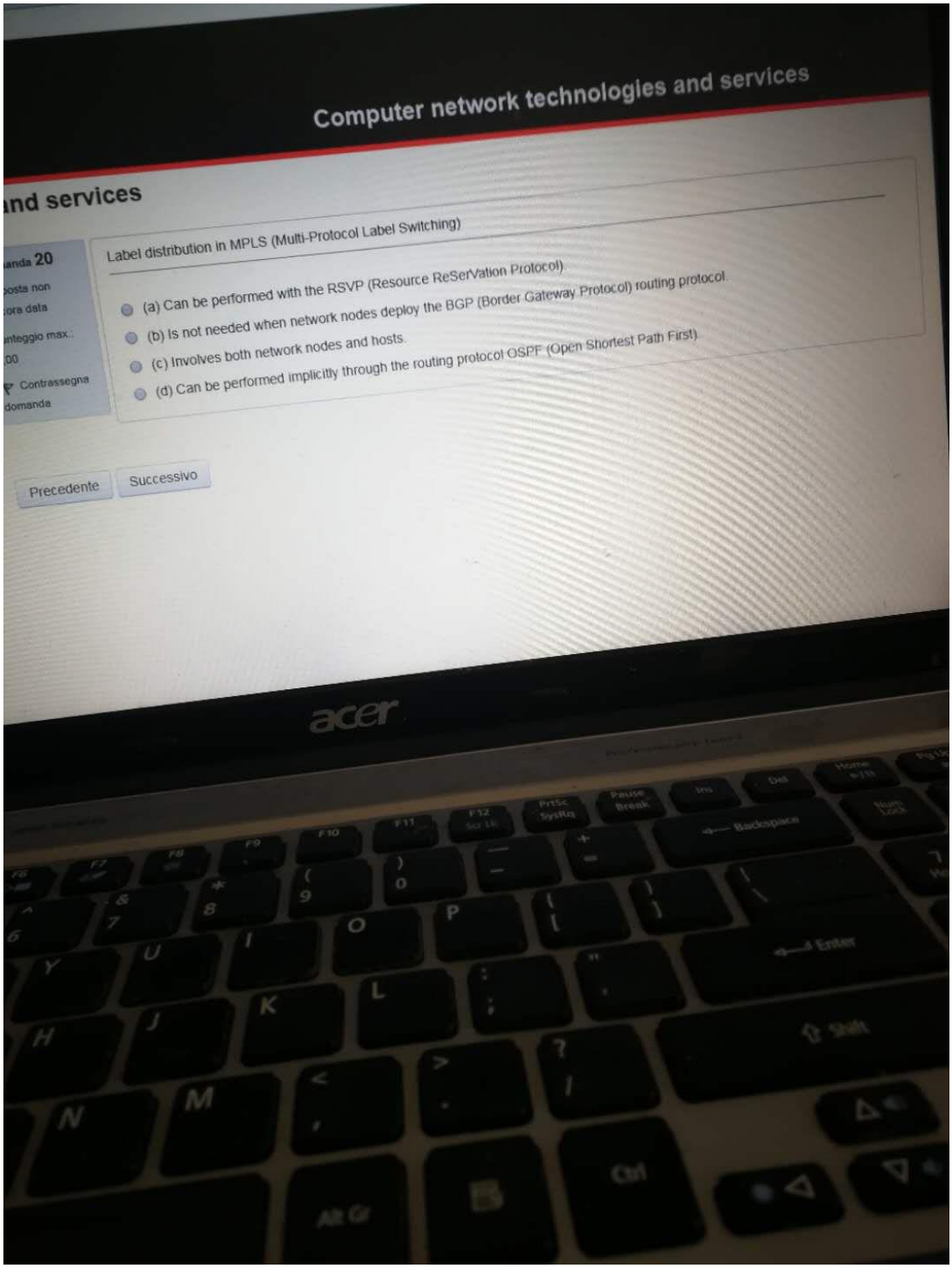
20-A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Contrassegna
domanda
Label distribution in MPLS (Multi-Protocol Label Switching)
(a) Can be performed with the RSVP (Resource ReSerVation Protocol).
(b) Is not needed when network nodes deploy the BGP (Border Gateway Protocol) routing protocol.
(c) Involves both network nodes and hosts.
(d) Can be performed implicitly through the routing protocol OSPF (Open Shortest Path First).
Precedente
Successivo
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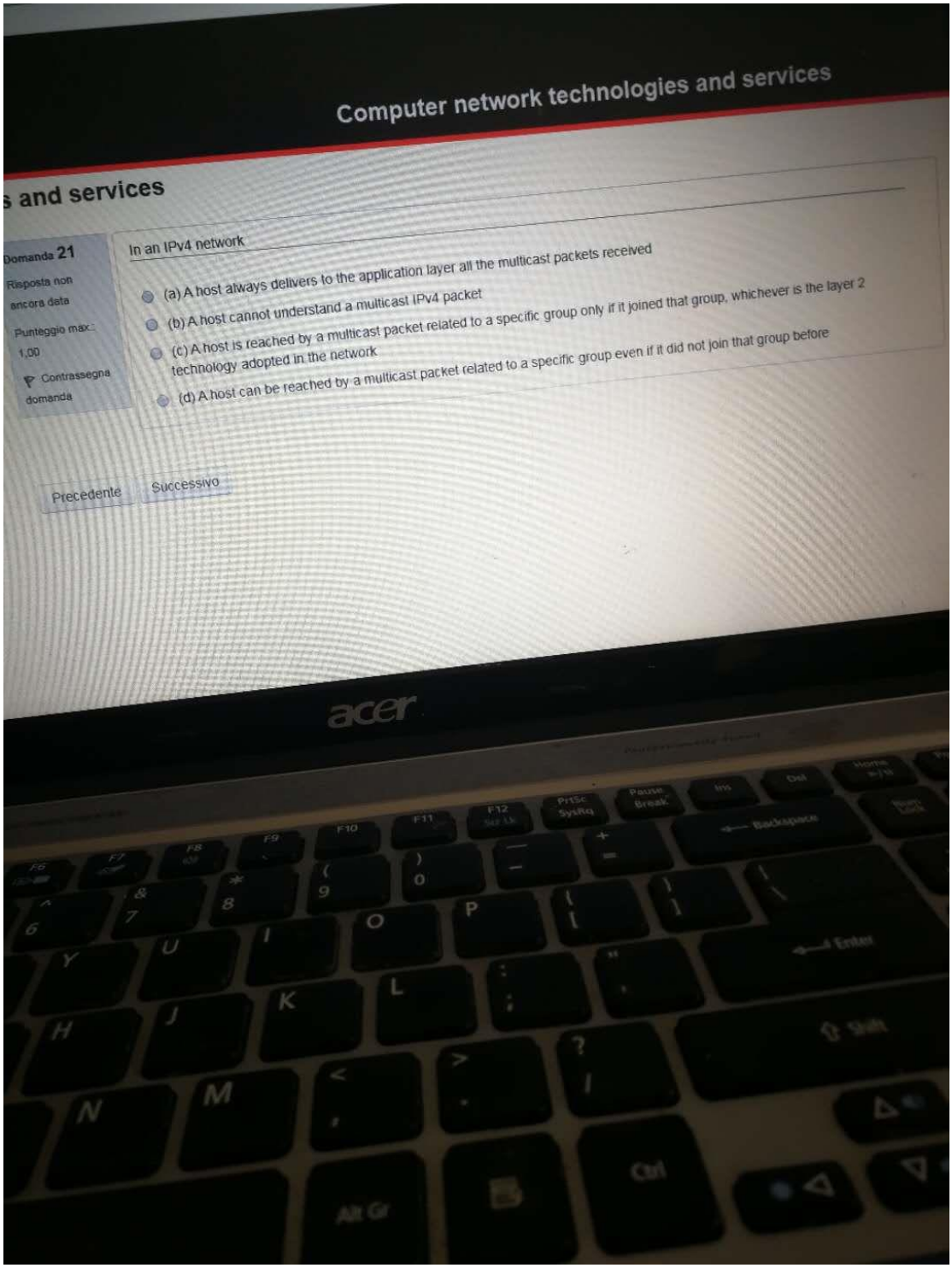
21-D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Contrassegna domanda
In an IPv4 network
(a) A host always delivers to the application layer all the multicast packets received
(b) A host cannot understand a multicast IPv4 packet
(c) A host is reached by a multicast packet related to a specific group only if it joined that group, whichever is the layer 2 technology adopted in the network
(d) A host can be reached by a multicast packet related to a specific group even if it did not join that group before
Precedente
Successivo
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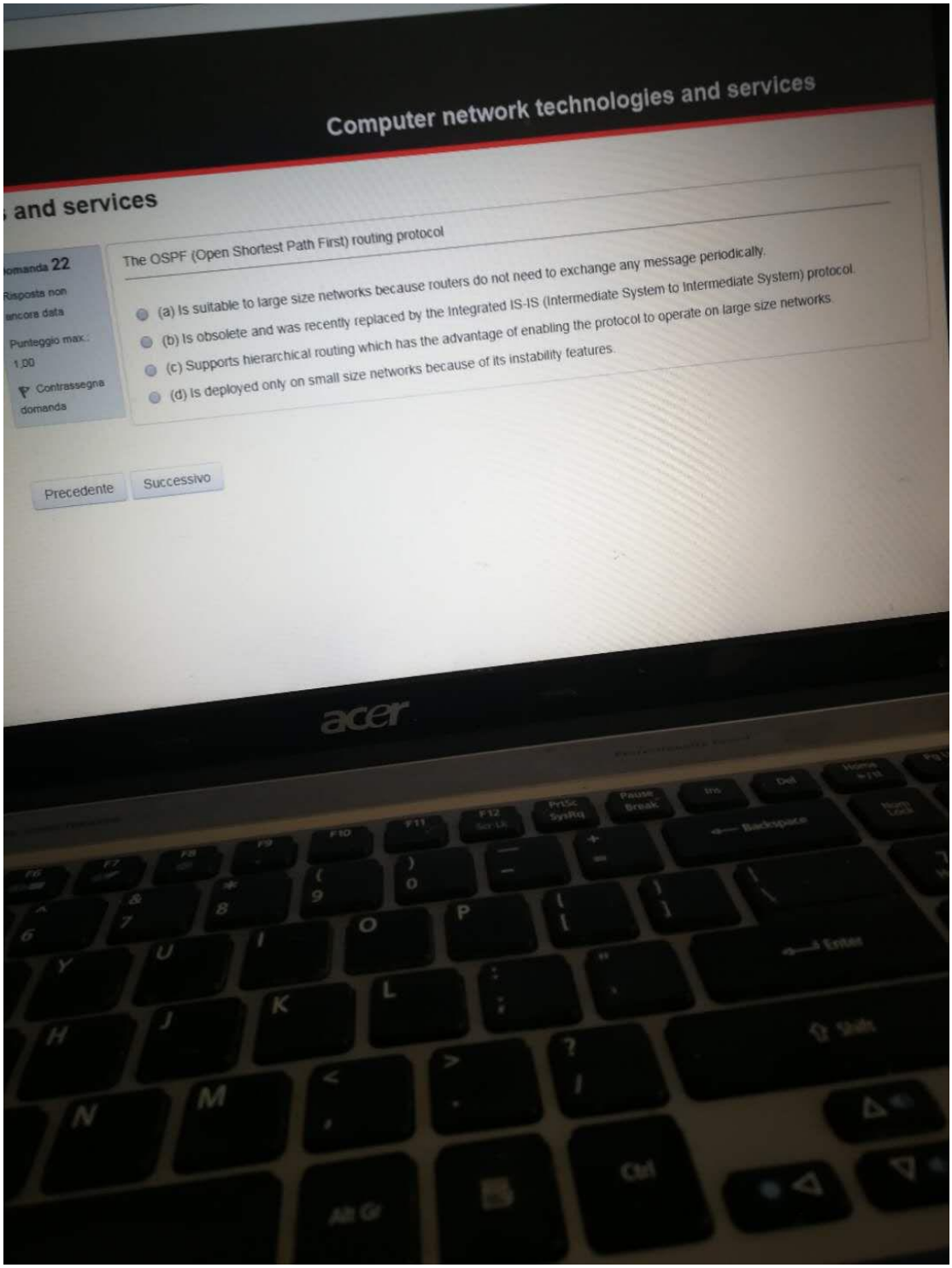
22-C


Computer network technologies and services
and services
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Contrassegna
domanda
The OSPF (Open Shortest Path First) routing protocol
(a) Is suitable to large size networks because routers do not need to exchange any message periodically.
(b) Is obsolete and was recently replaced by the Integrated IS-IS (Intermediate System to Intermediate System) protocol.
(c) Supports hierarchical routing which has the advantage of enabling the protocol to operate on large size networks.
(d) Is deployed only on small size networks because of its instability features.
Precedente
Successivo
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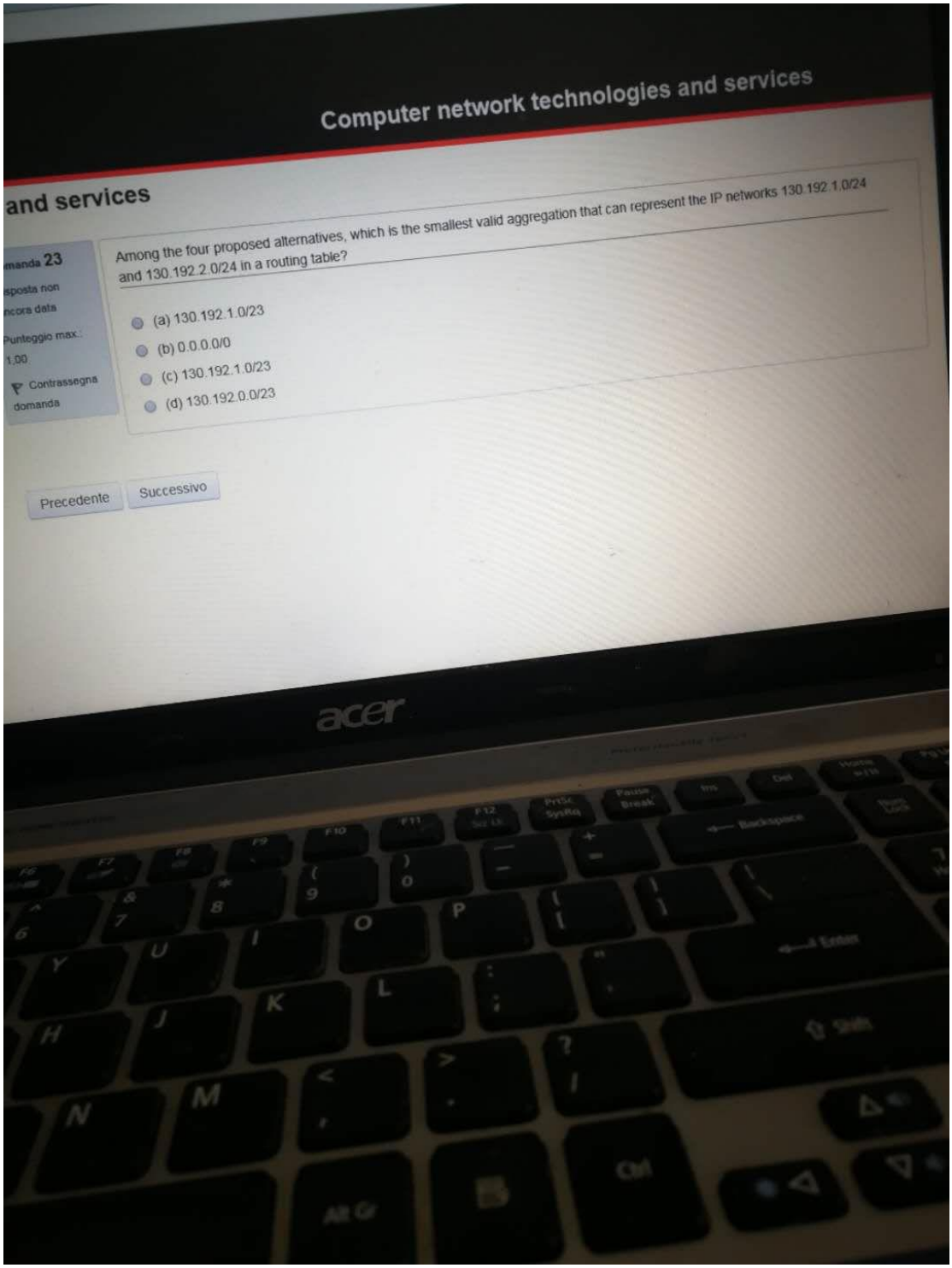
23-B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Among the four proposed alternatives, which is the smallest valid aggregation that can represent the IP networks 130.192.1.0/24 and 130.192.2.0/24 in a routing table?
(a) 130.192.1.0/23
(b) 0.0.0.0/0
(c) 130.192.1.0/23
(d) 130.192.0.0/23
Precedente
Successivo
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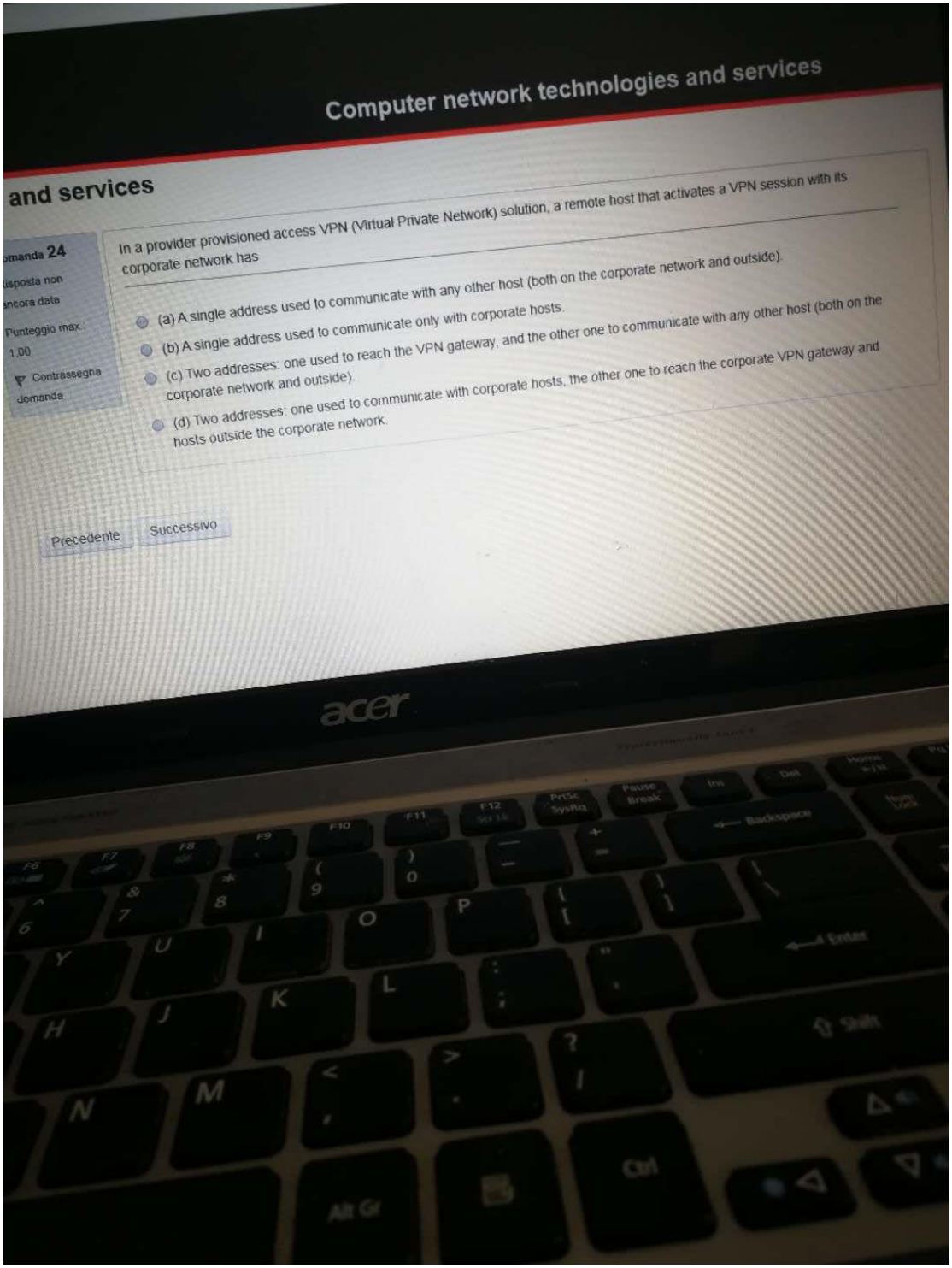
24-A


Computer network technologies and services
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Contrassegna
domanda
In a provider provisioned access VPN (Virtual Private Network) solution, a remote host that activates a VPN session with its corporate network has
(a) A single address used to communicate with any other host (both on the corporate network and outside).
(b) A single address used to communicate only with corporate hosts.
(c) Two addresses: one used to reach the VPN gateway, and the other one to communicate with any other host (both on the corporate network and outside).
(d) Two addresses: one used to communicate with corporate hosts, the other one to reach the corporate VPN gateway and hosts outside the corporate network.
Precedente
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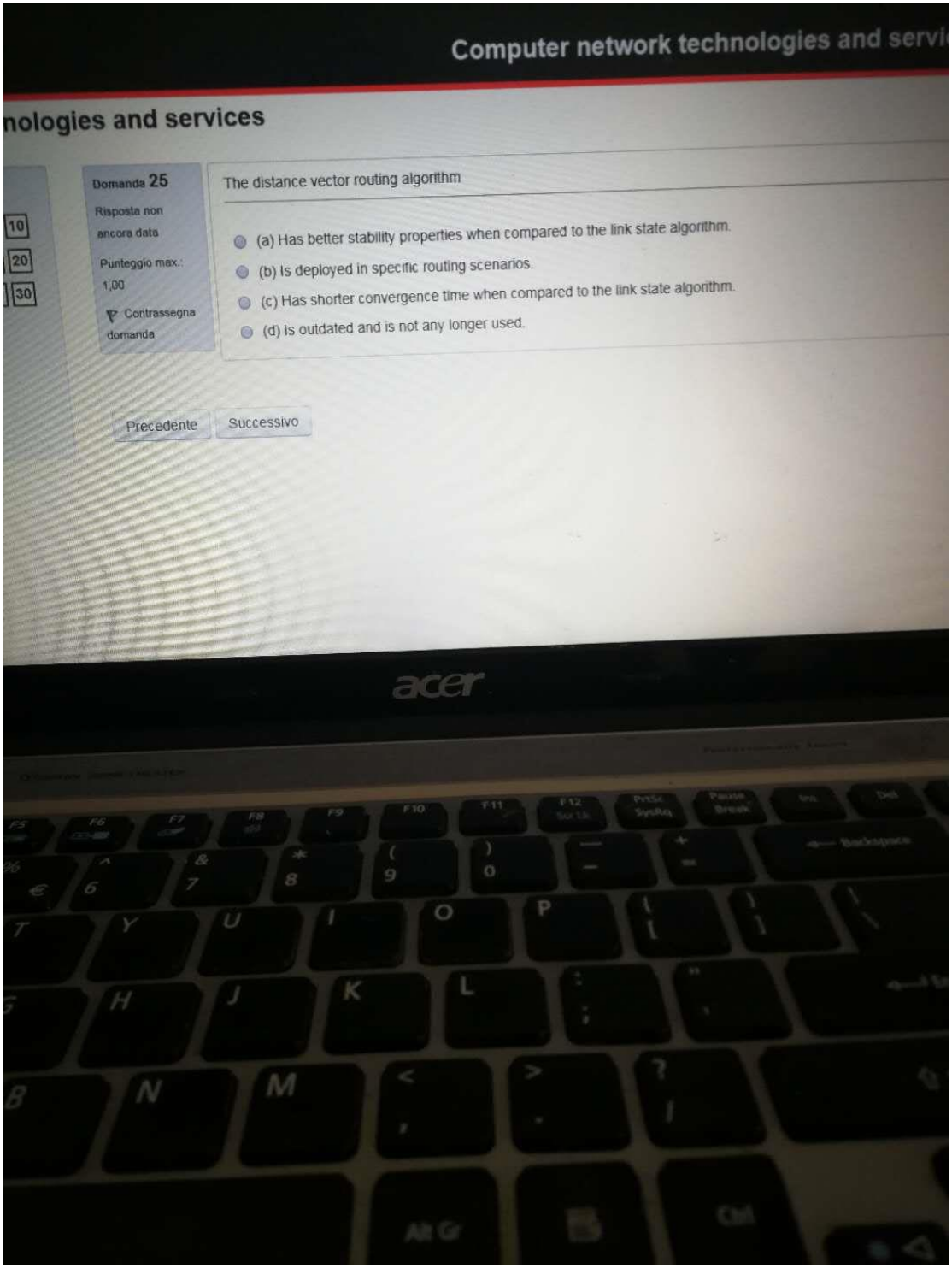
25-B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Contrassegna domanda
The distance vector routing algorithm
(a) Has better stability properties when compared to the link state algorithm.
(b) Is deployed in specific routing scenarios.
(c) Has shorter convergence time when compared to the link state algorithm.
(d) Is outdated and is not any longer used.
Precedente
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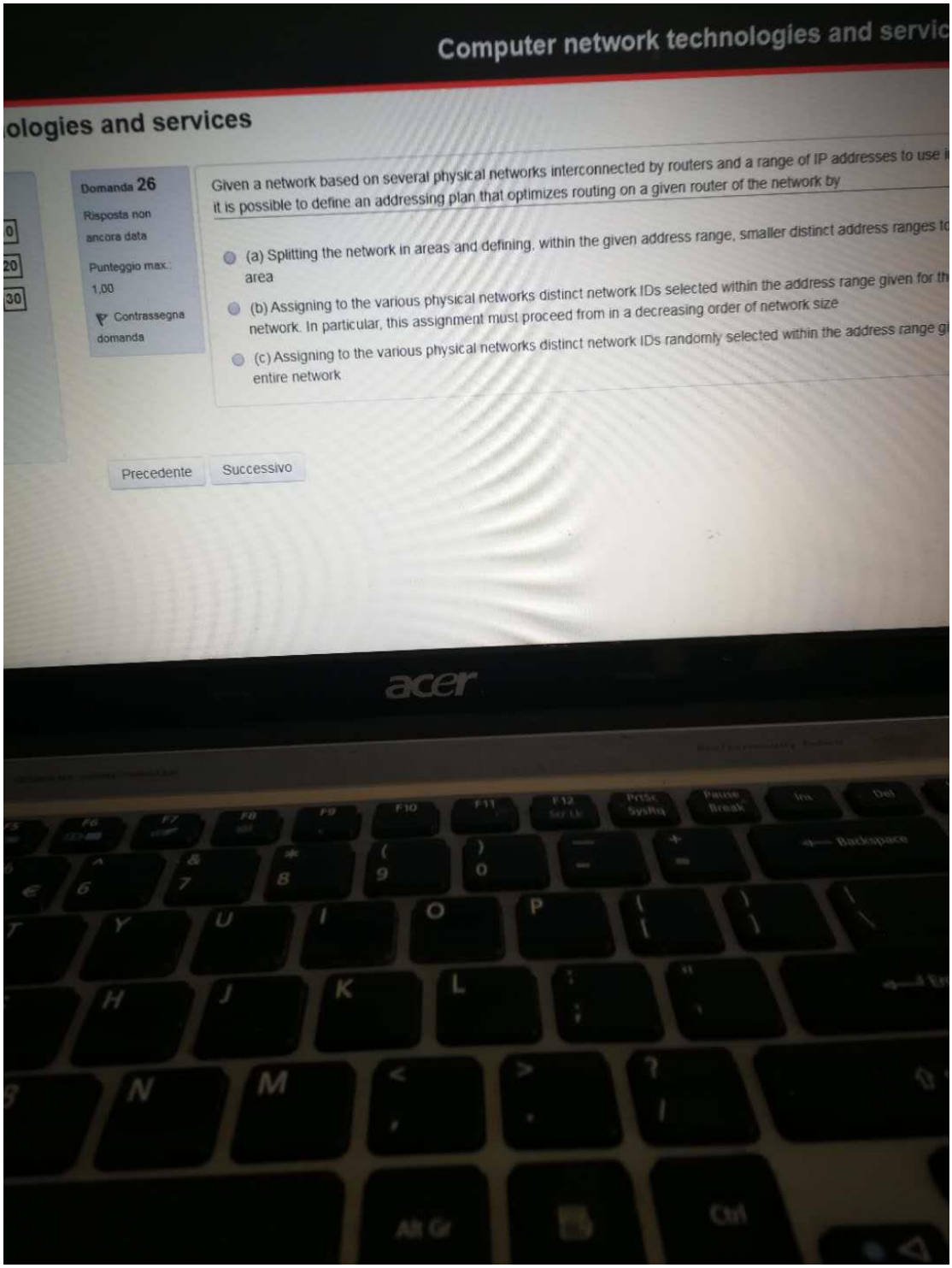
26-A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Contrassegna domanda
Given a network based on several physical networks interconnected by routers and a range of IP addresses to use i
it is possible to define an addressing plan that optimizes routing on a given router of the network by
(a) Splitting the network in areas and defining, within the given address range, smaller distinct address ranges to
area
(b) Assigning to the various physical networks distinct network IDs selected within the address range given for th
network. In particular, this assignment must proceed from in a decreasing order of network size
(c) Assigning to the various physical networks distinct network IDs randomly selected within the address range gi
entire network
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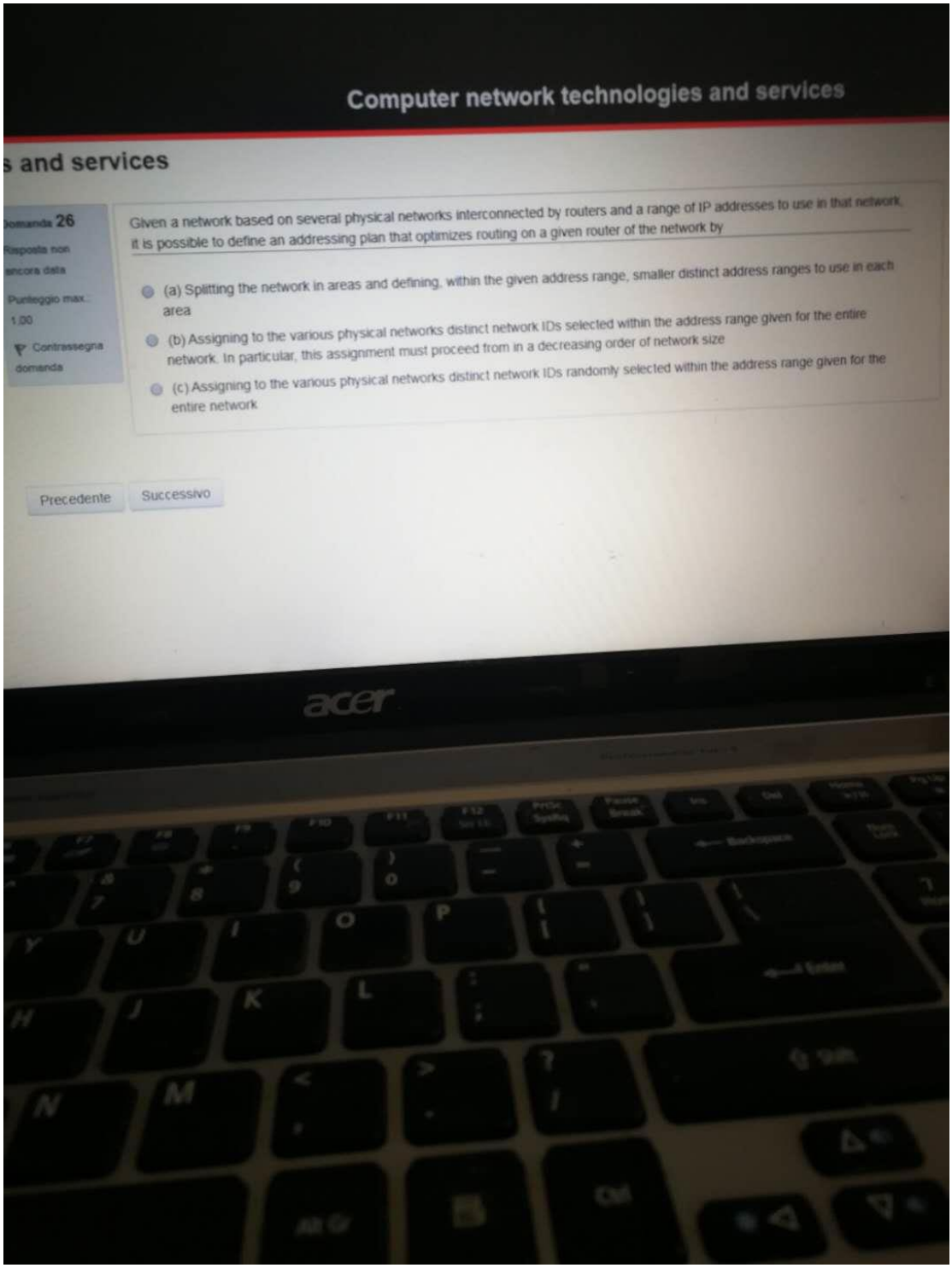
Computer network technologies and services
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Domanda 26
Risposta non ancora data
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Contrassegna domanda
Given a network based on several physical networks interconnected by routers and a range of IP addresses to use in that network, it is possible to define an addressing plan that optimizes routing on a given router of the network by
(a) Splitting the network in areas and defining, within the given address range, smaller distinct address ranges to use in each area
(b) Assigning to the various physical networks distinct network IDs selected within the address range given for the entire network. In particular, this assignment must proceed from in a decreasing order of network size
(c) Assigning to the various physical networks distinct network IDs randomly selected within the address range given for the entire network
Precedente
Successivo
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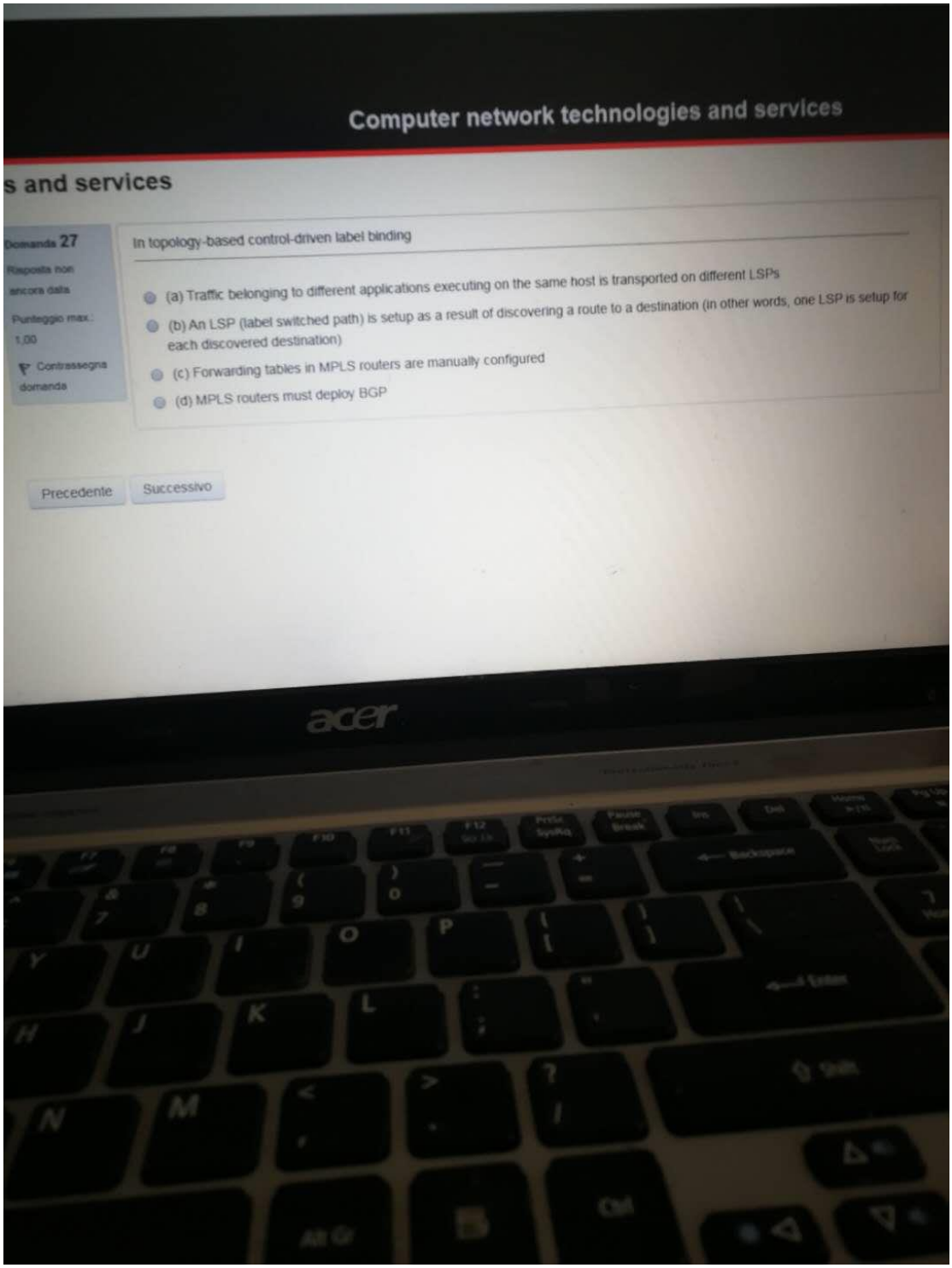
27-B ?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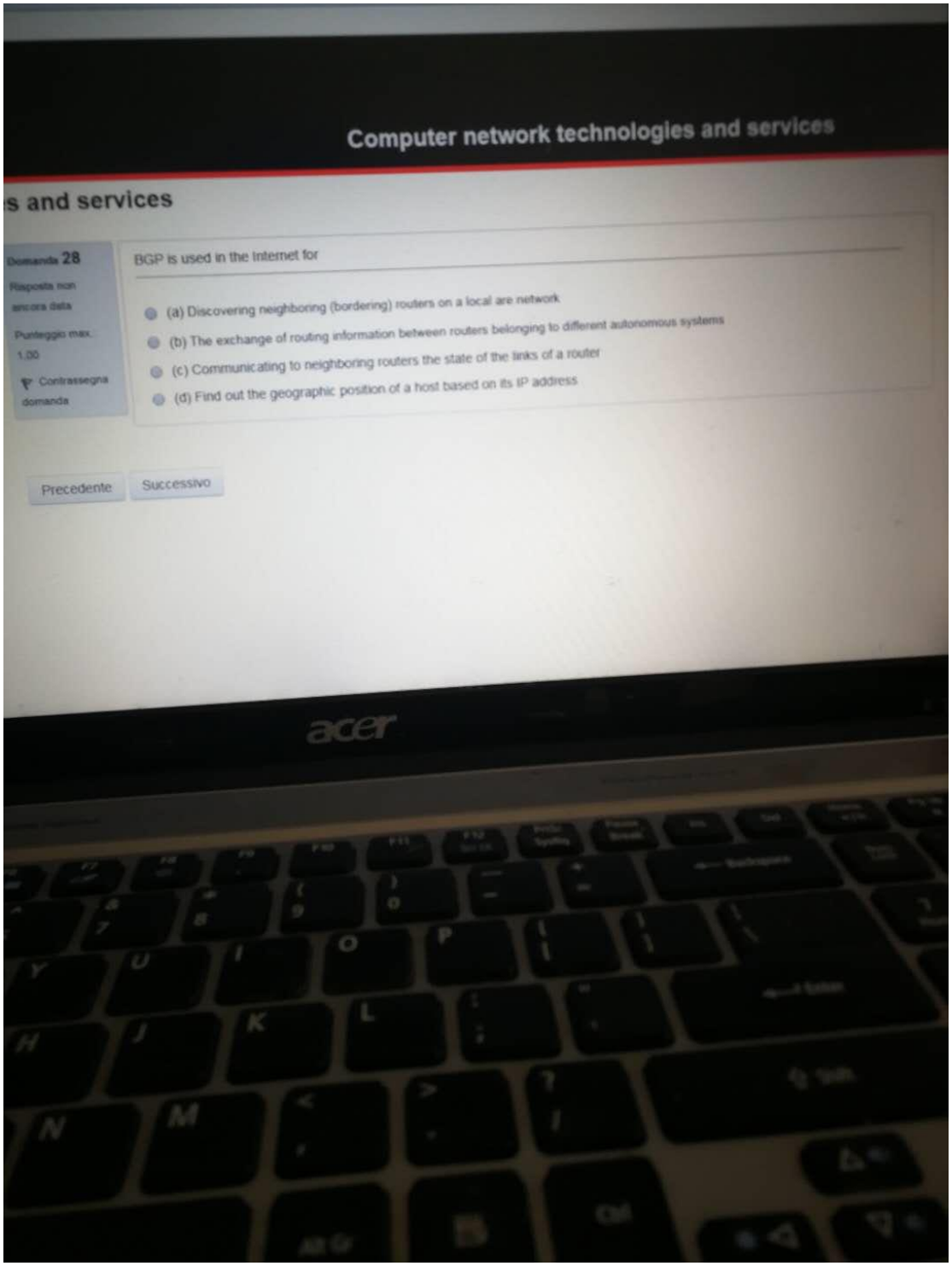
Domanda 27
Risposta non ancora data
Punteggio max.: 1,00
Contrassegna domanda
In topology-based control-driven label binding
(a) Traffic belonging to different applications executing on the same host is transported on different LSPs
(b) An LSP (label switched path) is setup as a result of discovering a route to a destination (in other words, one LSP is setup for each discovered destination)
(c) Forwarding tables in MPLS routers are manually configured
(d) MPLS routers must deploy BGP
Precedente
Successivo
acer

28-B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Risposta non ancora data
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Contrassegna domanda
BGP is used in the Internet for
(a) Discovering neighboring (bordering) routers on a local are network
(b) The exchange of routing information between routers belonging to different autonomous systems
(c) Communicating to neighboring routers the state of the links of a router
(d) Find out the geographic position of a host based on its IP address
Precedente
Successivo
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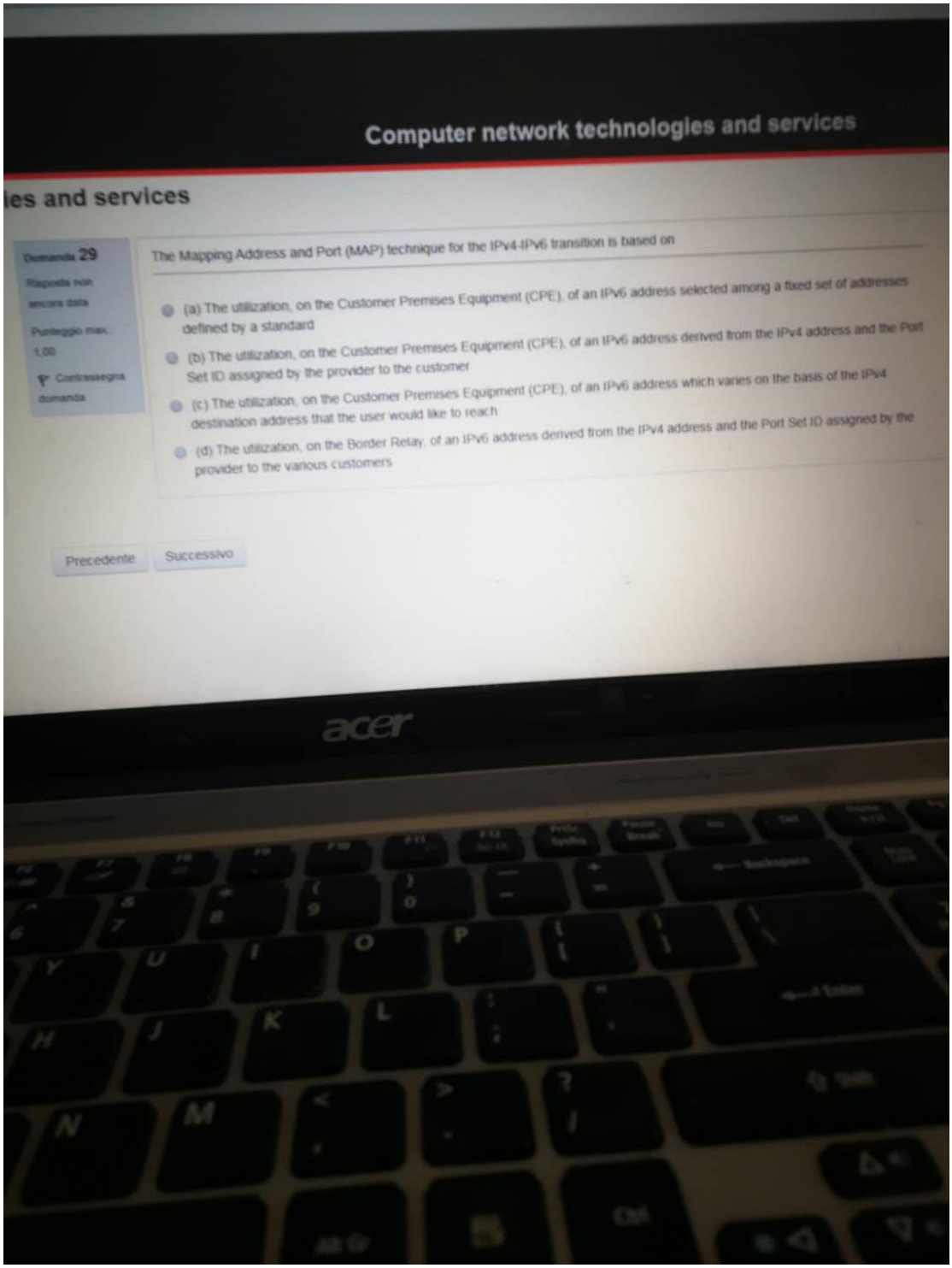
29-B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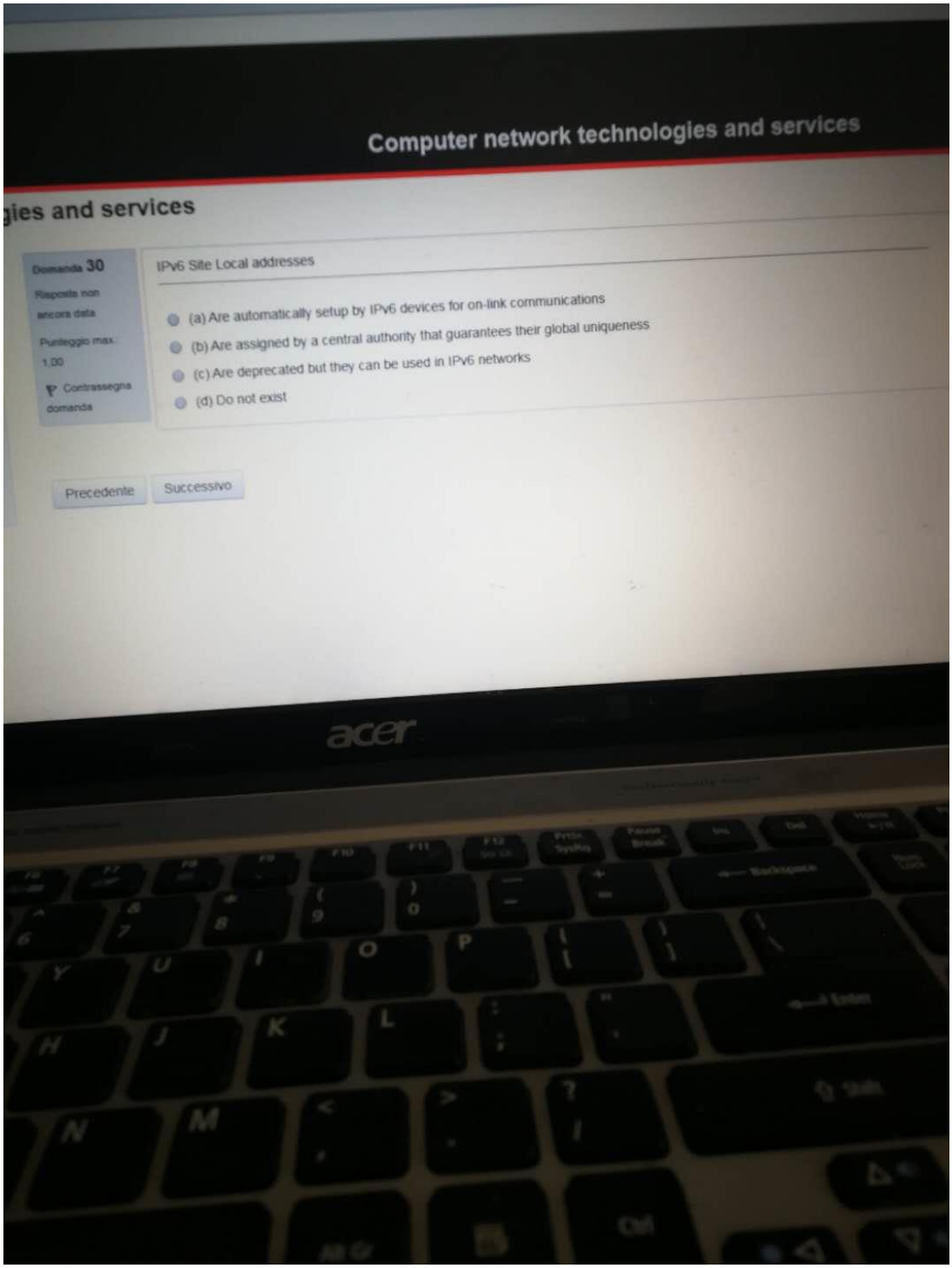
Contrassegna domanda
The Mapping Address and Port (MAP) technique for the IPv4-IPv6 transition is based on
(a) The utilization, on the Customer Premises Equipment (CPE), of an IPv6 address selected among a fixed set of addresses defined by a standard
(b) The utilization, on the Customer Premises Equipment (CPE), of an IPv6 address derived from the IPv4 address and the Port Set ID assigned by the provider to the customer
(c) The utilization, on the Customer Premises Equipment (CPE), of an IPv6 address which varies on the basis of the IPv4 destination address that the user would like to reach
(d) The utilization, on the Border Relay, of an IPv6 address derived from the IPv4 address and the Port Set ID assigned by the provider to the various customers
Precedente
Successivo
acer

30-C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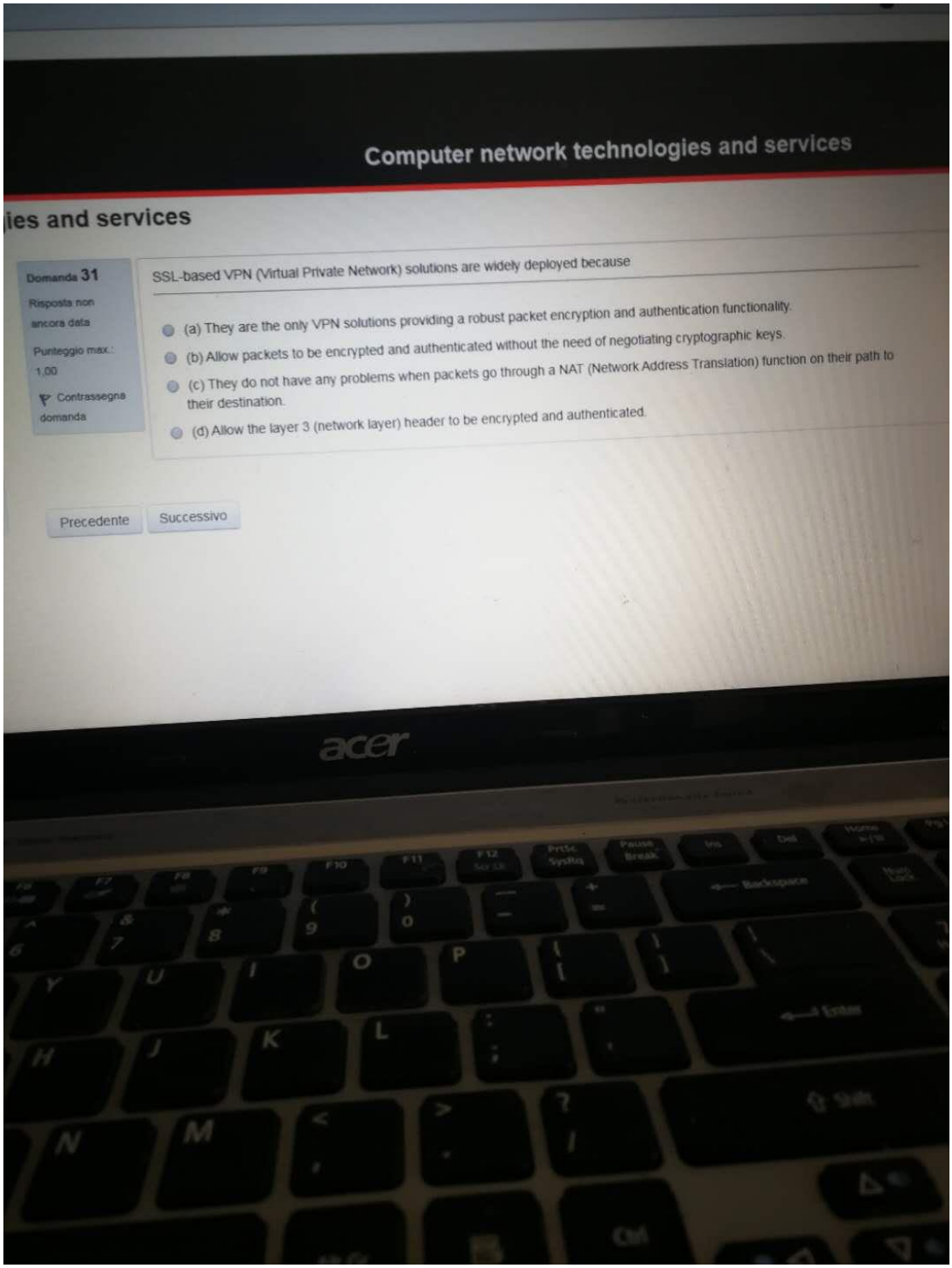
Contrassegna domanda
IPv6 Site Local addresses
(a) Are automatically setup by IPv6 devices for on-link communications
(b) Are assigned by a central authority that guarantees their global uniqueness
(c) Are deprecated but they can be used in IPv6 networks
(d) Do not exist
Precedente
Successivo
acer

31-C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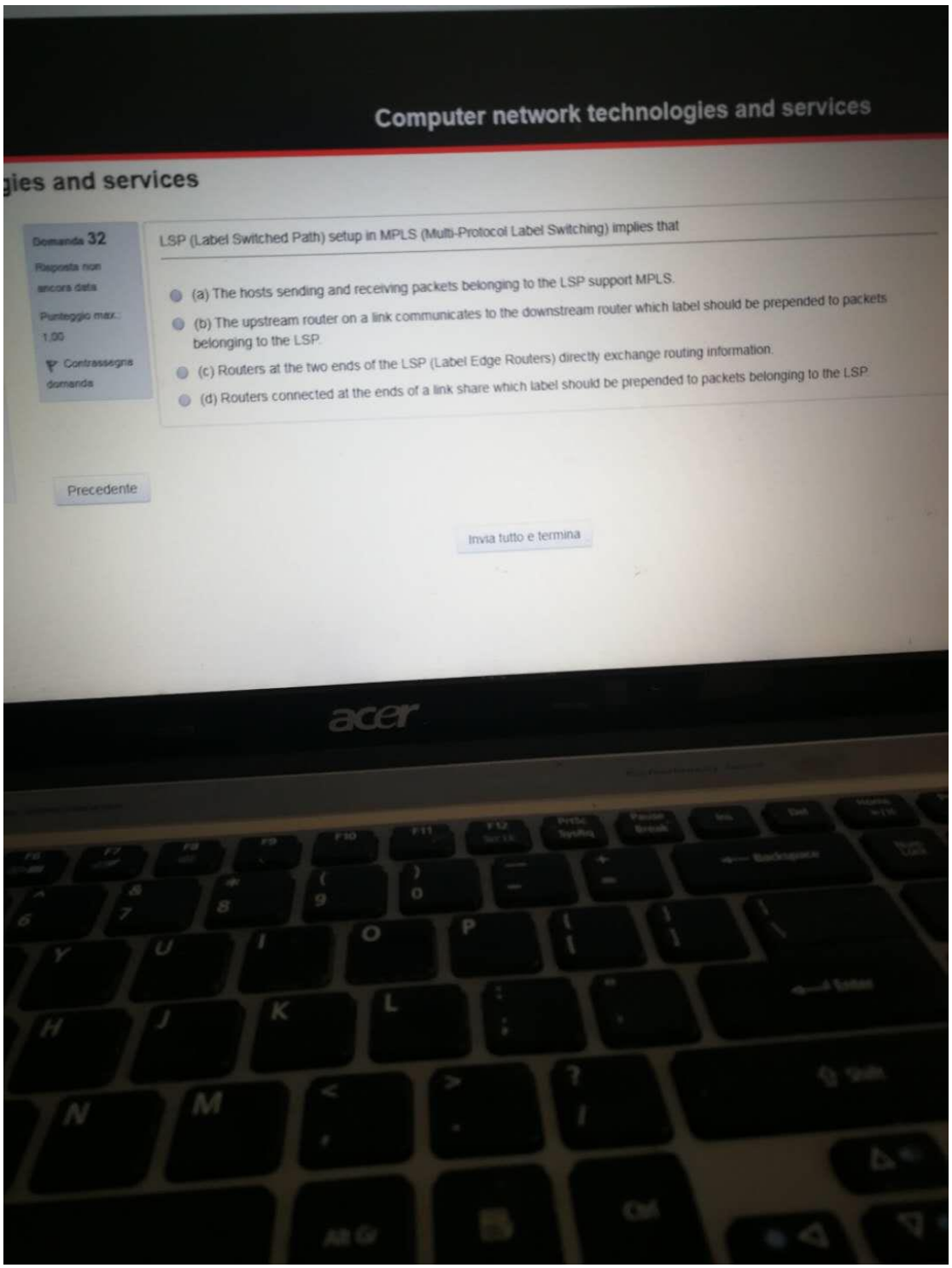
Risposta non ancora data
Punteggio max.: 1,00
Contrassegna domanda
SSL-based VPN (Virtual Private Network) solutions are widely deployed because
(a) They are the only VPN solutions providing a robust packet encryption and authentication functionality.
(b) Allow packets to be encrypted and authenticated without the need of negotiating cryptographic keys.
(c) They do not have any problems when packets go through a NAT (Network Address Translation) function on their path to their destination.
(d) Allow the layer 3 (network layer) header to be encrypted and authenticated.
Precedente
Successivo
acer

32-D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Domanda 32
Risposta non ancora data
Punteggio max.: 1,00
Contrassegna domanda
LSP (Label Switched Path) setup in MPLS (Multi-Protocol Label Switching) implies that
(a) The hosts sending and receiving packets belonging to the LSP support MPLS.
(b) The upstream router on a link communicates to the downstream router which label should be prepended to packets belonging to the LSP.
(c) Routers at the two ends of the LSP (Label Edge Routers) directly exchange routing information.
(d) Routers connected at the ends of a link share which label should be prepended to packets belonging to the LSP.
Precedente
Invia tutto e termina
acer