April 2019

IT Passport Examination

Questions must be answered in accordance with the following:

Question Nos.	Q1 – Q100
Question Selection	All questions are compulsory.
Examination Time	9:30 – 11:30 (120 minutes)

Instructions:

1. Use a pencil.   If you need to change an answer, erase your previous answer completely and neatly.   Wipe away any eraser debris.

2. Mark your examinee information and your answers in accordance with the instructions below.   Your answer will not be graded if you do not mark properly.   Do not mark nor write on the answer sheet outside of the prescribed places.

    (1) **Examinee Number**

    Write your examinee number in the space provided, and mark the appropriate space below each digit.

    (2) **Date of Birth**

    Write your date of birth (in numbers) exactly as it is printed on your examination admission card, and mark the appropriate space below each digit.

    (3) **Answers**

    Select one answer (a through d) for each question.

    Mark your answers as shown in the following sample question.

    [Sample Question]

      Q1. In which month is the fall IT Passport Examination conducted in 2018?

    a) August   b) September   c) October   d) November

    Since the correct answer is "c)" (October), mark your answer sheet as follows:
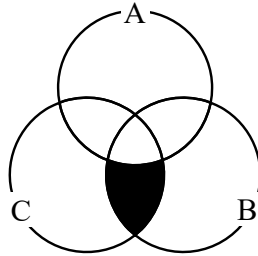
    [Sample Answer]

Q1	ⓐ	ⓑ	●	ⓓ

Do not open the exam booklet until instructed to do so.

Inquiries about the exam questions will not be answered.

Q1. Which of the following is a search condition for the black area of the Venn diagram shown below?

a) (not A) and B and C   b) (not A) and (B or C)

c) (not A) or (B and C)   d) (not A) or (B or C)

Q2. Japanese restaurants in Sapporo and Japanese restaurants in Hakodate are to be searched for together. Which of the following is the logical expression that represents the search condition?

a) ("Sapporo" AND "Hakodate") AND "Japanese restaurant"

b) ("Sapporo" AND "Hakodate") OR "Japanese restaurant"

c) ("Sapporo" OR "Hakodate") AND "Japanese restaurant"

d) ("Sapporo" OR "Hakodate") OR "Japanese restaurant"

Q3. When a path goes from node A_1 to node C_2 in Fig. 1 and the passing nodes are counted as shown in Fig. 2, there are three shortest paths with the minimum number of passing nodes. How many shortest paths are there available to go from node A_1 to node D_4 via node C_2?
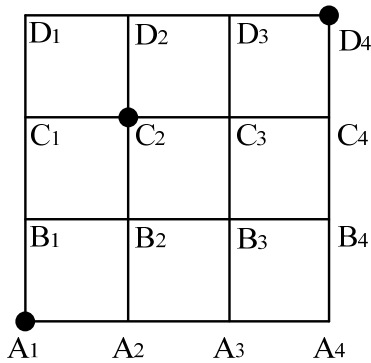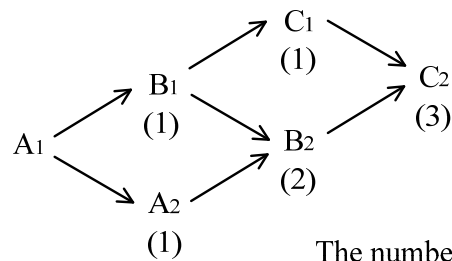

Fig. 1	**Fig. 2**

The number in parentheses below a node represents the number of shortest paths from A_1 to that node.

a) 6   b) 9   c) 12   d) 20

Q4. As shown in the figure below, decimal numbers 2, 5, 10, and 21 are represented using five squares that are black or white.

    2   □□□■□
    5   □□■□■
    10   □■□■□
    21   ■□■□■

A white square indicates 0, and a black square indicates a different positive value that is determined depending on the position of the square. When the sum total of the values of the five squares shows a decimal number, which of the following is the decimal number that is represented by ■■□□□?

a) 12   b) 20   c) 24   d) 30

Q5. The data is exchanged between variable *A* and variable *B*.   When variable TMP is used to temporarily store data, which of the following is the procedure for exchanging data correctly?   Here, "$x \leftarrow y$" indicates that the data of "x" is replaced with the data of "y".

a)
| TMP ← *A* |
| *A* ← *B* |
| *B* ← *A* |

b)
| TMP ← *A* |
| *A* ← *B* |
| *B* ← TMP |

c)
| TMP ← *B* |
| *A* ← *B* |
| *B* ← TMP |

d)
| TMP ← *B* |
| *A* ← *B* |
| *B* ← *A* |
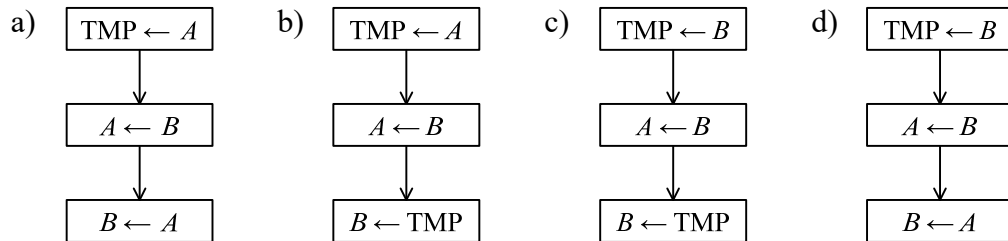
Q6. The procedure described below is sequentially performed for two variables x and y, starting with step (1).   When the procedure is completed, what is the resulting value of x?

[Procedure]
   (1) Assign 2 to *x* and 3 to *y*.
   (2) Subtract 1 from the value of *y*, and assign the resulting value to *y*.
   (3) Add the values of *x* and *y*, and assign the resulting value to *x*.
   (4) If the value of *y* is 1, complete the procedure. Otherwise, return to step (2).

   a) 4   b) 5   c) 7   d) 8

Q7. In a markup language, with the purpose of displaying on a screen and printing, it is possible to directly embed not only the document content, but also the document structure and layout information, and the character font and size.   Which of the following is classified into such a markup language?

   a) CASL   b) HTML   c) SQL   d) URL

Q8. Which of the following represents a processing procedure of a program graphically in a visual way?

    a)   Gantt chart   b)   Data flow diagram

    c)   Flowchart   d)   Radar chart

Q9. There is a desk that can hold at most four (4) files. On this desk, six (6) files A through F are used for a job. When the fifth file needs to be put on the desk, the file with the longest time since the last use among the four (4) will be put in a drawer. If the files are put on the desk and referenced in order of A, B, C, D, E, C, B, D, F, B, which of the following is the last file to be put in the drawer?

    a) A b) B c) D d) E

Q10. Which of the following is an appropriate description concerning a CPU?

    a) The cache memory that is integrated into a CPU is used to virtually extend the capacity of the main memory.

    b) A CPU is equipped with the arithmetic and logical function that serves as part of control functions.

    c) A CPU is categorized as a 16-bit, 32-bit, or 64-bit CPU depending on the data volume processed at a time, but the width in bits is not related to the performance.

    d) For CPUs that have the same architecture, the higher the clock frequency, the faster the response time.

Q11. Which of the following is an appropriate description concerning flash memory?

    a) It becomes read-only storage once data is written.

    b) No power supply is required to retain stored data.

    c) It is not used for digital cameras because of the difficulty of downsizing.

   d) Data is read or written using laser light.

Q12. Among the interface standards (i) through (iv), which of the following contains all and only the standards that do <u>not</u> need a physical connection with cables and the like?

       (i) Bluetooth
       (ii) IEEE 1394
       (iii) IrDA
       (iv) USB 3.0

   a) (i), (ii)   b) (i), (iii)   c) (ii), (iii)   d) (iii), (iv)

Q13. Which of the following is an appropriate description about a device driver?

   a) Software for controlling and operating peripherals that are connected to a PC
   b) Software that is started immediately after a PC is turned on, and enables basic input/output to the hard disk and the keyboard before the OS starts
   c) Software to be embedded in a Web browser for displaying pages that contain video
   d) Software that integrates multiple files into one (1) file and restores the original files from the file

Q14. Among the system configurations shown below, which of the following has the lowest probability of causing the entire system to stop at the occurrence of a failure? Here, ⊣□⊢ represents an identical device. When the devices are connected in parallel, only one device must be running, and when the devices are connected in serial, all devices must be running.
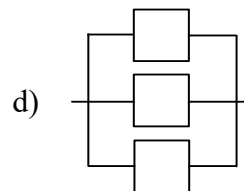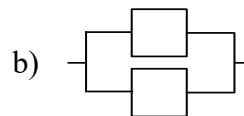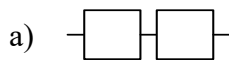
Q15. When MTBF is 600 hours and MTTR is 12 hours, what is the approximate availability?

   a) 0.02   b) 0.20   c) 0.88   d) 0.98

Q16. Which of the following is an explanation of characteristics of a dual system?

a) It provides two (2) sets of systems that perform the same processing and checks the correctness of the processing by comparing the results. If one of the systems fails, it isolates the failed system and continues the processing.

b) The same two (2) devices are used, so that the processing capability can be increased to double that of a simplex system.

c) It provides a currently used system for performing online processing and also a backup system that is made on standby while performing batch processing. In the event of a failure in the currently used system, it switches to the backup system, starts the online processing on it, and continues the service.

d) It connects multiple devices in series and configures them in such a way that the load of each function is distributed among them, so that processing capability is high. But if any one of the devices fails, it becomes unable to provide the service.

Q17. What is the minimum amount (in Mbytes) of virtual memory that is required under the conditions below?

[Conditions]

1. Memory required for the OS: 200 Mbytes

2. Memory required for applications: An amount of 50 Mbytes is required for each application, and a total is calculated by multiplying it by the number of applications that run concurrently.   Eight (8) applications run concurrently.

3. Memory required for controlling main memory or other related functions: In addition to 512 Mbytes of main memory, a minimum amount of 20 Mbytes is required.

4. Required virtual memory: The required amount is the sum of the above 1 through 3.

   a) 762   b) 782   c) 1,112   d) 1,132

Q18. Which of the following explains the functions of an archiver, which is one (1) type of data management utility?

a) It creates areas on hard disks for storing data and managing such stored data.

b) It packs multiple files into a single file or restores them for data backup or distribution.

c) It protects data through such functions as file protection to secure the data from unauthorized use or destruction, and copy protection to prevent illegal data copying.

d) On a fragmented hard disk, it reorganizes files by placing them in consecutive blocks as much as possible.

Q19. Which of the following is an appropriate description concerning OSs used for PCs?

a) Since the interface between an OS and application programs is standardized, the application programs can be developed without regard to the type of OS.

b) An OS allocates the computer resources, such as the CPU, memory, and auxiliary storage device, to application programs.

c) Since an OS has the function of automatically converting character set of a file, application programs can access the file without regard to the character set.

d) The source code of an OS is required to be disclosed so that application programs can be free to use the various functions of the OS.

Q20. A spreadsheet program is used to create a quick reference chart for the compound interest per a principal of 1,000 dollars. Which of the following is the expression that should be entered in cell B4? Here, the expression in cell B4 is copied to each of cells B4 through F13.

	A	B	C	D	E	F
1	Principal	1,000				
2	Interest rate	0.02	0.025	0.03	0.035	0.04
3	Number of years					
4	1					
5	2					
6	3					
⋮	⋮	⋮	⋮	⋮	⋮	⋮
13	10					

a) B1*((1+$B2)^$A4−1)

b) B1*((1+$B2)^A$4−1)

c) B1*((1+B$2)^$A4−1)

d) B1*((1+B$2)^A$4−1)

Q21. Which of the following is the most appropriate purpose of installing a business application software package instead of developing own application software?

a) To enhance the environment of development

b) To reduce the cost of development

c) To acquire the knowledge of software development methods

d) To improve the skills of application developers

Q22. Which of the following is an appropriate description about the function keys of a PC?

a) They are the keys where specific functions are assigned for each application and OS.

b) They display a keyboard shape on a screen and enable input processing with software.

c) They have a security role and are keys for performing encryption and decryption.

d) They are information to identify specific lines uniquely in a database.

Q23. Which of the following is a computer that is used for tasks such as global scale environmental simulations and DNA analysis, and was developed with the objective of processing large amount of calculations at ultra high speed?

a) Virtual computer
b) Super computer
c) General purpose computer
d) Microcomputer

Q24. Which of the following is the copyright protection technology that is used for a DVD-R and an SD card, and allows digital content to be duplicated to recording media only once?

a) AR
b) CPRM
c) HDMI
d) MIDI

Q25. Which of the following is an appropriate description concerning the characteristics of video distribution using streaming?

a) The data to be distributed must be stored on the server beforehand, and videos of events and sports cannot be distributed while they are being shot.

b) Deterioration in video quality due to partial loss of data in reception can be completely eliminated.

c) Warm-up time is not required for starting playback of a video, and therefore, the viewer can immediately start watching the video.

d) Rather than waiting for the entire video data to be downloaded, playback starts as soon as some data has been received.

Q26. Among the processes where multiple users simultaneously access the same database, which of the following is a process that **does not need** a countermeasure for securing transaction consistency?

a) A bidding process for an auction

b) An ordering process for online sales

c) A search process for library information

d) A reservation process for train tickets

Q27. Which of the following is a term for an operation that extracts only the rows (records) with a price of 100 yen or more, from the "Product" table of a relational database?

Product

Product_number	Product_name	Price (yen)
S001	Scissors	200
S002	Pencil	50
S003	Notebook	120
S004	Eraser	80
S005	Ruler	150

a) Join   b) Projection   c) Selection   d) Union

Q28. A customer name and his or her address, a product name and its unit price, the number of products ordered by the customer, and the date of order are to be managed by using a relational database. Which of the following is an appropriate table after normalization? Here, the underline represents primary keys, and there are same customer names and product names.

a) CUSTOMER

CustomerNumber	CustomerName	Address

PRODUCT

ProductNumber	ProductName	UnitPrice

ORDER

OrderNumber	CustomerNumber	ProductNumber	Quantity	Date

b) CUSTOMER

CustomerNumber	CustomerName	Address

PRODUCT

ProductNumber	ProductName	UnitPrice

ORDER

OrderNumber	CustomerName	ProductName	Quantity	Date

c) CUSTOMER

CustomerNumber	CustomerName	Address	Date

ORDER

OrderNumber	CustomerName	ProductName	UnitPrice	Quantity

d) PRODUCT

ProductNumber	ProductName	UnitPrice	Quantity

ORDER

OrderNumber	ProductNumber	CustomerName	Address	Date

Q29. When character strings are searched by using wildcard characters with expression "*A*.te??", which of the following lists all and only the character strings that match the search condition among the character strings I through IV? Here, the wildcard character "?" represents any one (1) character and "*" represents a character string that consists of zero (0) or more of any characters.

I   A.text
II AA.tex
III B.Atex
IV BA.Btext

a) I   b) I, II   c) II, III, IV   d) III, IV

Q30. Which of the following is an appropriate description concerning communications protocols?

a) There are no communications protocols that are used in analog communication.
b) They are developed only by international organizations, and those developed independently by manufacturers are not called communications protocols.
c) In communications protocols, only the procedure of actions in normal cases are defined.
d) Devices that are provided by different manufacturers or have different OS can communicate with each other if they use the same communications protocol.

Q31. When another network such as the Internet is accessed from a network in an office or a household, which of the following fulfills the role of an entrance or an exit to the other network?

a) Splitter   b) Default gateway
c) Hub   d) Repeater

Q32. Which of the following is used to identify a wireless network?

   a) Bluetooth   b) SSID   c) LTE   d) WPA2

Q33. Which of the following network is a WAN?

a) It is a network that uses a company's own communication lines, and connects buildings within the same premises.

b) It is a network that connects the floors in a company's building.

c) It is a network that uses a communications service provider's communication lines, and connects a head office with branch offices.

d) It is a network that connects the PCs on one floor.

Q34. Mr. *A* sent an e-mail message to the recipients below. Which of the following is an appropriate explanation of the information that the recipients of the message can determine?

[Destinations]
To: Mr. *B*, Mr. *C*
Cc: Mr. *D*
Bcc: Mr. *E*, Mr. *F*

a) Mr. B can see that the same message was also sent to Mr. E.

b) Mr. C can see that the same message was also sent to Mr. B and Mr. D.

c) Mr. D can see that the same message was also sent to Mr. E.

d) Mr. E can see that the same message was also sent to Mr. C and Mr. F.

Q35. Which of the following is a term for software that encrypts files on a PC in order to make them unusable, and demands money or other valuables in exchange for the decryption key?

a) Keylogger   b) Ransomware
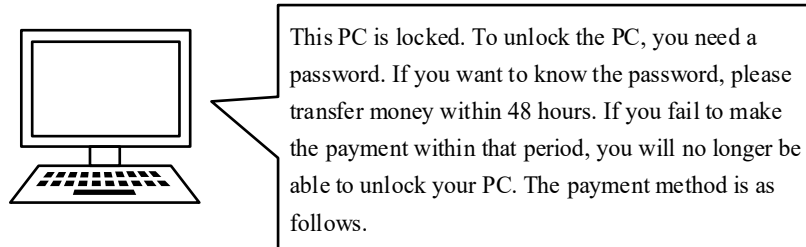
c) Rootkit   d) Worm

Q36. When treatments against information security risks are categorized into risk transfer, risk avoidance, risk acceptance, and risk reduction, which of the following is the description that corresponds to risk acceptance?

a) Taking security measures, and reducing the likelihood that problems will occur
b) Without taking any special action, estimating the impact when damage occurs
c) Shifting risk to a third party through insurance
d) Removing the causes of a problem, and eliminating the likelihood that the risk will materialize

Q37. Which of the following is an appropriate description about password management?

a) A password that is used for a business system should not be used for any private Internet services.
b) The initial password should not be changed until a user becomes familiar with the operation of login to the system.
c) Several passwords should be prepared and used in rotation.
d) A password should be stored in a plaintext file and saved on a PC.

Q38. When a user accessed the URL in the body of an e-mail message with a PC, the message shown in the figure appeared on the screen and the PC was locked. What is used in this attack?

This PC is locked. To unlock the PC, you need a password. If you want to know the password, please transfer money within 48 hours. If you fail to make the payment within that period, you will no longer be able to unlock your PC. The payment method is as follows.

a) Keylogger
b) Spyware
c) Bot
d) Ransomware

Q39. Which of the following is <u>not an example</u> of a cyber attack?

a) With a purpose of obtaining confidential information, looking for recorded media that were disposed of from an office
b) By exploiting a vulnerability of a server, breaking into its Web site, and making unauthorized modification to its data
c) By sending a large amount of requests at once, disrupting a service
d) By using a back door, remotely controlling another person's PC

Q40. In a corporate network, which of the following is a server that should be installed in a corporate LAN rather than in the demilitarized zone (DMZ)?

a) An e-mail server that receives e-mails from outside the company
b) A DNS server where IP addresses of servers that are open to the public are registered
c) A file server that stores confidential information of the company
d) A Web server that publishes information to the outside of the company

Q41. Among the information I through IV used for authentication, which of the following lists all and only the biometrics used for authentication?

I   PIN (Personal Identification Number)

II Iris

III Fingerprint

IV Vein

a) I, II, III   b) II, III   c) II, III, IV   d) IV

Q42. When information security management is based on the PDCA cycle, which of the following corresponds to *C*?

a) The objectives, processes, and procedures for information security are established.

b) Improvement is made through corrective and preventive actions on the basis of an evaluation.

c) Processes and procedures are introduced and operated.

e) Effectiveness of the processes are measured and evaluated.

Q43. Which of the following is appropriate as the characteristic of single sign-on?

a) It is an effective countermeasure for information leakage because data is processed and stored on a server side, and data does not remain on devices.

b) It implements high availability because when the data is saved, it is automatically distributed and stored on multiple disks.

c) It implements high confidentiality because it employs authentication that uses fingerprint and iris in addition to a password.

d) It implements high convenience because once a user is authenticated, he or she is allowed to use multiple services without any more authentication.

Q44. Among I through III below, which of the following lists all and only the appropriate measures for preventing a PC from getting infected with viruses?

I   Applying a security patch to software
II Striping across hard disks
III Educating users on security

a) I   b) I, II   c) I, III   d) II, III

Q45. Company *A* has decided to digitize a paper list of customers and manage customers by using electronic data. Which of the following is an appropriate method for preventing information leakage from the electronic data of the customer list?

a) Attaching a digital signature to the data
b) Frequently obtaining backups of the data
c) Saving the data on a RAID disk
d) Encrypting the data

Q46. The system development process includes system requirements definition, system design, programming, test, and software acceptance. When a new system is developed, which of the following is defined as a system requirement in the initial stage of development?

a) Device configuration of the system
b) Development standard of the system
c) Scope of the system
d) Test plan of the system

Q47. In the process of system requirements definition, which of the following is an appropriate evaluation criteria for system requirements?

a) Consistency with results of system integration test
b) Consistency with needs of system outsourcer
c) Appropriateness of the design method used
d) Coverage of test cases

Q48. Which of the following is an appropriate test for a user to confirm by himself/herself whether the delivered software satisfies the requirements?

a) Acceptance test
b) Integration test
c) System test
d) Unit test

Q49. It has been decided that a department will participate in the test of a newly developed business system as the user department. Which of the following is an appropriate matter that should be confirmed as the user department?

a) Business requirements are satisfied.
b) Individual programs run according to the program specifications.
c) The network that is used by the system can be monitored according to the predetermined procedure.
d) Data is exchanged between the programs as specified in the design document.

Q50. Software development models include the waterfall model, spiral model, prototyping model, and RAD, etc. Which of the following is the most appropriate explanation of the waterfall model?

a) After all activities in each phase in the development are complete, the project proceeds to the next phase.
b) The functions to be developed are divided, and each function is efficiently and swiftly developed with the use of development tools and parts.
c) At an early phase in software development, a prototype is created that enables users to visually confirm requirements.
d) The functions of a software are divided, and the software is gradually completed through repeated design and development for each function so that feedback from users can be incorporated.

Q51. In a system development project, the project manager must appropriately communicate with project members. Which of the following is an appropriate item to be considered concerning communication with project members?

a) The method of communication should be selected according to the information to be communicated, for example, when confidentiality is emphasized, a meeting with limited project members should be held, and when efficiency is emphasized, a broadcast e-mail message should be sent.

b) As efficiency should be emphasized over urgency and confidentiality, communication methods such as e-mail and electronic bulletin boards should always be used.

c) In order to maintain fairness, the same communication method and materials must be used for both external project stakeholders and project members.

d) When information is sent to project members, there is no need to confirm that the information is received as the project members have a duty to receive the information.

Q52. Which of the following is the most appropriate description of stakeholders in a system development project?

a) They are individuals and organizations such as users of the developed system and managers in the development division.

b) They are sponsors who bear the cost of system development.

c) They are events that may negatively affect the project and other events that may positively affect the project.

d) They are project deliverables and tasks that are performed to create the deliverables.

Q53. Which of the following is an appropriate activity for project human resources management in a system development project?

a) Determining the type of deliverables to be created in external design phase

b) Creating a schedule for the integration test

c) Estimating personnel costs for defining system requirements

d) Conducting training to improve programming skills

Q54. There are negative and positive risks in a project. Among the treatment of risks in scheduling, which of the following corresponds to a treatment of a positive risk?

a) Having all members receive vaccination before influenza spreads to prevent the members from not being able to work

b) Reducing the entire project duration by carrying out tasks for creating software programs in parallel when the overall cost can be reduced by advancing the schedule

c) Securing replacement staff in advance in preparation for delay due to unexpected withdrawal of staff

d) Purchasing insurance in preparation for payment of a penalty due to delivery delay

Q55. Which of the following is an appropriate description of WBS creation in project management?

a) Lowest level works are defined by decomposing a work into the one that can certainly be completed in one (1) day by one (1) person.

b) Higher level works are defined by accumulating smaller units of work one by one.

c) Works needed to create deliverables are decomposed and defined.

d) All works are defined at the same depth of hierarchy in one (1) project.

Q56. Project management knowledge areas are classified into project cost management, project scope management, project quality management, project risk management and other areas. Which of the following is an appropriate activity performed in project quality management?

a) To define and manage necessary work procedures and the measure of performance level in order to comply with deliverable acceptance criteria

b) To manage a project so that it can be completed within the budget

c) To identify potential events that may have negative impact on the project, analyze them, plan responses, and conduct monitoring and control

d) To define and manage works that need to be performed for the success of the project

Q57. In a project where 60 programs are created with a budget of 18 million yen, when the status of the project was checked 20 days after the start of the project, it was found that 40 out of the 60 programs have been completed at a cost of 15 million yen. If the project continues to proceed at the same pace, what is the excess of cost over budget? Here, the scale of all programs and productivity are the same.

a) 3 million yen   b) 4.5 million yen   c) 6 million yen   d) 7.5 million yen

Q58. For confidential information that is managed in an information system, which of the following is an appropriate measure that is taken from the facility management perspective to prevent information leakage?

a) Installation of antivirus software
b) Entrance and exit control for a building that has a computer room
c) ID and password management for information systems
d) Encryption of electronic documents

Q59. In order to provide a service that meets customer needs, which of the following is an appropriate approach in which an organization performs maintenance, management, and continuous improvement for operation of an information system?

a) IT governance
b) IT service management
c) Service desk
d) Project management

Q60. Concerning an information system that is used by the department *A* and department *B*, the support department received information from user *C* that a report was not able to be printed from a printer on the network. When a failure of printing reports is defined in the SLA as below, which of the following is an action that complies with the SLA to be taken by the support department?

- A failure shall be notified to the administrator of each user department within 20 minutes after the receipt of the failure information.
- The failure shall be resolved and the recovery from the failure shall be notified to the person who sent the information as well as the administrator of each user department within two (2) hours after the receipt of the failure information.

a) The department investigated the cause and took measures immediately after the receipt of the information. The department notified the occurrence of the failure and the recovery from failure to user C as well as the administrators of the departments A and B after 30 minutes from the receipt of the information.

b) The department notified the occurrence of the failure to the administrators of the departments A and B after 10 minutes from the receipt of the information. The support department took measures and notified the recovery from failure to the administrators of the departments A and B after one (1) hour from the receipt of the information.

c) The department notified the occurrence of a failure to the administrator of the department A after 10 minutes from the receipt of the information and to the administrator of the department B after 30 minutes from the receipt of the information. The support department took measures and notified the recovery from the failure to user C and the administrators of the departments A and B after one (1) hour from the receipt of the information.

d) The department notified the occurrence of a failure to the administrators of the departments A and B after 15 minutes from the receipt of the information. The support department took measures and notified the recovery from the failure to user C and the administrators of the departments A and B after one (1) hour from the receipt of the information.

Q61. Which of the following is an appropriate purpose of providing FAQ to users in IT service management?

a) Providing a framework of IT service management
b) Defining a target value for the service level on the sides of both service provider and users
c) Establishing a single point of contact for users to accept all kinds of inquiries concerning the service
d) Supporting users so that they can solve problems by themselves

Q62. Which of the following is an appropriate measure of facility management that maintains and protects facilities and equipment of an information system?

a) Reviewing the fuel replenishment plan in order to maintain the appropriate duration that power can be generated with a private power generation system
b) Introducing asset management software in order to manage all the company's own software centrally
c) Standardizing how to set a screen saver in order to prevent unauthorized use of the PCs
d) Reviewing the firewall settings in order to enhance the prevention of unauthorized access

Q63. Which of the following is an appropriate measure to implement internal controls function?

a) A job description indicating the scope of work and roles is not created.
b) A work handover document for a successor is not created.
c) Purchasing and payment are not processed by the same person.
d) Team members are not separated for system development and production.

Q64. Which of the following is an appropriate document prepared by an audited department after a system audit in response to the evaluation results?

a) Improvement plan
b) Audit evidence
c) Service level agreement
d) System audit report

Q65. It was decided to conduct a system audit and an audit team was formed accordingly. Which of the following is a common requirement for all auditors who participate in the team?

a) Independence from the subject of the audit
b) Detailed technical knowledge about the system to be audited
c) Hands-on experience with the business to be audited
d) Capability to remedy problems of the department to be audited

Q66. A product is manufactured by allocating a set of materials to three factories A, B, and C. The profit of the factories according to the allocated units of the material is as shown in the table below. How much (in million yen) is the maximum profit that is obtained by allocating a total of four units of the material to the factories?

Unit: million yen

Allocated units of material	0 units	1 unit	2 units	3 units	4 units
Profit of factory A	0	2	5	7	8
Profit of factory B	0	1	3	5	7
Profit of factory C	0	3	4	6	8

a) 8 b) 9 c) 10 d) 11

Q67. A company wants to perform an acceptance inspection on an outsourced part with a non-defective probability of 0.9 and defective probability of 0.1. The table below shows four (4) proposed acceptance inspections with their respective cost per non-defective and defective part. Which of the following is the plan with the lowest expected cost?

Plan	Cost per non-defective part	Cost per defective part
A	0	1,500
B	40	1,000
C	80	500
D	120	200

a) A b) B c) C d) D

Q68. What is the total sales amount in million yen at the break-even point that is calculated based on the income statement shown below?

Unit: Million yen

Total sales	4,000
Variable manufacturing cost	1,400
Variable selling cost	600
Fixed cost	800

a) 1,200   b) 1,231   c) 1,600   d) 2,154

Q69. Data of the defects and faults of products, complaints from customers, etc. are prepared and categorized according to their cause or situation. Which of the following represents the number of data in each category in descending order on a bar graph and the cumulative total on a line graph?

a) Control chart   b) Tree diagram
c) Pareto chart   d) Matrix chart

Q70. Which of the following is the appropriate term that represents a variety of individuals with different sex, age, nationality, experience, and the like?

a) Glass ceiling
b) Diversity
c) White collar exemption
d) Work-life balance

Q71. Which of the following is an appropriate way to brainstorm?

a) Asking participants to present feasible ideas and refrain from generating unrestrained ideas

b) Proceeding with the session without blaming any member who creates an improvement plan that takes advantage of another member's suggestion

c) Proceeding with the session while selecting the opinions that are suitable to the theme

d) Encouraging the criticism of ideas to pursue quality rather than quantity of ideas

Q72. Among the phases of the PDCA cycle in corporate business operations, which of the following measures and evaluates the status of execution of operations on the basis of KPI?

a) P   b) D   c) C   d) A

Q73. From the viewpoint of consideration for recipients of e-mail, which of the following is the most appropriate example of e-mail transmission?

a) A questionnaire on member satisfaction is sent by e-mail to all the addresses of 100 selected members entered in the "To" (destination) field.

b) A large-size document presenting a company's products is sent to a customer as an e-mail attachment without being compressed.

c) A reply to an e-mail query from a customer about a product is sent also to those customers who should know about the details, by entering their addresses in the "Cc" (carbon copy) field.

d) An e-mail is sent to the limited customers by using the "Bcc" (blind carbon copy) field in order to inform them of the URL of the Web page of a special event.

Q74. An e-mail with a subject of "Caution: New computer virus" was received from the external network. The sender is not an acquaintance, and the content may or may not be true. However, the e-mail describes the characteristics of the virus, and instructs that the e-mail must be forwarded to as many people as possible. Which of the following is an appropriate course of action to be taken for this e-mail?

a) The e-mail is forwarded to acquaintances.
b) The e-mail is forwarded to all employees.
c) The e-mail is not forwarded to anyone.
d) An e-mail is sent to the sender to ask for countermeasures against the virus.

Q75. Which of the following is an appropriate combination of the standard and its applicable field?

	IEEE 802.3	ISO 9001	ISO 14001
a)	LAN	Environmental management	Quality management
b)	LAN	Quality management	Environmental management
c)	Environmental management	LAN	Quality management
d)	Environmental management	Quality management	LAN

Q76. From the viewpoint of corporate governance, which of the following is the most appropriate method of strengthening the functions of monitoring and supervising the decision-making process of the management?

a) Installing a camera for monitoring the entry and exit of the president's office
b) Periodically requesting a private detective to investigate the conduct of the management
c) Appointing some outside directors
d) Employing law school graduates as members of the internal audit department

Q77. Which of the following is an academic organization in the USA that promotes standardization activities concerning Ethernet LAN and wireless LAN, etc.?

a) ICANN b) IEEE c) ISO d) W3C

Q78. Which of the following is an international standardization organization that engages in standardization of information security management systems and quality management systems?

a) ANSI b) CEN c) ISO d) JIS

Q79. Which of the following is an appropriate description concerning M&A?

a) The analysis of the flow of business and the chain of value for the production of value of products and services provided by a company
b) The increase in autonomy in business strategy making by dividing a company by business or region
c) The drastic reform of business processes, and using IT to increase business throughput and cost efficiency
d) The acceleration of business deployment by fulfilling the functions that the company is lacking from other companies through corporate acquisition, etc.

Q80. Company A performs analysis of its positioning with competitors. In order for Company A to obtain the best evaluation of all three (3) companies, what is the minimum number of points required in the brand evaluation item?

   The minimum value of evaluation item is one (1) point and the maximum value is ten points, and each company is evaluated by using the total value of each weighted evaluation item.

Evaluation item	Weight	Company A	Company B	Company C
Selling power	1	10	9	6
Price	4	10	7	9
Quality	3	6	10	7
Brand	2		6	10

Note: The shaded part is not shown.

a) 6   b) 7   c) 8   d) 9

Q81. Which of the following is an appropriate example of vertical integration in corporate business development?

a) An apparel manufacturer outsources product inspection at factories to a partner company.
b) A major trading company makes a major retailer its subsidiary with the aim of expanding sales of products that it purchases overseas.
c) A bank acquires another bank through an M&A with the aim of increasing its size.
d) Many PC assembling companies use the semiconductors and OS of a specific manufacturer.

Q82. Which of the following is an appropriate description of the Balanced Scorecard (BSC)?

a) It analyzes what activities generate the value of products and services that are provided to customers.

b) It creates strategy and evaluates performance from four (4) viewpoints: financial, customer, internal business processes, and learning and growth.

c) It records entries in a ledger in order to ensure that the amounts of credits and debits are always in balance.

d) It scores and evaluates the creditworthiness of business partners through such means as financial indicators.

Q83. When enterprise strategies are classified into four (4) categories: "market penetration," "new product development," "market development," and "diversification" according to whether each of a product and a market is an existing one or new one, which of the following corresponds to a "market penetration" case?

a) A beverage manufacturer takes advantage of a technology that it owns, and develops a new species of flowers.

b) A casual apparel manufacturer sells business suits.

c) A food manufacturer expands its sales area that is focused on a local area to the entire country.

d) A commodity manufacturer increases shop floor sales staff, and expands the sales of core products.

Q84. A company that is considering entering a certain industry conducted a SWOT analysis. Among the analysis results, which of the following is the one that corresponds to an opportunity?

a) Success experience in an existing business

b) Deregulation in the industry

c) Product development capability of the company

d) The company's retail store network that covers the whole country

Q85. Which of the following is an appropriate purpose of Management Of Technology (MOT)?

a) To improve the productivity by using mathematics and natural science in business administration and production management

b) To grow a company by effectively connecting technical innovation with the business of one's company

c) To improve the quality of a company by ensuring that the employees put in efforts systematically to improve the quality of products

d) To improve the business process efficiency by acquiring the necessary techniques and knowledge from senior employees through actual business operations at the workplace

Q86. Which of the following is the situation where an improvement can be expected by installing an Material Requirements Planning (MRP) system?

a) Design drawings are managed on both electronic files and hard copies, so design change history cannot be accurately known.

b) Information concerning materials and their quantities required for manufacturing is complicated, so it is easy to miscalculate order quantities, and production is being adversely affected.

c) There are many design changes, so production efficiency does not improve.

d) High-mix, low-volume production is adopted, so the cost of installing production equipment is increasing.

Q87. Which of the following is an appropriate explanation of a banner advertisement that is a form of Internet advertisement?

a) When a Web site is being browsed, an advertisement from an advertiser is automatically displayed in another new window.

b) When a Web page is accessed from another page, a page with an advertisement is briefly shown before the accessed page is displayed.

c) When an advertisement image that is placed on part of a Web page is clicked, a page created by an advertiser is displayed.

d) When keywords are entered into a search service site, an advertisement related to the keywords is displayed on the page showing the search results.

Q88. Which of the following is an appropriate case example that corresponds to traceability?

a) Taking advantage of the Internet and Web technology for the use of computers in education

b) Assigning all development activities to an external specialized company without placing the development department within one's own company

c) Sharing knowledge and information that employees have across the entire organization, and utilizing it effectively to improve business performance

d) Being able to check the history from production up to sales on the basis of the labels pasted on meat and fish products

Q89. Which of the following systems can be realized through the use of RFID?

a) Providing medical care by transmitting images and voice data of patients from a remote site via a network

b) Depositing and withdrawing money from a bank ATM by using an ATM card

c) Reading product information from the barcodes on products, and performing sales management and order processing at the time of sale in stores

d) Setting an electronic tag on a delivery parcel, and checking information related to the shipping history of the parcel

Q90. A company wishes to create digital files from paper documents and paper blueprints, and make these available company-wide. Which of the following is appropriate equipment to be used?

a) GPS receiver
b) Scanner
c) Digitizer
d) Plotter

Q91. When build-to-order production is compared to build-to-stock production, which of the following is an appropriate characteristic of build-to-order production?

a) Shipment is not possible immediately when an order is received, but there is no risk of an excessive number of products in the inventory.
b) It is required to increase the accuracy of order forecasts, and maintain the optimum inventory volume of products.
c) It brings the risk of the loss of order opportunities through insufficient product inventory.
d) Products are produced according to a production plan that is proposed on the basis of a product order forecast.

Q92. Which of the following is a business objective that becomes possible to achieve with "the introduction of a POS system"?
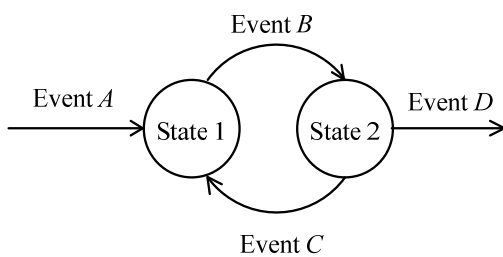
a) Improvement in the work productivity of salespersons and organizational strength of the sales department
b) Reduction in inventory volume of component parts and partly finished goods
c) Optimization of the series of processes from procurement to manufacturing, shipment, and sales
d) Improvement in the product lineup at each store and streamlining of ordering and inventory control

Q93. Which of the following is an appropriate item that should be clearly stated in the information system strategy of a company?
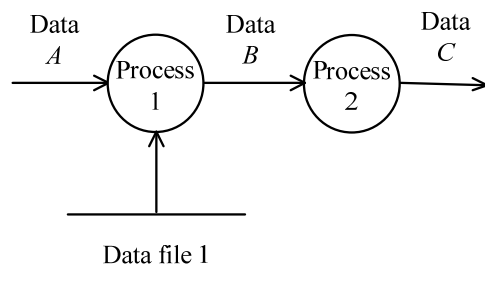
a) IT governance policy

b) Structure for developing a mission-critical system

c) Evaluation criteria for vendor proposals

d) Analysis results of user requirements

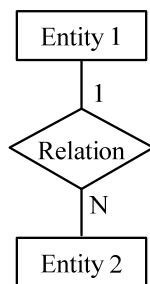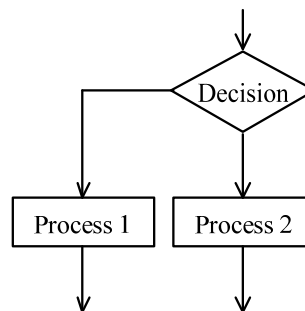**Q94.** Which of the following is an appropriate example part of DFD?

a)

Event B

Event A

State 1   State 2

Event D

Event C

b)

Data A   Data B   Data C

Process 1   Process 2

Data file 1

c)

Entity 1

1

Relation

N

Entity 2

d)

Decision

Process 1   Process 2

Q95. Training on how to use a sales forecast system is planned for the persons in charge of business across the country. Which of the following is the merit that is obtained by using e-learning in training?

a) The person in charge of business can be directly lectured about the content of the system from the person in charge of design, and raise questions then and there.
b) The person in charge of business can use his/her own free time and undergo training at any suitable time.
c) Several persons in charge of business can participate together and exchange their opinions on how to use the system.
d) The persons in charge of business can be asked to assemble together in a room and training can be imparted simultaneously.

Q96. Which of the following is a business operator that provides access to the Internet?

a) ASP b) ISP c) SaaS d) SNS

Q97. Which of the following is an appropriate explanation of an ASP?

a) A business operator or a form of service that provides communication lines for connecting to the Internet
b) A service on the Internet for creating a closed community that is accessible to users who are members of the community
c) A business operator or a form of service that provides users with application software on a server via the Internet
d) An approach of constructing an information system from the viewpoint of a service, rather than from the viewpoint of a product such as hardware and software

Q98. When requirements to be defined are categorized into operational requirements and system requirements, which of the following is an operational requirement?

a) The availability of an online system must be 99% or higher.
b) In order to prevent an information leakage, data that is received via a network must be encrypted.
c) In order to improve operability, a Web browser can be used for the screen display.
d) In order to reduce the cost of logistics, automation of shipment activities must be enhanced.

Q99. Which of the following is an explanation of "acceptance inspection" performed for a vendor?

a) Checking the estimate submitted by the vendor prior to placing an order based on the result of the check
b) Checking whether the deliverables provided by the vendor conform to the requirements specifications
c) Requesting the vendor to study and submit the proposal for a new system
d) Requesting the vendor to provide information for the purpose of collecting information

Q100. Which of the following is a document that is presented by the user to vendors upon procurement of an information system for requesting their proposals and that describes the overview and procurement conditions for the information systems?

a) RFC   b) RFI   c) RFID   d) RFP