

CFM EXAM

90 Questions

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- I. The goal of the Americans with Disabilities Act is to
 - A. allow access, under any circumstances, to all employees and visitors.
 - B. make sure that no qualified person with any kind of disability is turned down for a job or a promotion or refused entry to a public access area.
 - C. allow employers to be eligible for reimbursement for any adjustments made for hiring or retaining employees with physical disabilities.
 - D. give potential employees the right to apply and be considered for all jobs regardless of their disability.

Roll-up methodology: A, C, and D roll-up into B. From the ADA website, the ADA "prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of american life -- to enjoy employment opportunities, to purchase goods and services, and to participate in state and local government programs and services."

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2. A senior manager has relocated file cabinets into an aisle-way on an open-plan floor. The cabinets reduce the aisle width such that it is no longer code compliant. The arrangement is consistent with other areas within the space, but the other aisles are wider. What action should you take?

- A. No action is needed. The manager is responsible.
- B. Explore long-term solutions that are not potential hazards.
- C. Relocate the files immediately to a temporary location.
- D. Notify the vice president of the department of the manager's action.

Roll-up methodology. Facility managers are responsible to ensure a safe environment; the space must always meet the codes. Identifying options and collaborating with the users for resolution creates opportunities to find a better solution that supports the business after a safe environment has been ensured.

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3. Your company has received several security threats over the past several hours. You have been instructed to increase security and to inspect all items brought into the facility. Of immediate concern to you is the large amount of public traffic in and out of the building. What should you do first?

A. Install metal detectors and scanners like those in airports.

B. Send a memo to all employees to announce threats, state the company takes them very seriously, and ask for their cooperation.

C. Immediately close the building to non-employees and inspect all parcels and personal items employees bring in.

D. Instruct all department heads to screen visitors.

Answer C uses critical thinking. Only option C provides immediate safeguards that address the threats and complies with guidance to inspect all items. Options A, B, and D are subsequent actions that may be added.

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4. You are in a five-year planning meeting with corporate executives. The lobby receptionist has just notified you that the local fire official has made an unscheduled visit to inspect the facility. He wishes to speak with you about a serious safety problem. Which of the following is the MOST appropriate first action?

- A. Ask the maintenance supervisor to meet with the official.
- B. Get the official's phone number and call as soon as possible.
- C. Excuse yourself from the meeting to meet with the official.
- D. Ask the official to return later.

Answer A uses critical thinking. The maintenance supervisor would have in-depth knowledge of the building and would have the availability in this situation to meet with the local fire official while the facility manager is meeting with executives.

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5. Which of the following tactics can the facility manager utilize to build a better culture of safety among employees when planning facility strategies?

- A. Include representatives from those groups directly affected.
- B. Reference all applicable building codes.
- C. Take direction from the company's Environmental Health and Safety leadership team.
- D. Assess facility needs and gain alignment with the CEO's visions.

Critical thinking methodology. To build a better culture of safety among employees, including affected employee representatives promotes buy-in. (B), (C), and (D) do not address the importance of culture in promoting safety among employees.

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6. As part of an assessment prior to renovating one of your older properties, your staff identifies that asbestos was used to insulate the ducts running through the walls. What step would you take to safely remove the asbestos?

- A. Have the asbestos removed by staff who are experienced in renovation of older properties.
- B. Ensure your staff dispose the asbestos in sealed bags to prevent leakage.
- C. Hire a licensed abatement contractor.
- D. Require your staff to use equipment specified for the removal of hazardous products.

Answer C uses roll-up concepts to eliminate A, B, and D. A licensed abatement contractor will meet government regulatory requirements. A, B and D staff may be experienced but not correctly trained.

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7. You are directed to develop a new corporation's master real estate plan. What are two key practices you should implement early in the process of developing the plan?
- A. Secure local code authority approval and approval from stockholders.
 - B. Obtain local labor force demographics and conduct a certified land survey.
 - C. Engage local community organizations and conduct a transportation study.
 - D. Involve all stakeholders and conduct due diligence studies.

Roll-up methodology. Choices A, B, and C could be considered a part of due diligence and are tactical activities. The strategic aspect of master RE planning is understanding the stakeholders' requirements and expectations because that is what the RE plan will be based on. Choice D is the correct answer

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8. You are the Facility Manager for a large European banking institution that wants to develop a regional corporate office complex in small Asian country to leverage that country's recent economic growth. The country is known to have economic fluctuations. What provision will you include in your master real estate plan to accommodate unpredictable fluctuations in that country's economy?

- A. provisions to increase available capital investment during economic contraction
- B. provisions for subleasing or selling portions of the property during economic contraction
- C. provisions for early lease terminations for financially unstable tenants
- D. provisions for property expansion that increase revenues during economic contraction

Critical thinking and roll-up methodology. Choice A is not in the purview of the FM. Choice D does not seem feasible in that expanding would only increase the amount of vacant space in an economic downturn. Choice C is not the best response because potentially unstable tenants cannot be predetermined in a master plan. Choice B is the correct answer.

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9. You are the Facility Manager for a national construction trade association. The association's strategic plan anticipates the need to build a new training center on your campus within five years. The new training center is a strategic part of the trade association's ability to meet an expected increase in workforce demand. However, a temporary recession has decreased demand for training and reduced revenues. The association board asks you to revise the master plan to maximize the cost effectiveness of building the training center. What revisions could you recommend to the board that would decrease risk and keep the organization's long-term strategy strong?

- A. Decrease the size and cost of the new training center by eliminating office space and require staff to operate the new training center from their current offices.
- B. Relocate the new training center off campus to a less expensive construction site and dispose of the land parcel that was dedicated to the new building.
- C. Purchase an existing property off-campus and build out the space to create the new training center and require staff to operate the training center from their current offices.
- D. Build the new center. Temporarily reconfigure some training rooms as office spaces. Lease these office spaces to produce offsetting revenues until the training demand increases.

Critical thinking methodology. When mitigating risk due to changes within the economic climate, it is important to ensure risk mitigation steps are in place that allow for off-setting cost while maintaining physical presence.

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10. Which of the following is a reason to consider a real estate sale-leaseback option?
- A. It raises funds for up to 100% of the property value.
 - B. Lease payments are not tax deductible.
 - C. Property is sold to a holding company to lease out in the market.
 - D. It increases the company's tax burden.

(A) is the correct answer because it can often be financed up to 100% of the appraised value of the building or land. (B) is incorrect because lease payments can be tax deductible. (C) is incorrect because it is leaseback to the company that sold it. (D) is incorrect because it doesn't increase the company's tax burden.

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11. Your company is producing a new product and the present facility could be used if it underwent extensive renovation. Your other options are to build or lease at another location. What would be the most important factor in exercising your decision?

- A. Results of the financial analysis
- B. Locations of other sites
- C. Tax incentives for moving to another location
- D. Location of employee homes

Critical thinking/roll up methodology. Choice D has little to play in this decision. The company is not moving the entire operation, just a part of it related to the increased need for a training facility. Where employees live do not come into play. Choices B and C could occur based on the financial analysis.

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12. What is the best way to deal with the problem of obtaining new office space when rents and occupancy rates are high and the demand for space is high in the area you need to locate?

- A. Request information from the economic development authority.
- B. Plan to relocate only essential activities until the real estate market improves.
- C. Consult with a real estate specialist with experience in your locale.
- D. Defer the decision to the Chief Financial Officer (CFO).

After the need to relocate within a certain market is determined by the C suite, you should work very closely with a real estate agent with recent experience in the market. They will have the best knowledge of what is available as well as be knowledgeable about local landlords or leasing groups.

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13. Which of the following are advantages of leasing as opposed to owning real estate?
- A. predictable cash flow and greater long-term control
 - B. increased control and appreciation of capital investment
 - C. flexibility and lower initial capital investment
 - D. greater initial investment and hedge against inflation

Critical thinking methodology. (A) is incorrect because leasing provides less long-term control than owning. (B) is incorrect because the appreciation of a leased facility does benefit the lessee. (D) is incorrect because leasing has a lower initial cost of investment but is exposed to inflation. (C) is correct because leasing does not require an initial capital outlay for the purchase of the facility and allows the lessee the flexibility to change facilities upon lease expiration and contract or expand the footprint.

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14. What is your primary concern when reviewing an operating expense statement from your landlord for Common Area Charges (CAM)?

- A. Expenses are documented according to the terms of the lease and add up correctly.
- B. The total due versus amount budgeted.
- C. Expenses add up correctly.
- D. Expenses appear reasonable when compared to last year.

Knowledge-based methodology. Expenses should be documented, correctly calculated, and meet the terms of the lease.

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15. Why is it important to know how much office space will be needed for primary and secondary circulation?

- A. compliance with local ordinances
- B. chargeback of under-utilized space
- C. accommodation of workspace
- D. determine rentable space requirements

Critical thinking methodology. The rentable space is comprised of the usable space, core space, and the common area. There are a few factors to keep in mind: you are paying rent and operating costs (maintenance, utilities) for the rentable space, so you must make sure the common area/core space of a building is not too high. Some buildings are poorly designed and have a high common area. If you are leasing a space, during negotiation of the lease, make sure you understand the size of the common area and core and choose buildings that are efficiently designed. If you are building a space, before you approve a design, make sure the architects provide you the common area and core space information and you ask them that they design the space efficiently.

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16. What is the key to managing a successful facility management project?
- A. cost at budget and schedule at plan
 - B. no injuries resulting in lost days of work
 - C. project fully meets project scope
 - D. stakeholders agree to success criteria

Roll-up methodology. While all factors mentioned are relevant to a successful project, it won't be truly successful unless stakeholder criteria has been met.

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17. You are requiring fixed price bids for a project. In comparing bids, what is the most important aspect to consider?

- A. bid price
- B. insurance coverage and performance bonds
- C. availability and size of work force
- D. contractor understanding project scope and requirements

Critical thinking. Bid price is important but the bid may be low because the bidder does not fully understand the project scope and may have missed some considerations resulting in a low number. Insurance and bonding are important factors to consider, but at the end of the day, if the contractor does not fully understand the project scope, he may under insure and bond the project. Choice D is the correct answer. Choices A, B, and C are dependent on choice D.

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18. A project manager is most likely to collaborate with which of the following to develop specific internal occupancy requirements?

- A. a building appraiser
- B. an engineering firms
- C. a real estate brokers
- D. a facility manager

Critical thinking methodology. A facility manager will best understand the facility requirements for this organization. As external entities, a building appraiser, an engineering firm, and a real estate broker will not understand specific internal stakeholder requirements. A real estate broker may help locate a site which meets specifications but will not be familiar with internal stakeholder needs.

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19. You are planning space for a call center area. What should get top priority?
- A. Seating, wire management, and lighting
 - B. Seating, lighting, and sound masking
 - C. Wire management, lighting, and partition height
 - D. Carpeting, partition height, and sound masking

Critical thinking. Seating and lighting are always critical issues when planning a space. Poor seating and inadequate lighting can have a long-term negative effect on occupants e.G. (Poor productivity, health issues). Sound attenuation is also important and even more so in a call center area. Thus, choice B is correct.

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20. Project objectives divided into manageable components of the work package are known as the

- A. work breakdown structure.
- B. project charter.
- C. lessons learned.
- D. risk factors.

Knowledge based methodology. A work breakdown structure breaks down a project into phases, deliverables, and groups of work. It allows for easier management of each task or component of the project, accurate estimation of time, cost, and resources, and assignment of responsibility for activities.

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- B. project charter.
- C. lessons learned.
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21. As the Facility Manager you are developing a high visibility project. What task is necessary to ensure the successful completion of the project?

A. Utilize applicable Lessons Learned from previous projects to increase the likelihood of project success.

B. Manage the expectations of stakeholders to assure project acceptance and project goals are achieved.

C. Ensure that all stakeholders receive pertinent project information throughout the life cycle of the project.

D. Ensure adequate funding has been approved and that there are sufficient funds in the contingency budget.

Critical thinking. Choices A, C & D are good answers because they are all important in terms of project success. However, the stakeholders (customers) are at the top of the strategic planning model and thus choice B is the MOST correct answer.

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22. What tool is best suited to limit project delays?
- A. Scheduling software that coordinates multiple activities
 - B. A GANTT chart that lists tasks and timelines for each project
 - C. A time clock, to ensure that each employee is working their scheduled hours
 - D. A large wall calendar in a prominent location that lists employee's daily responsibilities

Critical thinking methodology. Scheduling software allows you to track multiple aspects of the project, timelines, budgets and, in some cases, payments and po's (depending on software) and can be distributed across multiple platforms and shared across different locations electronically.

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23. Your construction project needs value engineering. What stakeholders should you include in the value engineering decisions?

- A. The Project Team, Architectural and Engineering (A&E) firm, Operations and Maintenance Manager, and end-users
- B. The Architectural and Engineering (A&E) firm and Project Team
- C. The contractor, Architectural and Engineering (A&E) firm, and the Move Manager
- D. The Project Sponsor, Architectural and Engineering (A&E) firm, Operations and Maintenance Manager, and end-users

Systems thinking. The correct answer is choice A because it includes all teams necessary to evaluate the options and make decisions. Choice B & C are incorrect in that the end-user is not included. Choice D is incorrect because it does not include the entire project team, only certain members of it (A&E, O & M mgr).

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24. What system would best assist the facility manager to compare space temperatures, outside air conditions, and equipment capabilities?

- A. Integrated Workplace Management System (IWMS)
- B. Building Automation System (BAS)
- C. Computer Aided Facility Management (CAFM)
- D. Building Information Modeling (BIM)

Systems thinking. (A) and (C) address space management and (D) deals directly with the physical construction of a facility. (B) facilitates the efficient operation of the building by comparing space temperatures, outside air conditions, and equipment capabilities.

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25. A large, vegetated courtyard in the center of a U-shaped building has a sub-grade drainage system with multiple inlets spread evenly across the area. The inlets frequently fill with leaves, grass clippings, and other debris. Rainwater has been overflowing into the central lobby and first floor tenant spaces adjacent to the courtyard during recent storms. How should you address the problem?

- A. Direct the landscape crews to blow leaves, grass clippings and other debris toward adjacent properties so the inlet drains will not plug so quickly.
- B. Schedule regular maintenance of the courtyard drain inlets to monitor their condition and clean debris.
- C. Disable and permanently fill the drain lines and rely on surface drainage to remove water from the courtyard.
- D. Remove deciduous trees from around the courtyard and replace them with coniferous trees and other decorative vegetation.

Critical thinking. You are in a situation where the infrastructure in place is challenged by changing conditions presenting an urgent component (internal flooding). Time being of the essence, you choose to assist the infrastructure (B). Not avoid the problem (A), not cripple the infrastructure (C), not modify it long term (D).

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26. The managed building portfolio has grown and now includes several buildings that were built in the 1970s which received only critical maintenance. What analysis tool would be BEST used to prioritize future facility maintenance with limited available funding?

- A. root cause analysis
- B. age exploration analysis
- C. facility condition assessment
- D. D corrective maintenance analysis

Systems thinking. (C) A facility condition assessment's goal is to understand the whole system so managers can make informed decisions about where capital investment will have the most impact. (A), (B), and (D) address a single item of concern.

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27. Building information modeling (BIM) is

- A. an object-based digital representation of the physical and functional characteristics of a facility.
- B. a computer-aided design (CAD) representation of a building.
- C. a schedule of information about a building held by the facility department.
- D. a physical model of a building used to assist in its design and construction.

Knowledge based. (B) is a two-dimensional representation, whereas BIM utilizes three or four dimensions. (C) BIM requires three-dimensional rendering to accompany a schedule of information about a building. (D) BIM is a digital rendering rather than a physical model.

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28. It is a weekend, and your building is lightly occupied. You are the sole decision-maker regarding your facility on weekends. Domestic water service to the modern high-rise building has been cut off. Repairs will take more than an hour. What is the primary reason to call for an evacuation of the facility?

- A. The sprinkler system will not work.
- B. Restrooms will not function.
- C. The A/C system will not function.
- D. Codes and regulations require it.

Roll-up concepts applied with EHS trump all other answers. Life and safety of occupants trumps all other aspects of facilities management, whether they are biological (B), comfort (C), or legal (D).

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29. Asbestos was removed from some piping during a small weekend renovation when the building was not occupied. The contractor appears to have removed it properly but pointed out that the same material was used throughout the facility. What is your first step in dealing with the contractor's action?

- A. Immediately remove people from the facility.
- B. Do nothing; if it is enclosed, people are safe enough.
- C. Begin an ongoing removal program after hours under tight supervision.
- D. Hire a specialty consultant to develop an Operations and Maintenance plan to deal with the asbestos issue.

Critical thinking. This is a more than common scenario stemming from past (1970s) construction practices. The contractor was diligent and so should you. Do not panic (A) or ignore (B), or start working on time and material without a project budget. Investigate and plan is the right answer (D). If you fail to plan, you plan to fail.

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30. While removing an old underground storage tank that serviced a now abandoned generator, you discover that the soil is contaminated with diesel fuel. What action should be taken?
- A. Complete the storage tank removal and backfill the hole with clean soil.
 - B. Notify the appropriate regulatory agency if applicable and acquire the services of a certified/licensed brownfield contractor to remediate.
 - C. Designate the area as a brownfield and discontinue plans for future building improvements that might disturb that area.
 - D. Replace the underground storage tank with a concrete storage tank that includes a leak detection system to ensure future contamination is avoided.

Roll-up concepts using the EHS as it trumps all other answers. The appropriate regulatory agency should be notified first if applicable. Contaminated soil, or brownfield, requires the proper remediation to be in accordance with the appropriate regulatory agency. In the United States, the Environmental Protection Agency (EPA) requires a certified remediation team address the situation. Simply backfilling a contaminated area with soil or replacing a cracked tank without addressing the soil is not an acceptable solution when the soil is known to be a problem.

30. While removing an old underground storage tank that serviced a now abandoned generator, you discover that the soil is contaminated with diesel fuel. What action should be taken?
- A. Complete the storage tank removal and backfill the hole with clean soil.
 - B. Notify the appropriate regulatory agency if applicable and acquire the services of a certified/licensed brownfield contractor to remediate.
 - C. Designate the area as a brownfield and discontinue plans for future building improvements that might disturb that area.
 - D. Replace the underground storage tank with a concrete storage tank that includes a leak detection system to ensure future contamination is avoided.

31. You noticed that employees in multiple departments are increasingly taking advantage of remote working opportunities. Several cubicles are empty multiple days of each week, and several others are rarely occupied. Senior management is concerned about the rising energy costs to maintain unoccupied spaces and has requested some options to address the unused space while still accommodating employee workstation requirements. What is the best bottom-line cost reduction option you could propose to senior management?

- A. Decrease the footprint allocated to each department and propose sub-leasing unused space.
- B. Implement a space management plan that groups occupants by building use patterns.
- C. Coordinate a more condensed period for core occupant hours and limit energy use outside of the designated core hours.
- D. Integrate smart building systems that detect and monitor occupancy and adjust energy use to accommodate the occupant loads.

Critical thinking. Choice B does not address energy cost reduction. Choice C is incorrect because limiting the time building occupants can occupy the building may be unproductive. Choice D is unrealistic. A smart building system can tell a building to heat/cool one hard walled room and not the one adjacent to it, but it cannot do so in an open plan (cubicle) area. Thus, choice A, consolidating and restacking space can consolidate the unoccupied spaces in one contiguous area so that it can be sub-leased, which will lead to a reduction in all costs associated with the reduced space.

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32. You get many complaints from occupants about temperature control. Areas are either too hot or too cold. You decide to devise a "thermal comfort standard" for all facilities. What should your "thermal comfort standard" include?

- A. A temperature range for both winter and summer
- B. Specific temperature and humidity levels
- C. A temperature range at specific humidity levels
- D. Temperature, humidity, and air flow ranges

Critical thinking. Temperature, humidity, and air flow all affect the perception of comfort and especially affect water evaporation rates. The only complete response is "temperature, humidity, and air flow ranges." The end user may not be able to interpret this information, but it is necessary for the facility manager to follow a "thermal comfort standard" determined by industry standard levels.

32. You get many complaints from occupants about temperature control. Areas are either too hot or too cold. You decide to devise a "thermal comfort standard" for all facilities. What should your "thermal comfort standard" include?

- A. A temperature range for both winter and summer
- B. Specific temperature and humidity levels
- C. A temperature range at specific humidity levels
- D. Temperature, humidity, and air flow ranges

33. You are charged with selecting a new high-energy efficient chiller. There are two CFC chillers currently providing the necessary cooling for the building. What are two important sustainability factors to consider in deciding on your next chiller?

- A. A chiller that will not use CFCs and uses less energy.
- B. A chiller with low ozone depletion and global warming potential.
- C. Replace both chillers and choose another refrigerant.
- D. Replace only one of the two systems and keep the other chiller for back up.

Roll-up concepts. Because cfc's contribute to ozone depletion in the upper atmosphere, using a chiller which does not use cfc's and consumes less energy will contribute to reducing the company's carbon footprint.

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34. The local town has told your company that it must contain storm water runoff because it is affecting the recreational pond in the town. What would you recommend as a solution to capture and slow down the water leaving the site?

- A. Build rain gardens.
- B. Stop irrigation during storms.
- C. Install a variety of plantings on site.
- D. Change the parking lot to pervious and plant trees.

Critical thinking. (B) is an impossible option. (D) is a drastic, complicated project with deep ramifications that does not respond adequately to the question. (C) is only one part of the correct answer (A).

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35. You have met with the building architect to discuss rapidly renewable materials for the renovation of your building. Occupants have expressed concerns about what type of floor coverings would be considered rapidly renewable. What types of examples would you expect the architect to show as the proposed rapidly renewable materials?

- A. Bamboo, cork, and linoleum flooring examples
- B. Cork, linoleum, and stone flooring examples
- C. Bamboo, wool, and granite flooring examples
- D. Stone, bamboo, and cork flooring samples



Knowledge-based. The key word here is rapid. Stone and granite do not qualify as such, disqualifying options B, C, and D

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- B. Cork, linoleum, and stone flooring examples
- C. Bamboo, wool, and granite flooring examples
- D. Stone, bamboo, and cork flooring samples



36. You are working with the Procurement Division to build a sustainable supply chain. You have the organization's commitment to this initiative. In fact, the Chief Financial Officer (CFO) is sponsoring the initiative and ensuring on-going commitment. What should be your next step?

- A. Establish relationships with providers, set up measures of success, then monitor outcomes.
- B. Put out a request for proposal (RFP) to current and potential new suppliers willing to meet your organization's sustainability goals.
- C. Involve the local community in identifying in a discussion of ways to build more ecologically sound supply chain transportation and storage.
- D. Meet with current providers to discuss the new program. Request their commitment to it. Replace any providers who will not commit to the program.

Critical thinking is the answer method based on scope, criteria, and monitoring. An RFP is the next step to establish which suppliers can meet the organization's goals and includes current and potential new suppliers.

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-
37. The acronym LEED stands for which of the following?
- A. Leading Environmental Equivalent Discipline
 - B. Leadership in Eco-Friendly Engineered Domiciles
 - C. Lasting Environmental Enhancement Decisions
 - D. Leadership in Energy and Environmental Design

Knowledge-based methodology. LEED is a building rating system developed by the U.S. Green building council that offers rating systems for commercial interiors, homes, core and shell, health care, new construction, retail, schools, and existing buildings operations and maintenance. Similar systems in other countries include BREEAM/UK, CASBEE/japan, green globe/canada, green star/australia, green mark/singapore, and three star system/china

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38. You receive numerous complaints from occupants in a facility about technology "dead zones" within certain areas of the campus. The complaints indicate that wireless connections fail when in a specific area of the facility. What additional information do you require to successfully address this issue?

- A. Wireless frequencies affected
- B. Mobile phone service provider
- C. Wireless repeater locations
- D. Time of day outages occur

Knowledge based. Location of a wireless application protocol (WAP), as well as its height, impacts its signal strength. Even in an optimal location, the WAP must also be pointed correctly and free from line-of-sight obstructions.

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39. You have been asked to recommend a workplace technology that will best mitigate the risk of operational downtime. What technology will you recommend?

- A. Technical Support System (TSS)
- B. Building Automation System (BAS)
- C. Incident Management System (IMS)
- D. Computer Aided Facility Management System (CAFM)

Critical thinking methodology. The CAFM would provide timely information to the facility management team to mitigate risk. The other technologies are specific to a certain situation. The CAFM captures data on systems like age, repairs, and other work orders that are helpful in planning for potential repairs which cause systems downtime. The CAFM also allows interfacing with other FM systems used by an organization.

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- B. Building Automation System (BAS)
- C. Incident Management System (IMS)
- D. Computer Aided Facility Management System (CAFM)

40. You recently took control of a newly constructed facility with Building Information Modeling (BIM). Overnight, a leak was detected in the ceiling of the third floor, multi-function room. Ceiling tiles fell out. Water spilled on the floor causing damage. What information can be gleaned from BIM to address this issue?

- A. Flow rate
- B. Time water line and valve was installed
- C. Location of all water lines
- D. Type and style of valves installed on water lines

Knowledge based. One of the major advantages of having a BIM model available is locating the pipes within the area where the leak is. The other information such as flow rate, age of water line and type of valve are useful for other purposes, but not for identifying the water line, isolating the leak and performing the repair.

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41. In developing a sound strategic plan for a building automation system into the facility management work processes of an organization, there are many factors that must be taken into consideration. Of the four factors listed below, which should be dealt with first to assure successful implementation?

- A. sophistication level of the facility department staffs toward automated systems
- B. ability to integrate FM automation into the framework of the overall organizational technology plan
- C. commitment of adequate FM and information technology resources that will be necessary to complete the project
- D. completion of a comprehensive needs analysis that demonstrates the potential advantages of automation for this organization

Critical thinking. Ensuring that the building automation system can be integrated in the overall organizational technology plan is the first factor to assure successful implementation because it will address capability, feasibility, and security issues.

41. In developing a sound strategic plan for a building automation system into the facility management work processes of an organization, there are many factors that must be taken into consideration. Of the four factors listed below, which should be dealt with first to assure successful implementation?

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- B. ability to integrate FM automation into the framework of the overall organizational technology plan
- C. commitment of adequate FM and information technology resources that will be necessary to complete the project
- D. completion of a comprehensive needs analysis that demonstrates the potential advantages of automation for this organization

42. Your new CAFM system requires a thorough inventory of assets. Assume you want to begin inventorying assets, but your budget will not allow a comprehensive effort. What would provide the largest return on your investment?

- A. Inventory using bar code technology
- B. Inventory moveable items
- C. Inventory large investment items first
- D. Inventory corporate assets

Knowledge based. Because of their high financial value, large investment items can generate 5% of total value in annual maintenance (best practice). In case of breakdown, they can cause harm to occupants, reputational damage to the organization, and disruption to the operations, all coming with a large price tag. (A) is only a technological choice that can be part of a deployment. (B) is difficult to do and not the best choice and (D) is too wide a net and varies as a definition between organizations.

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- B. Inventory moveable items
- C. Inventory large investment items first
- D. Inventory corporate assets

43. Measuring the effectiveness of an emergency plan is important. You want to evaluate the appropriateness and adequacy of responses during a timed fire drill. What will you measure?

- A. response times and emergency measures
- B. emergency preparedness and response measures
- C. the emergency plan and its response measures
- D. building occupants/employee response and participation

Critical thinking. (D) is the best answer because you want to measure what actually happens during the timed fire drill, addressing how the building occupants/employees will participate and respond during this type of emergency.

43. Measuring the effectiveness of an emergency plan is important. You want to evaluate the appropriateness and adequacy of responses during a timed fire drill. What will you measure?

- A. response times and emergency measures
- B. emergency preparedness and response measures
- C. the emergency plan and its response measures
- D. building occupants/employee response and participation

44. As the Facility Manager, you coordinate with each stakeholder in an emergency. First, you facilitate the identification of agreed-upon goals. Then you persuade stakeholders to accept responsibility for specific performance objectives. What does this identification of goals and responsibility accomplish for the plan?

- A. Allows you to assess program progress and accomplishments
- B. Allows you to record program progress and accomplishments
- C. Allows you to assign program progress and accomplishments
- D. Allows you to develop programs and measure results and accomplishments

Systems thinking. (D) is the best answer because the stakeholders are responsible for specific performance objectives and will manage them. As the facility manager you want to be able to review the progress and accomplishments and ensure that the goals are met.

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- B. Allows you to record program progress and accomplishments
- C. Allows you to assign program progress and accomplishments
- D. Allows you to develop programs and measure results and accomplishments

45. An emergency preparedness plan must be integrated both horizontally and vertically with internal and external responders. The department's emergency plans must be synchronized with the community's plans. What is this consolidation called?

- A. Unity of Effort
- B. Unity of Resources
- C. Unified Planning
- D. Unified Activities

Knowledge based. (A) is the best answer because the requirements match the definition of unity of effort and choice B, C, and D are related to process in the plans.

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-
46. Which of the following is the **MOST** critical risk in an organization?
- A. property damage
 - B. occupant safety
 - C. business interruption
 - D. environment damage

Roll-up concepts. Occupant safety is most critical because it protects the life of building occupants. Property damage, business interruption, and environment damage are risks whose impact can be restored; whereas, occupant safety may result in loss of life.

46. Which of the following is the **MOST** critical risk in an organization?

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- B. occupant safety**
- C. business interruption
- D. environment damage

-
47. When disasters disrupt operations, the entire organization must restore operations as quickly as possible. To restore operations as soon as possible, a back-up facility must be used when the main facilities and operations functions
- A. are damaged beyond economic repair.
 - B. can no longer meet your business functions and be online.
 - C. are offline longer than it takes to bring your back-up site online.
 - D. are deemed uninhabitable by your local emergency authority.

Using roll-up concepts eliminates A, B, and C and D trumps all others due to EHS. A business continuity plan allows a company to resume business as quickly as possible after an emergency. An evaluation needs to be done to determine the best way forward to do this. Local authorities will quickly determine a facility is uninhabitable which necessitates a rapid move to a back-up facility.

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- C. are offline longer than it takes to bring your back-up site online.
- D. are deemed uninhabitable by your local emergency authority.

48. A business continuity plan is developed in cooperation with other functional representatives and required experts. What are the three most valuable experts you would want involved in the development of your plan?

- A. fire marshal, security companies, and other companies
- B. emergency responders, security companies, and insurers
- C. utility providers, local law enforcement, and insurers
- D. fire marshal, local law enforcement, and utility providers

Critical thinking can be used to eliminate A,B, and C as D lists all safety officials and the utility provider, the number one cause of business interruption. The fire marshal, local law enforcement, and utility providers will be the first line in the event of an emergency. They should be involved in the BCP development plan to give insight as well as opinion.

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- C. utility providers, local law enforcement, and insurers
- D. fire marshal, local law enforcement, and utility providers

49. Your new facility will have a generator. It is not scheduled to be completely up and running until the move is complete. What steps would you take to assure business continuity?

- A. Delay the move until the generator is installed and operating.
- B. Decide for temporary power until the generator is in place.
- C. Relocate critical functions until the generator is operational.
- D. Arrange for off-site backup

Critical thinking can be applied to eliminate A, C, and D. The most cost effective and least disruptive option is B. The emergency/risk defined in the question is not an unknown or related to natural disaster but still could lead to issues related to inadequate power supply. Temporary power in the form of a portable generator would need to be put in place in order to ensure operational life safety systems in the event of an outage.

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- A. Delay the move until the generator is installed and operating.
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50. You are the Facility Manager and are responsible for overseeing a forty-six-floor hotel. In response to new safety regulations, you are required to refurbish your elevators. Working closely with an engineering company, you identify a solution that not only meets all regulatory requirements but also saves energy resulting in an attractive pay-back period for the estimated \$1.5 million project investment. Your project will launch in two weeks, and you are developing your communications plan and related communications material. Which are the most important stakeholder groups to inform prior to launching this project?

- A. Given the large investment, you should inform the CFO and all senior management just prior to launching this project.
- B. You should inform all Facilities staff to ensure they are aware of the renovation schedule.
- C. You should inform all front-line hotel staff and hotel visitors and guests to minimize disruption caused by the project.
- D. You should inform the body that regulates elevators to ensure they are aware that the hotel will soon meet the regulator requirements.

Critical thinking eliminated A,B, and C. It is the facilities manager's responsibility to support and communicate various stakeholders on all things related to facilities. In this case, FM needs to communicate to all the users/occupiers/guests about the new project.

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51. In a leased building, there has been a recent increase in complaints of items stolen from the workplace. Most of the complaints concern missing staplers, tape, and hole punches from the copier area. You work at a company where everyone knows each other very well and theft would be highly unusual. As Facility Manager, you are responsible for the security of the staff and facility. Who is responsible to communicate about the issue of the missing office items?

- A. The building's security staffs since security of the building is their primary responsibility.
- B. The person sitting closest to the copier area since this person is the most affected.
- C. The Facility Manager since he or she is the primary person responsible for security.
- D. The landlord, since this is a leased facility.

Critical thinking eliminates A, B, and D as the FM has full responsibility. It is the facility manager's responsibility to support and communicate to various stakeholders on all things related to facilities. The process includes collecting feedback from users about the frequent thefts. The next steps would be to keep all the stakeholders involved and plan the action plan.

51. In a leased building, there has been a recent increase in complaints of items stolen from the workplace. Most of the complaints concern missing staplers, tape, and hole punches from the copier area. You work at a company where everyone knows each other very well and theft would be highly unusual. As Facility Manager, you are responsible for the security of the staff and facility. Who is responsible to communicate about the issue of the missing office items?

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52. A facilities manager is invited to a new employee orientation to give new employees an overview of the recycling policy, smoking policy, and fire drill procedures. Which of the following types of communication should the facility manager plan to use during the orientation?

- A. Informal communication because the meeting is laid back and the material is not a high priority to the c-suite.
- B. Formal communication because the material discussed is about policy directives and procedures.
- C. Formal communication because the information is complex.
- D. Informal communication because the information is not being presented by a member from the c-suite.

Roll-up methodology. Option B is the correct response. Options A and D are incorrect because policy and life-safety information should never be informally communicated to a new employee. Option C is incorrect, because policy and life-safety information should be communicated formally regardless of complexity.

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- C. Formal communication because the information is complex.
- D. Informal communication because the information is not being presented by a member from the c-suite.

-
53. Staff meetings can be used to effectively deliver information to employees when
- A. sharing news with employees.
 - B. team participation is important.
 - C. holding routine discussions.
 - D. discussing sensitive employee information.

Critical thinking eliminates A, C, and D. (A) sharing news with employees is best done through other means such as a newsletter. (B) staff can benefit from the shared team knowledge and collaboration available during a staff meeting. (C) routine discussions do not warrant effective team meeting as they are not a good use of team time. (D) this is not correct as sharing sensitive information should be done privately.

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- A. sharing news with employees.
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 - C. holding routine discussions.
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54. The MOST important criterion of cross-cultural communication is creating a message that

- A. is clear and concise enough to be understood by all.
- B. caters to most stakeholders.
- C. is complex and open to interpretation.
- D. is based upon the culture where the headquarters is located.

Critical thinking would eliminate B, C, and D. (B) is incorrect as you may not have information on the stake holders. In cross-cultural messages, you must try and cater to all, not a majority. Each culture should be able to participate in the key concepts. (C) during any communication to a mass audience, the message should be easily read, interpreted, and understood. (D) is incorrect as the culture of the company headquarters does not represent the entire audience and could be misinterpreted.

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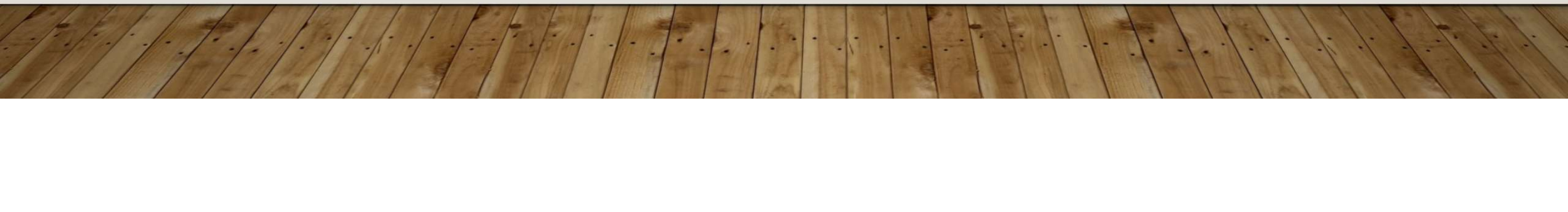
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- C. is complex and open to interpretation.
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55. ABC FM Limited has an existing service level agreement with Prime Offices Limited for a range of facility management services. There is an ongoing dispute between ABC FM Limited and Prime Offices Limited regarding the quality of the services being delivered. How would you advise the parties to resolve their dispute?

- A. The parties should terminate the existing contract and enter a new one.
- B. The parties should revise the service level agreement to include quality measures.
- C. The parties should refer the matter for arbitration.
- D. The parties should have an external audit of the services conducted.

Critical thinking eliminates A, C, and D as they do not address the root cause of quality. All SLA agreements or services should be measured with quality data to avoid interpretations of what quality is. With documented kpi's it will define the argument and its measurable effectiveness.

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56. As part of its continual improvement program, XYZ FM Limited embarked on a benchmarking exercise with a view to implementing best value practices at all its managed facilities. XYZ FM Limited provided its janitorial contractor, Best Janitors Limited, with a menu of best value practices that should be implemented as soon as possible. How should Best Janitors Limited go about implementing the best value practices?

- A. Evaluate the implications of adopting the best value practices.
- B. Request more money from XYZ FM Limited for implementing best value practices.
- C. Inform XYZ FM Limited that the best value practices are outside the contract scope.
- D. Implement the best value practices and invoice XYZ FM Limited for additional services.

Critical thinking aligns A as new services should always be evaluated for risk. The best answer is choice A. You must first evaluate the implications and how they may affect the operation and not ones that are an outcome of the evaluation. Choices B, C, and D are all outcomes.

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- D. Implement the best value practices and invoice XYZ FM Limited for additional services.

57. Which of the following is the best option for a facility manager to improve the outcome of a consultant's performance?

- A. Select a competent consultant based on reference checks of previous work.
- B. Provide constant documentation of the consultant's work.
- C. Construct a performance-based contract.
- D. Insist the consultant use an approval process.

Using the roll-up concepts eliminates all answers but C as this is the only measurable outcome. Constructing a performance-based contract is the best option for a facility manager because then all parties will understand the measure of success.

57. Which of the following is the best option for a facility manager to improve the outcome of a consultant's performance?

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- B. Provide constant documentation of the consultant's work.
- C. Construct a performance-based contract.
- D. Insist the consultant use an approval process.

58. When resolving quality issues in the delivery of FM services, what is the most critical action in the problem-solving process?

- A. Develop alternative solutions.
- B. Define the root cause of the problem.
- C. Develop an action plan.
- D. Determine the consequences of the problem.

Critical thinking methodology. Choice B is the correct response. In the problem-solving process, it is critical to know the root cause of a problem before developing an action plan (C) or identifying solutions (A). The consequences of the problem (D) are the result of the problem rather than the root cause.

58. When resolving quality issues in the delivery of FM services, what is the most critical action in the problem-solving process?

- A. Develop alternative solutions.
- B. Define the root cause of the problem.
- C. Develop an action plan.
- D. Determine the consequences of the problem.

59. Your lead mechanical technician has reported that one of the three rooftop HVAC units on your company's data center is likely to fail within the next six months. There are four possible replacement units that he has evaluated. All the units have comparable reliability and performance. Using a 5-year planning horizon, which unit should be purchased?

- A. Unit A because it can be on site quickest and has a useful life over 5 years.
- B. Unit B because it has the lowest initial cost of the unit.
- C. Unit C because it has the fastest delivery/efficient annual operating cost/longest expected life combination.
- D. Unit D because it is the highest quality system for this mission-critical facility.

Using roll-up concepts eliminates A, B, and D as they do not address risk, budget, and reliability. (C) is correct because it considers major aspects of asset ownership including useful life, continued maintenance, upgrades, decommissioning, and has the shortest downtime due to fast delivery. While the other answers are all important aspects of ownership, they do not give an accurate or full 5-year planning horizon.

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-
60. Which of the following is the greatest advantage of FM industry benchmarking?
- A. Cost comparisons with other facilities.
 - B. Determine improvement opportunities in facility operations.
 - C. Develop realistic budgets.
 - D. Evaluate staffing and workload needs.

Roll-up methodology. Option B is the best choice because benchmarking helps the facility manager identify areas of performance improvement. Options A, C, and D could be possible improvement opportunities specified in option B.

60. Which of the following is the greatest advantage of FM industry benchmarking?

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- C. Develop realistic budgets.
- D. Evaluate staffing and workload needs.

61. Which of the following methods should an organization use to confirm its mission, goals, objectives, procedures, and resources are effectively and efficiently executed?

- A. facilities agreement
- B. control procedures
- C. test indicators
- D. organizational audit

Knowledge based methodology. Option D is the only logical answer as the question asks which method should be used to confirm mission, goals, objectives, procedures, and resources are met. An audit is the only available answer that would assess the management goals, etc. Agreements, procedures, and indicators are all benchmarks, but they do not measure outcomes.

61. Which of the following methods should an organization use to confirm its mission, goals, objectives, procedures, and resources are effectively and efficiently executed?

- A. facilities agreement
- B. control procedures
- C. test indicators
- D. organizational audit

62. Which of the following could be included in a strategic facility plan for an owned building?

- A. a set of steps to accomplish a goal in a budget plan
- B. a long-term or mid-term set of specifications
- C. a facility life-cycle cost analysis
- D. an occupancy charts

Knowledge based methodology. Option C is correct because it helps the facility manager to prepare for long-term budgeting needs. Options A, B, and D are not relevant at a strategic level.

62. Which of the following could be included in a strategic facility plan for an owned building?

- A. a set of steps to accomplish a goal in a budget plan
- B. a long-term or mid-term set of specifications
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-
63. Classifying the seriousness of a conflict involves weighing which of the following factors?
- A. intensity level of the conflict and difficulty level of the resolution
 - B. personality traits of the parties involved and the impact to the business
 - C. negotiating skills of the facility manager leader and positions of the parties involved
 - D. potential for litigation and health and safety of the parties involved

Critical thinking: B, C, and D do not address any investigation for potential severity. The first step in understanding the severity of a conflict is to gauge the scope of the problem itself. B, C, and D are details of the scope of the problem that makes up the larger issue.

63. Classifying the seriousness of a conflict involves weighing which of the following factors?

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- D. potential for litigation and health and safety of the parties involved

64. A manufacturing plant building adjacent to your building is using solar photovoltaic panels on their site. The facility plant manager at this site has offered to sell renewable energy certificates (REC) to your company. Given this scenario, why would you decide to purchase the REC?

- A. Your building will be supplied with a less expensive energy source.
- B. The REC documents will be used to trade for other sources of energy.
- C. Buying RECs is one of your company's Corporate Social Responsibility goals.
- D. One of your company's goals is to reduce carbon emissions.

Critical thinking methodology. Given the information within the scenario, option A is the correct response. While options B, C, and D could be correct, there is not enough information to select them as correct.

64. A manufacturing plant building adjacent to your building is using solar photovoltaic panels on their site. The facility plant manager at this site has offered to sell renewable energy certificates (REC) to your company. Given this scenario, why would you decide to purchase the REC?

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- D. One of your company's goals is to reduce carbon emissions.

65. As the Director for US Facilities at an organization that puts a strong emphasis on corporate values and being the employer of choice, you have an open position for a Senior Manager. The nature of the position allows them to work from any company location. The organization wants the employee to come from within the organization. After creating a job description, what do you do to ensure that the offer is made to someone based on performance, experience, education, and not office politics or any other typical barriers (sex, race, ADA, etc.)?

- A. Have HR review the application and provide you with a list of candidates for your review. After completing your review, pass the application to a colleague for review and ask them to create a list. Follow up with current managers to get their view of the employees on the list and narrow that list from those conversations.
- B. Let HR review, conduct interviews, and provide you with a final list of staff members for second interviews.
- C. Create a panel to assist in the reviewing of the application and interviewing process. Based on the criteria set for the position, have a scorecard by which you measure the applicants, creating a final interview list from the scorecard.
- D. Create a scorecard to review applications against, creating a list of candidates for a third party to review and conduct background checks. Have a third party provide you with a list of candidates to select from.

Critical thinking. Choices A and B are not appropriate approaches. The hiring manager (FM) should be involved in the entire process. Asking the advice of colleagues and other managers is fine but the hiring manager (FM) should be making the decisions in terms of creating and narrowing the candidate list.

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- D. Create a scorecard to review applications against, creating a list of candidates for a third party to review and conduct background checks. Have a third party provide you with a list of candidates to select from.

66. What is the advantage of structuring the Facility Management group based on a functional model?

- A. Supports multiple simultaneous projects most effectively.
- B. Creates cross-training opportunities for all staff members.
- C. Reduces the risk of overspecialization for each staff member.
- D. Provides a clear chain of command across the organization.

Knowledge based. Functional models work best in larger organizations where a greater level of structure broken down by specialization is required.

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- D. Provides a clear chain of command across the organization.

67. You manage a corporate office facility. The occupants are top management and their staff. In addition to the regular routines of housekeeping, maintenance, etc., many requests are made from the CEO's office to the janitorial service personnel. How should you prioritize responses to requests?

- A. Those that relate to safety are handled first.
- B. Those that satisfy upper management are done first.
- C. First-in are first-out.
- D. Ask top management for their recommendation.

Roll-up concept: B, C, and D roll-up into safety. Safety issues can significantly and adversely impact the business. Part of an fm's primary role is to provide a safe working environment and protect its assets, which is also a priority for top management.

67. You manage a corporate office facility. The occupants are top management and their staff. In addition to the regular routines of housekeeping, maintenance, etc., many requests are made from the CEO's office to the janitorial service personnel. How should you prioritize responses to requests?

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- C. First-in are first-out.
- D. Ask top management for their recommendation.

68. You must decide whether to store archived records on-site or at a remote site. What factor should be given first consideration?

- A. Retention of the documents.
- B. The cost of storing documents off-site
- C. How often the records are currently used
- D. The type of documents being stored

Critical thinking. The ease and frequency of records access should be a priority based on response time in serving the customer. Once the determination to store archived records on-site or at a remote site has been made, the other options are secondary considerations.

68. You must decide whether to store archived records on-site or at a remote site. What factor should be given first consideration?

- A. Retention of the documents.
- B. The cost of storing documents off-site
- C. How often the records are currently used
- D. The type of documents being stored

69. You have been asked to isolate a department dealing with sensitive information from high traffic areas at the Corporate Headquarters office building. After reviewing affected departments' needs, a consultant has recommended moving them to another floor, reconfiguring modular workstations and relocating two smaller departments. What is your first consideration in reacting to the recommendation?

- A. Present the impact of the recommendation to affected managers.
- B. Develop a space plan considering each department's needs.
- C. Consider any viable alternative plans.
- D. Evaluate whether the relocation is consistent with the facility master plan.

Critical thinking. Option A is the best response because proceeding with the recommendations before discussing with the affected managers and creating a plan might have an unknown adverse impact.

69. You have been asked to isolate a department dealing with sensitive information from high traffic areas at the Corporate Headquarters office building. After reviewing affected departments' needs, a consultant has recommended moving them to another floor, reconfiguring modular workstations and relocating two smaller departments. What is your first consideration in reacting to the recommendation?

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- C. Consider any viable alternative plans.
- D. Evaluate whether the relocation is consistent with the facility master plan.

-
70. Your building is in excellent condition. However, the FM department is perceived poorly by upper management. What is the most effective thing you can do to change the perception of upper management?
- A. Work to improve the customer service skills of your staff.
 - B. Start benchmarking the department's record to show management the true contribution of FM.
 - C. Institute a computer-based work order tracking system to address management's concerns.
 - D. Set up meetings with upper management to provide data on the cost-effectiveness of your methods.

Critical thinking. Training your FM staff in customer service skills will complement excellent technical skills in gaining the respect and appreciation of the customer. Tracking data will not change negative perceptions of service.

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 - C. Institute a computer-based work order tracking system to address management's concerns.
 - D. Set up meetings with upper management to provide data on the cost-effectiveness of your methods.

71. A strategy **MUST** describe

- A. a plan of what actions will be taken and established performance measurements.
- B. what needs to be improved and how to be more competitive.
- C. the timeline and due dates for the work to be done.
- D. how to track progress and measure business risk.

Critical thinking methodology. Option A is correct because strategy explores the big picture and long-term needs of an organization. A strategic plan describes how an organization intends to achieve a goal or objective. Options B, C, and D are the tactical and operational outputs of strategic planning.

71. A strategy **MUST** describe

- A. a plan of what actions will be taken and established performance measurements.
- B. what needs to be improved and how to be more competitive.
- C. the timeline and due dates for the work to be done.
- D. how to track progress and measure business risk.

72. Which of the following is the systematic approach to using and reusing materials more productively over their entire life cycle?

- A. waste management
- B. recycling
- C. Sustainable material management
- D. Corporate Social Responsibility (CSR)

Roll-up concepts. Options A and B are subsets of C. D, CSR, would include "C" but is much broader than just using and reusing materials more productively.

72. Which of the following is the systematic approach to using and reusing materials more productively over their entire life cycle?

- A. waste management
- B. recycling
- C. Sustainable material management
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73. A manager who gives their employee authority to make decisions and act without prior approval is practicing which of the following?

- A. delegation
- B. employee involvement
- C. empowerment
- D. change management

Knowledge based. (A) delegating to an employee is instructing an employee to do a certain task and is not allowing an employee to make their own decisions/choices. (B) while employee involvement seeks participation from employees it does not necessarily encourage independent thinking. (D) similarly, change management does not necessarily encompass empowerment.

73. A manager who gives their employee authority to make decisions and act without prior approval is practicing which of the following?

- A. delegation
- B. employee involvement
- C. empowerment
- D. change management

74. Which of the following is **LEAST** effective as a motivational tool?

- A. disciplinary deterrents
- B. monetary incentives
- C. career development
- D. recognition

Critical thinking. While knowing that poor behavior or performance could lead to disciplinary action, using fear as a motivational tool does not work long-term.

74. Which of the following is LEAST effective as a motivational tool?
- A. disciplinary deterrents
 - B. monetary incentives
 - C. career development
 - D. recognition

-
75. An effective leader does which of the following?
- A. Creates an environment where all feel valued.
 - B. Takes credit for the work of their organization.
 - C. Refers to their staff as a resource.
 - D. Ensures their opinion is the 'right' one

Critical thinking eliminates B, C, and D as they do not consider problem solving, creativity, and analysis. An effective leader motivates their team to excel and feel valued. They ensure their team receives praise and credit for their work and allows their team to voice opinions and concerns. They do not take credit for others' work or dictate all the time.

75. An effective leader does which of the following?
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76. When a leader invites perspectives and ideas from other members of the team, their leadership style could be described as which of the following?

- A. collaborating
- B. trusting
- C. empathizing
- D. delegating

Critical thinking: applying communication from critical thinking eliminates B, C, and D. Inviting ideas from others illustrates a collaborative attitude and willingness to listen to other opinions.

76. When a leader invites perspectives and ideas from other members of the team, their leadership style could be described as which of the following?

- A. collaborating
- B. trusting
- C. empathizing
- D. delegating

77. What is the first course of action that should be taken when you have identified a contractor's difficulty to perform on a contract?

- A. Line up another contractor to take over project work.
- B. Seek the advice of senior management and corporate legal counsel.
- C. Speak to the contractor about your concern and discuss possible remedies.
- D. Prepare to take immediate legal action to avoid unnecessary delays.

Critical thinking methodology. Key words are, "first course of action." In order to find a solution to the problem you must first understand its root cause. The correct answer is choice C. Option B would follow option C - you need to first understand the problem before you can seek advice as to its possible solution. Options A and D are not first courses of action. They are remedies.

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- B. Seek the advice of senior management and corporate legal counsel.
- C. Speak to the contractor about your concern and discuss possible remedies.
- D. Prepare to take immediate legal action to avoid unnecessary delays.

78. A neighborhood group adjacent to your facility thinks the parking garage is an eyesore. They claim it blemishes the attractiveness of the area and keeps property values from rising. They have formally complained to the local authorities. What is the first step you should take in dealing with the problem?

- A. Refer the issue to the legal department to understand options going forward.
- B. Inform the Chief Executive Officer (CEO) and let him deal with the issue.
- C. Issue a press release indicating how you intend to deal with the issue.
- D. Approach the head of the neighborhood group to solicit input.

Roll-up concepts: legal action trumps all other possible answers. Referring the issue to the legal department is the first choice. If a formal complaint has been filed, the FM should understand what legal options are available. Choice B is not acceptable in that it is a last-ditch response. Choice C is not an appropriate action no matter what the solution. Choice D is not the correct answer at this point because a formal complaint has already been filed.

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79. Each year, you are responsible for creating an operating budget for your company's and the client's funding. Currently you provide full management services for a client site, except the client's core business. Your contract requires that you provide certain services at your own expense and manage the client's funding for the other services. What is the primary reason your client is comparing actual financial performance to a budget?

- A. To see how well you understand how to manage their company's business and the client's funds
- B. To check on your forecasting techniques and to revise budgets, goals, and plans
- C. To identify items that are more expensive than last year and reduce purchases
- D. To reduce materials expense and reduce overtime until you are back on budget

Critical thinking and roll-up methodology. Key parts of the budgeting process are forecasting and monitoring. Choices C & D could be a result of the monitoring process. Choice A might be a result of the forecasting process, i.e. If your budget is off it may be that you do not fully understand the company's business.

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80. Which of the following data resources offer the BEST opportunity for a facility manager to develop performance metrics that support the organization's overall financial strategy?

- A. Integrated Workplace Management System (IWMS)
- B. IFMA Benchmark Study Reports
- C. Internal Life-Cycle Cost (LCC) Report
- D. Operating Budget Balance Sheet

Critical thinking: A, C, and D do not address financial benchmarks outside the organization. (B) is correct because benchmark studies such as the IFMA benchmark study reports help an organization compare itself to other organizations and determine a baseline for their performance metrics. (A) is incorrect because IWMS is a software that helps organizations manage their assets. (C) is incorrect because it estimates the cost of the facility from cradle to grave. (D) is incorrect because it is a tool to help balance daily expenses.

80. Which of the following data resources offer the BEST opportunity for a facility manager to develop performance metrics that support the organization's overall financial strategy?

- A. Integrated Workplace Management System (IWMS)
- B. IFMA Benchmark Study Reports**
- C. Internal Life-Cycle Cost (LCC) Report
- D. Operating Budget Balance Sheet

81. Your facility management company has been asked to increase janitorial services at an existing client's campus by one day a week in some areas. Your vice president has asked, since you are familiar with the client's expectations and campus, that you provide: a scope of work, the costs for staffing, supplies and equipment needed to perform the work, and what the client should be charged for the work. The vice president has committed to providing the price for the added services to the client within a week. What type of estimate has your vice president requested of you?

- A. generic estimate
- B. feasibility estimate
- C. parametric estimate
- D. operating expense and revenue estimate

Critical thinking eliminates A, B, and C as they do not take into account the "big" picture. Providing operating expense and revenue estimate will give a comprehensive quote of the costs associated with the client's request. The other estimates will provide incomplete cost data.

81. Your facility management company has been asked to increase janitorial services at an existing client's campus by one day a week in some areas. Your vice president has asked, since you are familiar with the client's expectations and campus, that you provide: a scope of work, the costs for staffing, supplies and equipment needed to perform the work, and what the client should be charged for the work. The vice president has committed to providing the price for the added services to the client within a week. What type of estimate has your vice president requested of you?

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82. You are assigned to evaluate four buildings for your organization to determine the lowest cost option for leasing. Building #1 has 3,000 sq. ft. with rent of \$20.00/sq. ft. Building #2 has 10,000 sq. ft. with rent of \$19.50/sq. ft. Building #3 has 7,000 sq. ft. with rent of \$19.50/sq. ft. Building #4 has 9,000 sq. ft. with rent of \$22.00/sq. ft. Why is it important to understand the cost associated with each option?

- A. So that a budget can be prepared
- B. So that monthly rent can be paid
- C. To minimize unforeseen expenses and avoid other costs
- D. To be familiar with alternate solutions in case the requirement changes

Critical thinking: risk should always be evaluated and built into the budget. In most cases, a lease is signed for a long term. Without properly understanding the needs and the cost associated with it, you will incur unnecessary expenses for the extra space (if you get a large space than you need) or you are finding yourself without enough space (if the space you rented is too small) and you end up renting additional space and duplicating costs.

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83. You are the facility manager for a large corporate headquarters facility. The building was built 15 years ago. Maintenance and repair funds have never been adequate. You have negotiated with senior management for large capital budget for the upcoming year. What should you target first with these new funds?

- A. Deferred maintenance
- B. Carpet repairs
- C. Painting and aesthetic improvements
- D. Energy improvement

Roll-up concepts. Preventative and deferred maintenance are critical to maintaining your facilities. While B, C, and D are important, they're not going to ensure the facility can function for your customers. B and C are aesthetic, and D is not critical to ensure a running facility.

83. You are the facility manager for a large corporate headquarters facility. The building was built 15 years ago. Maintenance and repair funds have never been adequate. You have negotiated with senior management for large capital budget for the upcoming year. What should you target first with these new funds?

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- B. Carpet repairs
- C. Painting and aesthetic improvements
- D. Energy improvement

84. Which of the following refers to the number of years forecasted to recover an investment?

- A. return period
- B. forecasted period
- C. investment period
- D. payback period

Knowledge based. The payback period is the length of time required for an investment to recover its initial expenditure.

84. Which of the following refers to the number of years forecasted to recover an investment?

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- C. investment period
- D. payback period

85. Which of the following is an advantage to senior level managers when creating top-down budgets?

- A. increased employee acceptance
- B. more realistic goals are set
- C. increased employee motivation
- D. better control over decisions

Critical thinking. A top-down budget consists of executives reviewing past years expenditures and profits for each department and determining the coming year's budgets based on this information. It does not necessarily increase employee acceptance as typically managers and staff are not included in discussions. For this reason, top-down budgets can be unrealistic and/or demotivating to lower level staff. However, these budgets give better control to senior managers as they are setting the targets for the team.

85. Which of the following is an advantage to senior level managers when creating top-down budgets?

- A. increased employee acceptance
- B. more realistic goals are set
- C. increased employee motivation
- D. better control over decisions

86. Major or long-term purchases are typically funded by which of the following budget types?

- A. capital
- B. operating
- C. administrative
- D. charge-back

Knowledge based. (A) is the correct answer because capital budget is a planning process used to determine long-term purchases such as land, equipment, or new building. (B and C) are daily expenses, and (D) is a process to charge the customer for facilities services.

86. Major or long-term purchases are typically funded by which of the following budget types?

- A. capital
- B. operating
- C. administrative
- D. charge-back

87. Which of the following is impacted due to major expenditures for items like property, plant, and equipment?

- A. capital budget
- B. activity-based budget
- C. incremental budget
- D. operating budget

Knowledge based. Capital budget is the correct answer because it is allocating money for purchase or maintenance of fix assets such as land, buildings, and equipment. Operating budget is for day-to-day expenses. Activity-based budget and incremental budget are types of budget approaches.

87. Which of the following is impacted due to major expenditures for items like property, plant, and equipment?

- A. capital budget
- B. activity-based budget
- C. incremental budget
- D. operating budget

88. When comparing the Life-Cycle Cost (LCC), what are the three basic financial analysis tools employed to convert annual cash flows into numbers suitable for comparison?

- A. present value, average annual cost, and internal rate of return
- B. escalating cost, internal rate of return, and accelerated depreciation
- C. benefit-cost ratio, average annual cost, and escalating cost
- D. present value, accelerated depreciation, and benefit-cost ratio

Knowledge based. (A) is the correct answer because present value, average annual cost, and internal rate of return are three tools which relate to LCC. The other answers are incorrect because one or more terms in the answer does not relate to LCC.

88. When comparing the Life-Cycle Cost (LCC), what are the three basic financial analysis tools employed to convert annual cash flows into numbers suitable for comparison?

- A. present value, average annual cost, and internal rate of return
- B. escalating cost, internal rate of return, and accelerated depreciation
- C. benefit-cost ratio, average annual cost, and escalating cost
- D. present value, accelerated depreciation, and benefit-cost ratio

-
89. A technique for cost justification of a capital project includes
- A. depreciation expense.
 - B. rate of return.
 - C. cash flow.
 - D. operating cost.

Knowledge based. (B) is the correct answer because you want to justify project cost by the rate of return within a determined period. (A) is incorrect because it deals with fixed assets. (C) is incorrect because it is movement of money. (D) is incorrect because it involves daily expenses.

89. A technique for cost justification of a capital project includes

- A. depreciation expense.
- B. rate of return.**
- C. cash flow.
- D. operating cost.

90. In selling a facility manager's strategy, budget, and operational arguments to management, the facility manager **MUST** construct their presentation using

- A. language attuned to management.
- B. outstanding graphics.
- C. financial metrics.
- D. business successes.

Roll-up concepts: B, C, and D do not address management in terms of mission, vision, and values. (A) is the correct answer because language attuned to management deals with goals and objectives that are important to management. (B) is incorrect because images are secondary to "telling the story." (C) is incorrect because financial metrics may not align with overall company objectives. (D) is incorrect because business successes are outcomes.

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Good luck