

Information

—two

Taste

**Information is delicious !
“Information Taste” is a tasty IT test.
Hope you learn new things & enjoy !**

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THIS BOOK HAS EXAM-LIKE FORMAT, BUT IT IS NOT AN EXAM , IT IS JUST A BOOK !

- Don't get surprised, it is really just a book, it is not an exam !
The main aim of this book is mentioning some key topics and helping you learn more & wonder more.
This book is not intended to make you a suffering exam.
Notes are preferred to be given in exam format, so exam is just a format, that's all.
If you agree this concept, then there are no question points, no exam duration limit etc.
You will decide how to answer the questions. (with internet or without internet)
Just try to understand and try to answer, don't google immediately from the very first beginning.
→ But if you want answering this test-book as an exam, you can read criterias below.
- Happy testing :)

IF YOU WANT ANSWERING THIS TEST-BOOK AS AN EXAM, YOU CAN READ CRITERIAS BELOW

- This book has 50 questions. So all true options in a question have a total point of 2.
- Total exam duration is 75 minutes. Passing score is at least 70 of 100.
- Exam is documentation/internet closed exam.
- Questions have one or many answers. Questions will ALWAYS say "SELECT ALL THAT APPLY".
Questions will NEVER say "SELECT n THAT APPLY (n = total true option number)"

SCORING ALGORITHM

Think that a question has 5 options (a,b,c,d,e) but answer set is "a" and "c".
Question must have totally "2 points", so "a" is "1 point" + "c" is "1 point".
This makes score of all false options (b,d,e) each having "-1 point" separately.

- * If you dont give any answer (empty question) - your score is already "0 point"
- * If you just answer "a"-> your score is "1 point"
- * If your answers are "a,b,c" -> your score is = $1 + (-1) + 1 = "1 \text{ point}"$
- * If your answers are "b,d,e" -> your score is = $(-1) + (-1) + (-1) = "-3 \text{ points}"$
- * If your answers are "a,b,c,d,e" -> score = $1 + (-1) + 1 + (-1) + (-1) = "-1 \text{ point}"$

Similar example can be given like below

4 options (a,b,c,d) exist for a question. 3 is correct. (a,b,d)

This makes each true option "0,66 point" , which makes any false option (c) having each "-0,66 point"

You can calculate your score accordingly.

- Happy examining :)

SOLUTIONS

- **Solutions are given but they are short descriptions, not whole all story.**

It is your homework to examine in detail if you wondered the rest of story.

If you really wondered something and examined it, this book will succeed its mission.

COMMENTS

- All comments, advises are welcomed in this non-profit hobby activity (bulent.yucesoy@gmail.com)
- **"Information taste" series will continue annually. I will care all comments. (thanks if you comment)**
- I will publish your summarized comments in my web site. (<http://web.itu.edu.tr/~yucesoyb/books>)

Question-1: Select all true statement(s)

- a. In Windows, daemons and services are same thing.
- b. In UNIX, daemons and services are not same thing.
- c. Pipes are IPC objects.
- d. Anonymous pages of a process refer to files on disk.

Question-2:

server1 is ordinary linux server. krb5srv is linux kerberos server
krb5user1 is kerberos user authenticating from kerberos service at krb5srv server.

```
[root@server1 /]# date "+DATE: %d/%m/%y TIME: %H:%M:%S"
DATE: 14/02/2019 TIME: 11:03:18
[root@server1 /]# ssh -l krb5user1 krb5srv
Password:
[krb5user1@krb5srv ~]$ date "+DATE: %d/%m/%y TIME: %H:%M:%S"
DATE: 14/02/2019 TIME: 18:33:28
[krb5user1@krb5srv ~]$
```

Select all true statement(s) about this scenario.

- a. ntpd at kerberos server immediately corrected server1's time so user could login
- b. user credentials were cached, otherwise he would not login.
- c. server1 and krb5srv must be located in different countries.
- d. krb5user must have a keytab config, otherwise he would not login.

Question-3: which below terms are not unique to IPv6? (select all that apply)

- a. APIPA
- b. SLAAC
- c. Nibble
- d. Link-local address

Question-4: Choose all which are not features of social Networks?

- a. Small-world effect
- b. Bonferroni's principle
- c. Data clustering
- d. Skewed Degree Distribution (Power Law)

Question-5: Choose all below techniques that can't be used for data modelling in social Networks?

- a. Cayley Graphs
- b. Small-world Graphs
- c. Random Graphs
- d. Scale-free Graphs

Question-6: Select all true statement(s)

- a. Paths must be groups as "primary/secondary" for path failover/failback.
- b. SAN client periodically probes for path's status detection.
- c. "Path failback" and "Path restore" are not same thing.
- d. Sending IO from different path than received path is called TRESPASS.

Question-7: select all devices that can perform NAT?

- a. Routers
- b. Firewalls
- c. Load Balancers
- d. ASICs

Question-8:

Load Balancing can be achieved at which OSI layers?
(select all that apply)

- a. Layer-2
- b. Layer-3
- c. Layer-5
- d. Layer-6

Question-9: Select all true statement(s).

- a. You can connect "ethernet network" and "token-ring network" through a switch.
- b. Layer-3 switch is same as a router.
- c. Ethernet collision detection is through CSMA/CD algorithm
- d. NAT can be used for IP Masking purposes.

Question-10:

Which below scenario(s) can send a Linux server martian packets in network?
(select all that apply)

- a. a misconfigured IoT device in same subnet
- b. another server in same subnet, having two nics connected to same switch
- c. a router making wrong routes
- d. a Linux server having rp_filter enabled

Question-11:

Which programming language(s) does not have built-in random number generation function? (select all that apply)

- a. javascript
- b. node.js
- c. Solidity
- d. Lua

Question-12:

Which one(s) are **not** sample for UUID? (**select all that apply**)

- a. ZFS file system ID in Oracle Solaris
- b. Docker image Layer ID
- c. Uniqueidentifier in MS SQL Server
- d. Microsoft Active Directory SID

Question-13: Select all true statement(s).

- a. GCC compiler uses "cpp,cc1,as" commands at background.
- b. ldd is name of the default Linux loader binary.
- c. Shared object files have ELF format in Linux.
- d. Stack traces of Stripped binaries will include less meaningful information.

Question-14: Select all true statement(s)

- a. CPU IPC is more important than CPU clock-speed.
- b. CPU IPC may vary due to workload
- c. CPU instruction pipelining is critical for performance.
- d. At RISC CPUs, There is always at least 5 pipeline stages.
- e. When CPU pipeline stages increase, pipeline depth also increases.

Question-15:

You removed LVM swap device from RHEL-7 with below commands.

```
Swapoff -a; lvremove -Ay /dev/rootvg/lv_swap
```

You then removed related entry from `/etc/fstab`

You rebooted the server but it could not reboot, errors are below

```
dracut-initqueue timeout - starting timeout scripts
Could not boot.
/dev/rootvg/lv_swap does not exist
Boot has failed. To debug this issue add "rd.shell rd.debug" to the kernel cli.
```

Select all below missing actions before reboot?

- a. Remove swap parameter from `/etc/default/grub`
- b. Regenerate grub config
- c. Disable swap with "`systemctl mask dev-mapper-rootvg\x2dlv_swap.swap`"
- d. Regenerate initramfs

Question-16: Select all true statement(s)

- a. JDK includes JRE.
- b. JRE includes JVM.
- c. JVM uses heap memory.
- d. JRE uses native memory.

Question-17: Select all below Linux command(s) that can't be used together with regular expressions?

- a. nawk
- b. strings
- c. fgrep
- d. sed

Question-18: Select all true statement(s)

- a. Oracle Redo Log Buffer is inside SGA memory.
- b. Oracle SQL Cursors get memory inside PGA memory
- c. Oracle database OLAP Page Pool is inside UGA memory
- d. Oracle database UGA memory resides inside PGA area.

Question-19: Select all true statement(s)

- a. /dev/kmem is virtual memory.
- b. /dev/mem works as block device due to pages.
- c. /dev/urandom works with PRNG.
- d. ELF binaries prefer using /dev/zero instead of /dev/null.

Question-20:

which below linux command(s) can start up a light-weight http server?
(select all that apply)

- a. python
- b. nc
- c. php
- d. nohup

Question-21:

select all true statement(s)

- a. swap device is still necessary to detect slowness and take corrective action
- b. There is nothing to do except reboot if system started trashing
- c. Swap usage may differ according to early binding or late binding memory.
- d. Paging is a normal activity for operating systems.

Question-22:

select all true statement(s)

- a. Many small files can create bottleneck on hadoop namenode.
- b. Permission management system of Big Data environments is Centrifify.
- c. Apache Pig can be used for ETL operations.
- d. Streaming network sniffing logs can be sent to HDFS via Sqoop.

Question-23:

which CPU multi-threading works different?

- a. SMT
- b. HT
- c. CMT
- d. All same, just vendors give different names.

Question-24:

select all true statement(s) about AIX CPU micropartitioning.

- a. In shared mode, LPAR can consume more CPU than EC.
- b. In dedicated mode, SMT can't be enabled
- c. In shared mode, DLPAR operations can assign max CPU less than VP.
- d. lcpu calculation consider SMT value.

Question-25:

Select all true statement(s)

- a. FC protocol can run on both copper cable and optical cable
- b. SCSI works in parallel, but optical FC cables make SCSI serialized.
- c. Disks in FC fabric can be 100 km away from your server HBA
- d. Port zoning and WWN Zoning are two different logics at SAN terminology.

Question-26:

Select all SDS solution(s)

- a. GlusterFS
- b. HDFS
- c. Ceph
- d. Swift

Question-27:

Which scenario(s) fit more for GPU usage instead of CPU usage?
(select all that apply)

- a. Virtual Reality
- b. Self-driving cars
- c. Cassandra Clusters
- d. Digital Coin Mining

Question-28:

Select all true statement(s) about GPUs.

- a. GPUs dont have interruption
- b. GPUs dont have virtual memory
- c. GPUs are Turing complete.
- d. GPGPUS are more likely closer to CPUs rather than GPUs.

Question-29:

Select all programming languages which are object oriented.

- a. C
- b. Python
- c. Golang
- d. Erlang

Question-30:

Select all true statement(s)

- a. Oracle RDBMS table has 1000 column limit, big data has no limit.
- b. Big data parcels can be thought like rpm files.
- c. Hive performs well at historical analytics, HBase performs well at real-time.
- d. Hive Query Language is abbreviated as HQL

Question 31:

At C++, two functions can have same name if they have different arguments.

What is this feature called?

(select all that apply)

- a. Function overriding
- b. Function overloading
- c. Polymorphism
- d. Encapsulation

Question-32:

Select all options which are **not** journaling file systems.

- a. XFS
- b. BTRFS
- c. NTFS
- d. ZFS

Question-33:

Select all true statement(s) about RDBMS

- a. JOIN combines columns in TSQL.
- b. UNION combines rows in TSQL.
- c. BCNF is also called 3.5 NF
- d. There does not exist sixth normalization, maximum is five.

Question-34:

Select all true statement(s) about enterprise security.

- a. If auditing and monitoring is perfect, you can relax about security.
- b. Test systems may have more permission than Prod systems
- c. Write permission is critical but Read is not.
- d. Documents must be destroyed before throwing into trash.

Question-35:

Which command(s) are the same with **apropos** command?

(select all that apply)

- a. whatis
- b. info
- c. man -k
- d. locate

Question-36:

Which command(s) convert nroff file to dvi file?

(select all that apply)

- a. man -Z -Tdvi foo.1x.gz > foo.1x.dvi
- b. man -l -Tdvi foo.1x.gz > foo.1x.dvi
- c. man -Xdvi foo.1x.gz | col -bx > foo.1x.dvi
- d. man -Xdvi foo.1x.gz > foo.1x.dvi

Question-37:

Select all IoT related network protocols.

- a. Thread
- b. Kismet
- c. Fog
- d. Zigbee

Question-38:

Select all which does **not** exist inside SELinux contexts?

- a. user
- b. role
- c. target
- d. level

Question-39:

Cisco IoT Reference Model has how many layers?

- a. 5
- b. 6
- c. 7
- d. 8

Question-40:

Which Linux command(s) will list all package groups.

- a. Yum groups list
- b. Yum groups list expanded
- c. Yum groups list all
- d. Yum groups list hidden

Question-41:

```
# echo a > file1
# echo b > file2
# /bin/rm file3; touch file3
# YOUR COMMAND HERE
# cat file3
a b
#
```

Which command(s) produce above file3 content from file1 and file2?

- a. join file1 file2 > file3
- b. paste -d' ' file1 file2 > file3
- c. merge file1 file2 file3
- d. All above commands will achieve it.

Question-42:

Which below keywords are used for affinity/anti-affinity at RedHat OpenShift?

- a. shard/district
- b. pin/unpin
- c. region/zone
- d. in/out

Question-43:

Which below application is not message broker application?

- a. JMS
- b. ESB
- c. IntelliQ
- d. Kestrel

Question-44:

Select false AIX/Linux command matching?

- a. rmlvcopy/lvsplit
- b. ls1pp/rpm
- c. migratepv/pvmove
- d. genkex / insmod

Question-45:

Choose correct "Open Source Project / RedHat Project" mapping(s)
(select all that apply)

- a. Qemu / Rhev
- b. Spacewalk / Satellite
- c. ManageIQ / CloudForms
- d. Origin / Ansible

Question-46:

Ansible manages windows with which protocol?

- a. WMI
- b. WinRS
- c. WinRM
- d. WinSSH

Question-47:

Select all tools that can run agentless.

- a. Chef
- b. Puppet
- c. Ansible
- d. SaltStack

Question-48:

Select all architectures serverless computing provides.

- a. Backend as a Service (BaaS)
- b. Function as a Service (FaaS)
- c. Everything as a Service (XaaS)
- d. All above

Question-49:

All mail clients and servers are all disabled on your UNIX/Linux server.
But still files generate under /var/spool/clientmqueue folder and cause disk fullness.

What is the best solution for this problem?

- a. Edit /etc/crontab, replace MAILTO=root with MAILTO="", restart crond
- b. Append ">> log 2>> log" at the end of your crontab job lines.
- c. Make /var/spool/clientmqueue a read-only folder by changing its permissions
- d. Replace /usr/sbin/sendmail binary with an empty null file.

Question 50:

Select all correct IDS evasion techniques

- a. Steganography
- b. Session Splicing
- c. Fragmentation Attacks
- d. Encryption

SOLUTIONS

Solution-1: Correct answers are "a", "b" and "c".
Anonymous pages are heaps, stacks etc...

Solution-2: Correct answer is "c".
There can't be time skew more than 5 minutes for Kerberos, but here there is no time skew, only issue is timezone difference because user could login.

Solution-3: Correct answer is "a". APIPA is also used in IPv4.

Solution-4: Correct answer is "b".
Bonferroni's principle is a general concept for data mining to detect rare data.

Solution-5:
Correct answer is "a"
Cayley graph is for encoding, not data modelling.

Solution-6:
Correct answers are "a", "b" and "c".
Trespass is EMC term, meaning storage processor switching. All other are true.

Solution-7: All can perform NAT, ASICs are special aimed circuits.

Solution-8: LB is possible at Layer 2,3,4,5,7. Layer 6 is presentation

Solution-9: Correct answers are "c" and "d".

bridge needed between different topologies.

L3-switch can't operate on wan, but router can.

Solution-10: Correct answers are "a", "b" and "c".

Rp_filter is control mechanism for martians, it does not send martians.

Solution-11: Correct answer is "c". Randomization must be cared at smart contracts.

Solution-12: Correct answer is "d". AD SID is not UUID, all other are UUID(or GUID)

Solution-13: Correct answers are "a", "c" and "d". Ld is loader, it is not ldd.

Solution-14: All options are true.

Solution-15: Correct answers are "a", "b" and "c". New initramfs is not needed.

Solution-16: All options are true.

Solution-17: Correct answer is "b". "strings" can't be used with regex.

Solution-18: Correct answers are "a", "b" and "c". UGA resides inside SGA.

Solution-19: Correct answers are "a", "c" and "d".

/dev/mem is character device. Paging is another issue inside VMM.

Solution-20: Correct answers are "a" and "c"

Solution-21: All options are true.

Solution-22: Correct answers are "a" and "c".

Hadoop permissioning is Apache Sentry, not centify.

Streaming data import is done with Flume. Sqoop is for RDBMS data sources.

Solution-23: Correct answer is "c"

Solution-24: Correct answers are "a" and "d"

Solution-25: All options are true.

Solution-26: HDFS is not SDS, all other are SDS solutions.

Solution-27: Correct options are "a", "b" and "d".

Solution-28: All are true.

Solution-29: Python and Go have OOP.

Solution-30: Correct answers are "a", "b" and "c". "d" must be HiveQL.

Solution-31: It is called "function overloading" and also "Polymorphism"

Solution-32: ZFS is transactional file system, all other are journaling FS.

Solution-33: All are true.

Solution-34: Correct answer is "d"

Solution-35: Correct answer is "c"

Solution-36: Correct answer is "b"

Solution-37: Correct answers are "a" and "d"

Solution-38: Correct answer is "c"

Solution-39: Cisco IoT reference model has 7 layers.

Solution-40: Correct answer is "d".

Solution-41: Correct answer is "b".

Solution-42: Correct answer is "c".

Solution-43: There is no software named "IntelliQ", all other are message broker.

Solution-44: genkex correspondent command is lsmod, not insmod

Solution-45: Correct answer is "c".

Solution-46: Ansible uses WinRM for Windows management.

Solution-47: Correct answers are "c" and "d"

Solution-48: Correct answers are "a" and "b"

Solution-49: correct answer is "b"

Solution-50: Correct answers are "b", "c" and "d".

There are Stego IDS (SIDS) systems detecting steganography.

Bulent Yucesoy was born in Ankara at 16.04.1982.

He went to elementary school and middle school at Izmir.
(1988-1996)

He later on was accepted to Izmir Science High School. (1997-2000)

He won university and entered ITU Computer Engineering Department.
(ITU = Istanbul Technical University)

He loved computer engineering and continued at same university for his master degree (2004-2007) after he finished bachelor.
(2000-2004)

While making master education, he also worked at university IT Office (www.bidb.itu.edu.tr).

After his military service, he worked for 2 years at Kocnet Telecom (Vodafone acquired it) company (2008-2010).

Afterwards he joined Garanti Technology and he is working there since 2010. (www.garantiteknoloji.com.tr)

He likes details, thinks that devil hides inside details.

He loves his wife Ipek, his son Cagan and lastly he loves learning. (that's why he thinks information is delicious.)

This book is for people who also loves learning.

Hope you also like the book.

You can send comments to bulent.yucesoy@gmail.com

Let's summarize Bulent's philosophy with a wonderful Ataturk's saying. It is valid for all the world, all the people;

"If you love your country, do your best in your job"

