Information Taste – six

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 point"
* If your answers are "b,d,e" -> your score is = (-1) + (-1) + (-1) = "-3 points"
 * If your answers are "a,b,c,d,e" -> score = 1 + (-1) + 1 + (-1) + (-1) = "-1 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 about ASM

   a. ASM is a cluster file system
   b. ACFS is ASM extension to store non-oracle files inside cluster file system
   c. you can filter asm disks inside OS with ASM_DISKSTRING parameter
   d. you can label asm disks with mknod by creating character devices
   e. ASM disks must have oracle:oinstall ownership and 660 permission at OS level
   f. ASMFD prevents any writes except oracle software (eg: root cant make dd on disk)

Question-2: select all network protocols that support RDMA (remote direct memory access)

a. RoCE
b. IWARP
c. IB
d. IPoIB

Question-3: select products that support RDMA

   a. Apache Hadoop
   b. Apache Spark
   c. GlusterFS
   d. Ceph object storage
   e. TensorFlow ML library

Question-4: Select all true statements

a. NVMe is an alternative to SCSI
b. NVMe generally focus SSDs and flash memories.
c. NVMe use less CPU at IO operations than SCSI
d. NVMe does not need IO locking.
e. NVMe-oF is better than NVMe at transport layer

Question-5: Which is not a basic component of VERIS incident reporting schema?

   a. Actions
   b. Actors
   c. Assets
   d. Attributes
   e. Auditors

Question-6: Which is not a HA/DR term?

   a. RTO
   b. RPO
   c. WRT
   d. MTD
   e. MTO

Question-7: select all true statements

   a. oracle CDB can include many PDB databases
   b. oracle PDB Relocate enables PDB live migration between CDBs
   c. PDB Refresh periodically updates PDB clones.
   d. PDB switchover may be used to switch between on-prem and cloud.

Question-8: what is Infiniband correspondant of TCP protocol?

   a. IB RC
   b. IB UD
   c. IB QP
   d. IB SDP

Question-9: Select all true statements about SCTP protocol

a. It is also called TCPng
b. It provides features for IP Telephony SS7
c. TCP handshake is 3-way. SCTP handshake is 4-way
d. SCTP sends multiple data streams at the same time

Question-10: What is the single common Oracle database interface handling all OSI-standard transport and network layer protocols?

a. Oracle Call Interface (OCI)
b. Two-Task Common (TTC)
c. Transparent Network Substrate (TNS)
d. Oracle protocol support layer

Question-11: which config(s) at ifcfg files prevent NetworkManager modifying /etc/resolv.conf

a. PEERDNS=no
b. PEERROUTES=no
c. NM_CONTROLLED=no
d. USERCTL=yes

Question-12: select all clustering solutions that prevent split-brain issues

a. RedHat Cluster Quorum Disks
b. Oracle Solaris Cluster Quorum Disks
c. VCS coordinator disks
d. GPFS tiebreaker disks

Question-13: select all correct non-volatile flash memory techologies

a. NAND
b. AND
c. NOR
d. OR

Question-14: which provides Linux to access CEPH storage like ordinary block devices?

a. RBD
b. RGW
c. CephFS
d. iSCSI gateway

Question-15: select all true about CEPH

a. SATA disks can give good performance as OSD. SSD is not necessary.
b. CRUSH algorithm provides good performance at CEPH
c. Journal disk must be separate from OSD (Object Storage Device) disks
d. SSDs can be used at CEPH journal disk

Question-16: You want to make Solaris Cluster failover tests.
You dont want to go to datacenter to unplug/plug network cable.
You have ILOM console access to the server.
which network module insertion with ifconfig (ifconfig modinsert) and module removal (ifconfig modremove) achieves the same test?

a. ipqos
b. firewall
c. ldterm
d. vpnmod

Question-17: Select all possible network condition simulation tests you can do with ncsconfig on Solaris 11?

a. Propagation delay
b. Bandwidth
c. Drop rate
d. Packet reordering
e. Corruption

Question-18: select all alternatives to ILOM
a. HMC
b. XSCF
c. RMM2
d. ALOM

Question-19: select all true statements about IBM Power servers

 a. service processor name is FSP
 b. FSP provides multiple management interfaces like HMC, ASMI, CIM & IPMI.
 c. You can access ASMI through HMC
 d. FSP provides no local command line support via SSH/telnet

Question-20: Select all true about Hyper-Converged Infrastructures (HCI)

 a. SDDC is an HCI sample
 b. IaC is also an HCI sample
 c. Assets not plug-and-play compatible produce a challenge for HCI
 d. HCI makes scale-out data centers easier.

Question-21: which theorem/law tells about overall paralel performance after making
some tasks paralel

 a. Amdahl's law
 b. Little's law
 c. Queue theory
 d. Power Law

Question-22: select all app security techniques

 a. WAF
 b. RASP
 c. IAST
 d. DAST

Question-23: Which is not Infiniband Routing protocol that Subnet Manager uses?

 a. Minimum Contention Routing
 b. Deterministic Source based Routing
 c. Load Balancing Routing
 d. Deterministic Destination based Routing

Question-24: Select all AIOps use cases

 a. ITSM operations
 b. capacity plannings
 c. event correlation analysis
 d. Chatbot application giving help-desk service

Question-25: which one is not infiniband protocol?

 a. UDACL
 b. ZDP
 c. ZKP
 d. SRP

Question-26: which are used for Zfs pool recovery?

 a. zpool scrub
 b. zpool replace
 c. zpool import –Ff
 d. zpool clear

Question-27: what is UNIX epoch time?

 a. 1 january 1969
 b. 31 december 1969
 c. 1 january 1970
 d. 31 december 1970

Question-28: select all IoT Operating Systems

 a. RIOT
 b. TinyOS
 c. FreeRTOS
 d. Apache Mynewt

Question-29: select all true about POSIX

a. POSIX means portable operating system interface, forms portability standards
b. Some POSIX standards may become old limitations for growing needs.
c. POSIX username limit is 8 character, but useradd command limit is 32 character
d. POSIX just includes UGO permissioning, while enterprises use ACL permissioning

Question-30: which will increase when switched from monolithic applications to microservices?

a. Flexibility
b. Complexity
c. Scalability
d. Continous Delivery
e. Reliability

Question 31: What is the most preferred method to switch monolithic applications to microservices?

a. Greenfield deployment
b. Code Refactoring
c. Single Responsibility Principle
d. The Strangler Pattern

Question-32: Microservice applications fit which axis in scale cube

a. X-axis
b. Y-axis
c. Z-axis

Question-33: Select all data integration techniques

a. EAI
b. ETL
c. ELT
d. CDC

Question-34: Select all correct HDFS encryption related terms

a. ZONE
b. DEK
c. EDEK
d. KMS

Question-35: Which one belongs to a different category?

a. HIPAA
b. PCI DSS
c. FISMA
d. ITIL

Question-36: select languages that dont have garbage collection?

a. C
b. C++
c. Java
d. Python

Question-37: select all true statements

a. swappiness can be set per process within cgroups.
b. you can use mlock() to prevent swapping of your application pages.
c. uncontrolled memory leaks will cause swapping
d. it is better to prefer disabling swap if you also have server redundancy

Question-38: select all non-Turing complete languages

a. ANSI SQL
b. Regular expressions
c. HTML
d. JSON
e. YML
f. S-EXPRESSIONS

Question-39: Select all true statement(s) about "In-Memory Data Grids (IMDG)"

a. IMDG works better with data partitioning than NoSQL,NewSQL,IMDB
b. IMDG provides ACID consistency with 2-phase-commit (2PC) protocol
c. IMDG may use MVCC locking and meanwhile reduce private network communications
d. Together with In-Memory Compute Grids, IMDGs give better scalable applications

Question-40: select all In-Memory Data Grid Platforms

a. Hazelcast
b. Websphere eXtreme Scale
c. Ehcache
d. Red Hat Jboss Data Grid
e. Oracle Coherence
f. GridGain

Question-41: select correct S-expressions usage areas

a. SPKI
b. LISP
c. SCALA
d. XML

Question-42: What are correct basic functionalities of IMCG (In-Memory Compute Grid) systems?

a. Distributed Deployment & Processing
b. Distributed Resource Management
c. Distributed Execution Models
d. Distributed Execution Services
e. Distributed Analysis & Reporting

Question-43: select all correct programming languages generation history statements

a. first generation programming languages are machine-codes
b. second generation is assembly languages.
c. C is an example for 3rd generation
d. fourth generation includes statements near to human language.
   Python,Ruby are examples of generation-4.
e. 5th generation is last generation with visual tools to code.
   Prolog is an instance for generation-5

Question-44: which is not a computer scam activity?

a. Phishing
b. Catfish
c. 419
d. DDoS

Question-45: Which is not a model used in IMCG Breadth

a. MapReduce Processing
b. Streaming Processing & CEP
c. MPI-Style Processing
d. Waterfall Processing

Question-46: select all true about FEC (Forward Error Correction)

a. FEC does not have handshake mechanism, so suitable for broadcast communication
b. Sender sends redundant data to prevent data transmission errors
c. Gen-6 32-gbit FC networks implement this feature.
d. FEC uses byte error recovery

Question-47: select all correct temporary Linux alias disabling methods?

a. run "unalias" command
b. run alias by escaping it with "\"
c. run command full path instead of alias
d. run alias by using "command" command.

Question-48: select all true about linux shell prompts

a. prompt can be modified by setting PROMPT_COMMAND
b. you can configure colored prompts by using color codes after "\e[" symbol
c. you can configure prompt color codes by also using tput command
d. PS2 variable is used when OS runlevel is 2.

Question-49: when needed HISTCONTROL configured, which preceding character can be put in front of commands, not to make them logged inside history?

a. comment character (#)
b. escape character (\ )
c. space character ( )
d. minus character (-)

Question 50: what is the project name for Hadoop on top of Openstack?

a. Sahara
b. Zaqar
c. Ironic
d. Trove

SOLUTIONS

Solution-1: all true
Solution-2: all support RDMA
Solution-3: all work with RDMA
Solution-4: all true
Solution-5: e
Solution-6: e
Solution-7: all true
Solution-8: IB RC is TCP. IB UD is UDP. IB QP is PORT. SDP enables RDMA for socket-app
Solution-9: all true
Solution-10: it is TNS.
Solution-11: A and C prevents NetworkManager.
Solution-12: all make fencing to prevent split-brain.
Solution-13: Non-volatile flash types are NAND and NOR.
Solution-14: Rados Block Device – RBD provides this.
Solution-15: all true
Solution-16: ldterm
Solution-17: all possible to test
Solution-18: all true
Solution-19: all true
Solution-20: all true
Solution-21: it is Amdahl's Law
Solution-22: WAF and RASP provide application security.
Solution-23: d
Solution-24: all true
Solution-25: ZKP is Zero-Knowledge-Proof. It is unrelated with IB.
Solution-26: all provide zpool recovery. Replace is used with hot spares.
Solution-27: UNIX epoch time is 1 January 1970.
Solution-28: all true
Solution-29: all true
Solution-30: all true except COMPLEXITY
Solution-31: Strangler Pattern is most used for transferring to microservices.
Solution-32: Microservices is Y-axis in scale cube.
Solution-33: all true
Solution-34: all terms used in HDFS encryption.
Solution-35: ITIL is different. First three are regulations.
Solution-36: c and c++ does not have garbage collection.
Solution-37: all true
Solution-38: all true
Solution-39: all true
Solution-40: all true
Solution-41: a,b and c are correct.
Solution-42: first 4 are true
Solution-43: all true
Solution-44: DDoS is break-down attack. Others are SCAM
Solution-45: Waterfall is traditional monolithic software process modelling.
Solution-46: all true except D. FEC uses bit error recovery
Solution-47: unalias is permanent solution, B-C-D are temporary disabling.
Solution-48: B and C are correct
Solution-49: single space is enough if "export HISTCONTROL=ignorespace" is done
Solution-50: Hadoop on OpenStack is Project SAHARA.

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"