DevOps Foundation V3.2
Sample Examination 1

1. A small group of individuals recently returned from a conference where they learned about DevOps. They cannot agree on how to get started. Where should an IT organization start when adopting DevOps practices?

    A. Understand why the organization exists
    B. Pick the right applications to pilot
    C. Develop a long-term strategy
    D. Identify tools and training needed

2. What is the Three Ways?

    A. Methodology for identifying and removing constraints
    B. The key principles of DevOps
    C. Disciplined, data-driven approach for reducing waste
    D. A methodology for performing continuous improvement

3. Which statement about Kanban is CORRECT?

    A. Pushes work through a process
    B. Requires a workflow management tool
    C. Pulls work through a process
    D. Enables more work in progress

4. What is the Agile Manifesto?

    A. Values and principles to guide an iterative and people-centric approach to software development
    B. Methodology that focuses on making sure software is always in a releasable state throughout its lifecycle
    C. Declaration of the benefits and intentions of DevOps
    D. Intentions and motives of being an agile enterprise

5. An organization is trying to overcome the challenges of their legacy silo culture where teams have been organized by subject matter expertise. What is this organization suffering from?

    A. Cultural debt
    B. Change fatigue
    C. Organizational change
    D. Low trust

6. Which statement BEST describes change fatigue?

   A. Aggressive resistance
   B. Apathy
   C. Finger pointing
   D. Exhaustion

7. Due to a tightly-coupled architecture, an organization is unable to increase the frequency of releases for a key service. When releases do occur, they are extremely painful and the organization's competitive advantage is eroding as a result. Which software development approach could be used to improve this situation?

   A. Test-driven development
   B. Containers
   C. Microservices
   D. Chaos Monkey

8. An organization has just completed the deployment of a pilot release using DevOps practices and a preliminary deployment pipeline. Which metric would provide the most information to help them continually improve?

   A. Mean Time to Repair (MTTR)
   B. Change lead and cycle times
   C. Knowledge sharing
   D. All of the above

9. Which statement about DevOps teams is MOST accurate?

   A. They are responsible for establishing DevOps practices across the enterprise
   B. They are accountable for the development of the deployment pipeline
   C. They should be a fixed team that works together on long term projects
   D. They should have shared accountabilities

10. An organization recently held an internal DevOps Days. During one of the openspace sessions, it was suggested that there be more opportunities for dev, ops, security and other IT areas to interact and share. What sort of opportunities should the organization consider?

   A. Hackathons
   B. Simulations
   C. Immersion opportunities

D. All of the above

11. Which of the following roles are DevOps stakeholders?

A. QA testers
B. Support professionals
C. Suppliers
D. All of the above

12. Which is NOT a goal of DevOps?

A. Improved productivity
B. Fewer but higher-quality software releases
C. Lower risk software deployments
D. Improved quality of code

13. An organization is implementing a disruptive application similar to the Simian Army. Which of the Three Ways are they introducing?

A. The First Way
B. The Second Way
C. The Third Way
D. The Phoenix Project

14. An organization is looking to improve real-time collaboration between teams. Which DevOps practice should they be considering?

A. Kanban
B. ChatOps
C. Escalation
D. Alerts

15. Which is a characteristic of a DevOps culture?

A. Effective one-way communication from the top down
B. Recognizing the best and brightest for their successes
C. Shared vision, goals and incentives
D. All of the above

16. Which BEST describes a deployment pipeline?

    A. An automated version of the ITSM change management process
    B. Automated process for managing software changes from check-in to release
    C. Collection of tools that enable continuous integration
    D. Sequence of value-adding activities required to design, build and deliver a product

17. At a recent conference, a CIO was told that her organization should invest heavily in machine learning. Back at the office, she asked one of her senior leadership team to pull together an investment case. What is NOT a direct benefit they are likely to receive from using artificial intelligence and therefore should be excluded from the investment case?

    A. Predicting future scenarios
    B. Finding new trends and correlations
    C. Augmenting human contribution and boosting productivity
    D. Building a blame free culture

18. Which statement about the Improvement Kata is CORRECT?

    A. It focuses on short term goals
    B. It is a 7-step process
    C. It considers the organization's long-term vision or direction
    D. It should be performed as time allows

19. In the context of agile software development, which of the following is NOT a responsibility of IT Operations?

    A. Managing the product backlog
    B. Defining non-functional requirements
    C. Identifying security requirements
    D. Provisioning the infrastructure

20. Which of the following is a characteristic of a high trust organizational culture?

    A. Good information flow
    B. Cross-functional collaboration
    C. Learning from failures and new ideas
    D. All of the above

21. Why is organizational culture a critical success factor for DevOps?

   A. It represents the values and behaviors that contribute to the unique social and psychological environment of an organization
   B. It represents a command and control approach to the delivery of services
   C. It represents the way that an organization is structured and organized
   D. It reflects the strategic direction of the business' leadership

22. What is a primary benefit of DevOps toolchains?

   A. To automate steps in the deployment pipeline
   B. To trace features' journeys from inception to live
   C. To ensure that the architectural design supports interoperability and consistency
   D. All of the above

23. Which of the following DevOps roles is NOT YET well defined?

   A. Systems engineer
   B. Continuous delivery automation architect
   C. DevOps engineer
   D. Experience assurance

24. An organization is implementing DevOps. The developers are concerned that their ITSM processes are too complex, slow and will not support DevOps principles and practices. Which IT framework will help the organization instill agile thinking into existing ITSM processes?

   A. ITIL
   B. Agile
   C. Agile service management
   D. Lean

25. Which lean tool depicts the flow of information, materials and work across functional silos with an emphasis on quantifying and eliminating waste?

   A. Improvement Kata
   B. Continuous Delivery
   C. Kanban
   D. Value stream mapping

26. The business 'why' of the Golden Circle represents an organization's

    A. Purpose, cause and belief
    B. Products and services
    C. Competitive advantage
    D. Profitability

27. What determines which DevOps principles and practices will BEST benefit an organization?

    A. Business strategies and goals
    B. The commitment of early adopters
    C. The availability of advanced tools
    D. IT's capabilities and resources

28. The Theory of Constraints supports which of the Three Ways?

    A. The First Way
    B. The Second Way
    C. The Third Way
    D. All of the above

29. Which of the following is required for Continuous Integration?

    A. Automated unit, integration and acceptance testing
    B. Automated release management
    C. Continuous delivery pipeline
    D. Deployment pipeline

30. Which DevOps practice relies on a deployment pipeline that enables push-button deployments on demand?

    A. Continuous testing
    B. Continuous integration
    C. DevSecOps
    D. Continuous delivery

31. **Which of the following ITSM processes are most critical to DevOps?**

    A. Organizational change management
    B. Service continuity management
    C. Incident management
    D. All of the above

32. **An organization has identified they have a culture of blame and fear, where incidents are not valued and failure is not embraced as a learning opportunity. There are many single points of failure and employees suffer daily as a result of the fragility of the systems, enduring painful war-rooms during frequent outages. What should this organization look to in order to improve the situation?**

    A. Safety Culture
    B. Agile software development
    C. Building a DevOps toolchain
    D. Site Reliability Engineering

33. **When trying to effect major change, who should be engaged in planning activities and serve as change agents?**

    A. Early adopters
    B. Conservatives or naysayers
    C. Management
    D. People who need proof

34. **What of the following is NOT a typical element in a DevOps toolchain?**

    A. Monitoring tools
    B. Test automation
    C. Version control
    D. Service desk incident management systems

35. **Which of the following is a critical success factor for DevOps?**

    A. Establishing a tool chain
    B. Hiring DevOps Engineers
    C. Management commitment to culture change
    D. Automating everything

36. Which of the following is not a goal of DevOps leadership?

A. Help to improve self-diagnosis
B. Control and evaluate workers using metrics
C. Instil self-improvement
D. Translate local discoveries to global improvements

37. Which of the Three Ways encourages peer review of production changes?

A. The First Way
B. The Second Way
C. The Third Way
D. All of the above

38. What does the concept of "shift left" represent?

A. Building quality into the software development process via early and continuous testing
B. Passing release packages to IT Operations following completion of a batch of development
C. Performing random tests on code that is committed to a continuous integration server
D. Doing more testing in production after deployment

39. An organization is struggling with the additional time it takes for security reviews after an Agile team completes a Sprint. The delay is impacting their ability to release. They want to include more security testing as part of their "shift left" testing approach. Which DevOps practice would they need?

A. ChatOps
B. Continuous Testing
C. DevSecOps
D. Vulnerability alerts

40. An organization is preparing to automatically deploy every release that passes automated unit, integration, user acceptance and non-functional tests. Which DevOps practice are they applying?

A. Continuous delivery
B. Continuous testing

C. Continuous deployment
D. Continuous integration

ANSWER KEY

Question	Correct Answer	Topic Area
1	A	1: Exploring DevOps
2	B	2: Core DevOps Principles
3	C	3: Key DevOps Practices
4	A	4: DevOps Values: Business & Technology Frameworks
5	A	5: DevOps Values: Culture, Behaviors & Operating Models
6	B	5: DevOps Values: Culture, Behaviors & Operating Models
7	C	6: DevOps Values: Automation & Architecting Toolchains
8	D	7: DevOps Values: Measurements, Metrics & Reporting
9	D	8: DevOps Values: Sharing, Shadowing & Evolving
10	D	7: DevOps Values: Measurements, Metrics & Reporting
11	D	1: Exploring DevOps
12	B	1: Exploring DevOps
13	C	2: Core DevOps Principles
14	B	3: Key DevOps Practices
15	C	5: DevOps Values: Culture, Behaviors & Operating Models

16	B	6: DevOps Values: Automation & Architecting Toolchains
17	D	6: DevOps Values: Automation & Architecting Toolchains
18	C	4: DevOps Values: Business & Technology Frameworks
19	A	4: DevOps Values: Business & Technology Frameworks
20	D	5: DevOps Values: Culture, Behaviors & Operating Models
21	A	5: DevOps Values: Culture, Behaviors & Operating Models
22	D	6: DevOps Values: Automation & Architecting Toolchains
23	C	8: DevOps Values: Sharing, Shadowing & Evolving
24	C	4: DevOps Values: Business & Technology Frameworks
25	D	4: DevOps Values: Business & Technology Frameworks
26	A	1: Exploring DevOps
27	A	1: Exploring DevOps
28	A	2: Core DevOps Principles
29	A	3: Key DevOps Practices
30	D	3: Key DevOps Practices
31	D	4: DevOps Values: Business & Technology Frameworks
32	A	4: DevOps Values: Business & Technology Frameworks
33	A	5: DevOps Values: Culture, Behaviors & Operating Models

34	D	6: DevOps Values: Automation & Architecting Toolchains
35	C	8: DevOps Values: Sharing, Shadowing & Evolving
36	B	8: DevOps Values: Sharing, Shadowing & Evolving
37	B	2: Core DevOps Principles
38	A	3: Key DevOps Practices
39	C	3: Key DevOps Practices
40	C	3: Key DevOps Practices