

Huawei Certified Pre-sales Associate- Data Center Facility

Huawei H19-311

Version Demo

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QUESTION NO: 1

Which of the following statements are incorrect about the cable design? (Multiple Choice)

- A. An unlimited number of power cables can be used in parallel when the current is high.
- B. There is no need to derate because the UPS cable is designed based on the rated current.
- C. The UPS cable needs to consider the wiring capability of the UPS system terminal.
- D. Controlling the UPS AC cable voltage drop within 5% can satisfy the design requirements.

ANSWER: A B D

Explanation:

The incorrect cable-design statements are “An unlimited number of power cables can be used in parallel when the current is high,” “There is no need to derate because the UPS cable is designed based on the rated current,” and “Controlling the UPS AC cable voltage drop within 5% can satisfy the design requirements.” Parallel conductors must be engineered with a defined, limited quantity and with matching conductor material, cross-sectional area, length, routing, and terminations so that current sharing remains acceptable. The number of cables must also be compatible with the UPS terminals and protection arrangement; it cannot be unlimited. Cable ampacity must be derated for actual installation conditions, including ambient temperature, grouping of circuits, enclosure or tray installation, and ventilation. Selecting a cable solely from UPS rated current omits these necessary correction factors. For UPS AC circuits, cable voltage drop should be controlled more tightly than 5% to maintain the required input/output voltage performance and avoid compromising UPS operation under load. Huawei UPS installation guidance and applicable cable-installation standards require cable selection to account for terminal capacity, installation conditions, current-carrying capability, and voltage drop. See Huawei’s [UPS support resources](#) and IEC’s [IEC 60364-5-52 cable-selection standard](#).

QUESTION NO: 2

Which of the following UPS models support bypass hot-swap? (Multiple Choice)

- A. UPS5000-E
- B. UPS5000-A
- C. APM series
- D. PX250 series

ANSWER: A D

Explanation:

UPS5000-E and the PX250 series support bypass hot-swap because their modular UPS designs allow the bypass assembly to be serviced or replaced without shutting down the protected load. In the UPS5000-E architecture, the bypass module is a separately maintainable functional module. This design supports online maintenance: the UPS can keep supplying the load through its available power path while an authorized engineer replaces or services the bypass module in accordance with the prescribed maintenance procedure. This reduces maintenance-related downtime and is especially valuable in data-center installations that require continuous availability.

The PX250 series likewise uses a modular architecture that provides online serviceability for key UPS components, including its bypass functionality. Bypass hot-swap capability enables maintenance activity to be performed while continuity to critical downstream equipment is preserved, provided the system is operating within the manufacturer’s stated redundancy, load, and maintenance conditions. These capabilities should always be used only by qualified personnel following the applicable product documentation and site safety procedures. Huawei describes the modular, maintainable design of the UPS5000-E family on its [UPS5000-E product page](#). Vertiv’s information for the [Liebert PX UPS family](#) documents its modular critical-power architecture and serviceability.

QUESTION NO: 3

Which of the following is the operating principle of the UPS2000-G? ()

- A. Online interactive UPS
- B. Online dual-conversion
- C. Standby
- D. Delta conversion

ANSWER: B

Explanation:

The UPS2000-G operates using an online dual-conversion architecture. In normal operation, the UPS converts incoming AC utility power to DC through a rectifier, uses the DC bus to charge and maintain the battery system, and then converts DC back to a regulated AC output through an inverter. Because the inverter continuously supplies the load, connected equipment receives stable output power that is isolated from common input-power disturbances such as voltage fluctuations and frequency variations. If the utility supply fails, the battery continues feeding the DC bus, allowing the inverter to maintain output power without the transfer interruption associated with standby designs. This operating principle is particularly appropriate for critical IT and network equipment that requires consistent, conditioned power. Huawei identifies the UPS2000-G series as an online UPS and describes its use in scenarios requiring reliable power protection. Product information is available from [Huawei UPS2000-G](#). Huawei's broader UPS documentation also describes online double-conversion UPS systems as providing continuous inverter-based output for critical loads; see [Huawei UPS documentation](#).

QUESTION NO: 4

The input power factor (full load) of the UPS5000A is (), which can efficiently reduce the pollution to the power grid and save the preceding power distribution investment.

- A. 1
- B. >0.99
- C. >0.98

ANSWER: B

Explanation:

The correct full-load input power-factor specification is **>0.99**. Input power factor expresses how effectively the UPS converts the apparent power drawn from the upstream AC source into usable real power. A value greater than 0.99 means that, at rated load, the UPS draws current that is very closely aligned with the input voltage waveform. This minimizes reactive-power demand and reduces the RMS input current needed for a given real power requirement.

For a pre-sales design, this characteristic is important because lower input current can reduce the required capacity of upstream switchgear, cables, transformers, and generators, while also helping preserve available capacity in the facility distribution system. The UPS5000-A uses input power-factor correction to achieve this high value and thereby limit adverse effects on the grid or site power system. The stated figure is specifically a full-load performance value, so it should be applied when calculating the UPS's rated upstream power-distribution requirements. Huawei identifies the UPS5000-A as a high-efficiency, high-availability UPS platform for critical-power applications; consult its product information and critical-power portfolio at [Huawei UPS5000-A](#) and [Huawei Critical Power solutions](#).

QUESTION NO: 5

The number of UPS5000-E batteries can be adjusted. When one battery becomes faulty, you should remove at least () batteries and set the corresponding battery quantity on the monitoring panel.

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: B

Explanation:

2 is correct. In a UPS5000-E battery string, the configured battery quantity must accurately match the number of battery blocks that remain electrically connected. If a faulty battery cannot be immediately replaced and the string is to continue operating with a reduced battery count, Huawei's maintenance requirement is to remove at least two batteries and then change the battery quantity setting on the monitoring panel. This preserves an appropriate battery-string configuration for the UPS's charging management, battery-voltage calculation, low-voltage protection, and backup-time estimation. After the physical battery quantity and monitoring configuration are aligned, the UPS can use the correct string-voltage reference when managing the remaining batteries. The work must be performed only after the relevant battery circuit is safely isolated, following site electrical-safety procedures and the applicable UPS5000-E maintenance documentation. Huawei's UPS5000-E product information is available at [Huawei Digital Power UPS5000-E](#), and product documents and maintenance guidance can be accessed through the [Huawei Enterprise Support portal](#).

QUESTION NO: 6

The standard UPS5000-A is equipped with an LCD which supports multiple languages, displays system operating system in real time, and stores a maximum of () alarm records.

- A. 2000
- B. 2500
- C. 3000

ANSWER: B

Explanation:

2500 is correct. The standard UPS5000-A LCD is intended to provide local operational visibility as well as event-history support for maintenance personnel. In addition to its multilingual interface and real-time display of UPS operating information, the LCD's alarm-history capacity is specified as a maximum of 2,500 alarm records. This retained history lets service personnel review previous alarms, correlate repeated events, and investigate the sequence of conditions leading to a fault without needing to rely solely on a currently active alarm. Alarm records are particularly useful during preventive maintenance and post-event troubleshooting because an intermittent issue may no longer be visible in the real-time status view. The value refers to the maximum number of alarm entries retained by the standard LCD function; once the record limit is reached, normal historical-record management applies as new events are recorded. Huawei's UPS5000-A product information and associated documentation are available through the [Huawei UPS product page](#) and the [Huawei Enterprise Support portal](#), where the applicable UPS5000-A documentation can be consulted for model-specific operating details.

QUESTION NO: 7

Which of the following modules in the UPS5000-E (50 kVA power module) support online hotreplacements?

(Multiple Choice)

- A. Power module
- B. Control module
- C. Bypass module

ANSWER: A B C**Explanation:**

The UPS5000-E's modular architecture is designed to maintain power availability during servicing by allowing key functional units to be replaced while the UPS remains in operation, subject to the applicable operating procedures and site safety requirements. The **Power module** supports online hot replacement because capacity is delivered through parallel modular power units; a module can therefore be serviced or exchanged without requiring a complete UPS shutdown when redundancy and load conditions permit. The **Control module** also supports hot replacement, enabling maintenance of the system's monitoring and control functions while preserving continuity through the UPS design. The **Bypass module** is likewise a hot-replaceable functional module, supporting maintainability of the bypass path without unnecessarily interrupting protected output.

This serviceability is a central benefit of Huawei's modular UPS design: it reduces maintenance time and helps improve availability for critical loads. Before performing any replacement, personnel must follow the product documentation, confirm the UPS operating state and redundancy, use appropriate protective equipment, and comply with local electrical-safety practices. Huawei identifies the UPS5000-E as a modular UPS platform and provides product documentation and support resources through its enterprise site: [Huawei UPS5000-E product page](#) and [Huawei Enterprise Support](#).

QUESTION NO: 8

The UPS5000-A-400/500K has good scalability, supporting a maximum of Q to be used in parallel.

- A. 2
- B. 3
- C. 4
- D. 6

ANSWER: C**Explanation:**

The correct answer is **4**. The Huawei UPS5000-A 400 kVA/500 kVA system is designed with parallel redundancy and capacity-expansion capability, allowing up to four UPS units to operate in a parallel system. In this arrangement, the units coordinate output through the parallel-control architecture so that the load can be shared among the participating systems. This scalability lets a deployment increase available capacity in stages or implement redundancy while retaining centralized UPS protection for the critical load.

For pre-sales sizing, the four-unit limit is important because the final parallel configuration must be planned within the product's supported architecture, including the appropriate parallel cabinets, cables, input/output distribution, battery configuration, and site electrical capacity. The usable load capacity and resilience level should then be calculated according to the selected redundancy design and the actual rating of each installed UPS. Huawei identifies the UPS5000-A family as a modular, high-capacity UPS solution and provides product information through its Digital Power portfolio: [Huawei UPS5000-A product page](#). Huawei's enterprise support portal also provides the applicable manuals and technical documentation for installed equipment: [Huawei Enterprise Support](#).

QUESTION NO: 9

The UPS5000-E features wide voltage and frequency input range. It can be used in severe grid environments and extend the battery service life. What's the maximum input voltage range of the UPS5000-E?

- A. 305-485 V
- B. 105-485 V

ANSWER: C

Explanation:

The correct maximum input-voltage range is **138–485 V**. This wide operating window allows the UPS5000-E to continue accepting utility power through substantial voltage variation, rather than transferring unnecessarily to battery operation during brief or moderate grid abnormalities. In practical deployments, that capability is especially valuable where the mains supply is unstable or where feeder voltage can fluctuate because of loading conditions. Remaining in normal online operation whenever the input stays within the supported range reduces avoidable battery discharge-and-recharge cycles. Fewer such cycles help preserve battery capacity and contribute to longer battery service life, while the UPS continues to deliver conditioned power to protected loads.

The stated range is an input operating specification, so it describes the utility-voltage limits within which the UPS is designed to work, not the output voltage delivered to the load. Huawei identifies the UPS5000-E as an online UPS intended for critical power applications and highlights its adaptability to challenging power environments. Product-family information is available from [Huawei Digital Power UPS](#), and Huawei's enterprise support portal provides product documentation and technical specifications at [Huawei Enterprise Support](#).

QUESTION NO: 10

Which of the following UPS types does the PS5000-E (50 kVA power module) belongs to? (Multiple Choice)

- A. Industrial frequency UPS
- B. High frequency UPS
- C. Rack and tower-mounted UPS
- D. Modular UPS

ANSWER: B D

Explanation:

The PS5000-E/UPS5000-E platform with 50 kVA power modules is correctly classified as a **High frequency UPS** and a **Modular UPS**. Its online double-conversion architecture uses high-frequency power-conversion technology, allowing high power density, efficient AC/DC and DC/AC conversion, and reduced equipment footprint compared with traditional low-frequency transformer-based designs. Huawei identifies the UPS5000-E family as an online, modular UPS solution intended for data-center and critical-power applications.

It is also modular because the UPS capacity is built from independently installable power modules, including 50 kVA modules. This architecture lets a deployment scale capacity as requirements grow and supports redundancy configurations such as N+1. Individual modules can be serviced or replaced without redesigning the entire power system, supporting availability and maintainability objectives in critical facilities. Huawei's UPS product information describes the UPS5000-E as a modular UPS family and highlights its scalable modular design and high-efficiency operation. See Huawei's [UPS5000-E product page](#) and the [Huawei UPS portfolio](#) for the product-family classification and design context.

QUESTION NO: 11

Which of the following Eaton products is similar to the UPS5000-A 30-120 kVA?

- A. 9395
- B. NXR
- C. 9390

ANSWER: C

Explanation:

9390 is the comparable Eaton product family for the Huawei UPS5000-A in this capacity class. The UPS5000-A is a three-phase, online double-conversion UPS intended for critical facilities such as data centers, communications sites, and enterprise IT rooms. Its 30–120 kVA range places it in the medium-to-large centralized UPS segment, where availability, parallel capability, battery support, and serviceability are key selection considerations. Eaton's 9390 is likewise an enterprise three-phase online UPS platform, with ratings that overlap the UPS5000-A range and features designed for critical-power applications. Therefore, it is the appropriate competitive comparison rather than merely a product with a superficially similar name or unrelated positioning. The comparison is based on the intended application class, three-phase architecture, and overlapping power range; an exact one-to-one rating still requires confirmation of the required load, redundancy design, input/output configuration, battery autonomy, and regional model availability. Huawei's digital-power UPS portfolio is available at [Huawei UPS products](#), and Eaton provides 9390 platform information at [Eaton 9390 UPS](#).

QUESTION NO: 12

The UPS specifications of the Fusion Module500 include (). (Multiple Choice)

- A. 3 kVA
- B. 6 kVA
- C. 10 kVA
- D. 15 kVA

ANSWER: A B C

Explanation:

FusionModule500 is Huawei's small integrated data-center solution, designed for edge sites and small equipment rooms. Its UPS configuration is offered in the 3 kVA, 6 kVA, and 10 kVA capacity classes, allowing the power system to be selected according to the IT load and required backup architecture. These ratings represent the available UPS specifications for the FusionModule500 solution rather than a single fixed capacity: a smaller deployment can use 3 kVA, while installations with greater IT equipment demand can use 6 kVA or 10 kVA. Selecting the correct rating is important because UPS capacity must accommodate the expected load, appropriate operating headroom, and supported battery-backup requirements. Huawei describes FusionModule500 as an integrated smart modular data-center product with integrated power infrastructure, and its published product information identifies the relevant UPS-capacity configuration range. Therefore, "3 kVA," "6 kVA," and "10 kVA" are the applicable specifications. See Huawei's [FusionModule500 product page](#) and the [FusionModule500 documentation](#) for product and configuration details.

QUESTION NO: 13

Which of the following statements is correct about the UPS5000-S at lowloads? (Multiple Choice)

- A. The system efficiency is 95% at 20% loads.
- B. The system efficiency is 96.5% at 20% loads.
- C. The system efficiency is 96% at 40% loads.
- D. The system efficiency is 97% at 40% loads.

ANSWER: B D

Explanation:

The correct low-load efficiency figures for the UPS5000-S are "The system efficiency is 96.5% at 20% loads." and "The system efficiency is 97% at 40% loads." These values reflect the UPS5000-S design focus on maintaining high operating

efficiency not only near full load, but also in the partial-load range commonly encountered in data-center and critical-power deployments. High efficiency at 20% and 40% load reduces conversion losses, lowers heat dissipation, and can reduce cooling demand and operating cost over the life of the UPS. In presales sizing discussions, these partial-load figures are particularly important because a UPS is frequently selected with capacity headroom for future growth or redundancy and therefore may operate below its rated capacity for substantial periods. Huawei product information for the UPS5000-S identifies high efficiency performance across its operating range, including these low-load efficiency characteristics. The stated figures should be understood as system efficiency performance under the applicable specified test conditions and configuration, rather than as an unconditional value for every installation environment. See Huawei's [UPS5000-S product page](#) and the [UPS5000-S documentation](#) for product specifications and operating information.

QUESTION NO: 14

Which of the following are the highlights of the UPS2000-G series (6 kVA to 20 kVA)? () (Multiple Choice)

- A. Reliable
- B. Efficient
- C. Simple

ANSWER: A B C

Explanation:

Reliable, Efficient, and Simple are all core highlights of the Huawei UPS2000-G series in the 6 kVA to 20 kVA range. Reliability is provided through online double-conversion protection, which continuously conditions power for connected equipment, together with battery-management capabilities and design features intended to support stable operation. Efficiency is a key product benefit because the series is designed to reduce power losses during normal operation; higher operating efficiency lowers energy consumption and cooling demand in small and medium IT environments. Simple reflects practical deployment and maintenance characteristics, including a compact rack/tower-oriented form factor, an LCD interface for local status and configuration, and management or monitoring capabilities that help administrators operate the UPS without unnecessary complexity. These attributes fit the intended use of the series: dependable power continuity for equipment such as server rooms, network cabinets, and small data-center infrastructure, while keeping operating cost and administration manageable. Huawei identifies reliability, efficiency, and ease of use as central value themes for its UPS portfolio and the UPS2000-G product family. See Huawei's [UPS2000-G product page](#) and [UPS portfolio overview](#).

QUESTION NO: 15

The UPS5000-A features the design of reliability, high efficiency, and simplicity. Which of the following statements are correct about the UPS5000-A-400/500K? (Multiple Choice)

- A. The UPS5000-A-400/500K has built-in components for parallel operation.
- B. The UPS5000-A-400/500K supports the upflow mode.
- C. The UPS5000-A has two control units.
- D. The input voltage of the UPS ranges 138-485 V AC.

ANSWER: A C D

Explanation:

The UPS5000-A-400/500K is designed for high-power critical-power applications in which availability and maintainability are essential. It includes built-in parallel-operation components, allowing units to be connected in a parallel system without requiring separate external parallel-control hardware. This supports capacity expansion and redundant configurations while simplifying deployment. The system's dual control-unit design also improves control reliability: redundant control capability helps maintain coordinated UPS operation and supports continuity of service in a critical-power environment. In addition, the specified 138–485 V AC input-voltage operating range reflects the UPS's ability to tolerate substantial utility-voltage variation. A wide acceptable input range reduces unnecessary transfers to battery operation when the incoming power

fluctuates, helping preserve battery capacity for genuine outages. These characteristics align with Huawei's UPS5000-A positioning around reliable, efficient, and simplified large-capacity UPS infrastructure. Huawei product and technical-support resources for the UPS portfolio are available at [Huawei Digital Power UPS products](#) and [Huawei Enterprise Support—UPS](#).

QUESTION NO: 16

In ECO mode, a UPS normally supplies the load through the () when the utility power is within the permitted range.

- A. Battery string
- B. Inverter output
- C. Bypass path
- D. Maintenance bypass switch

ANSWER: C

Explanation:

Bypass path is correct. In ECO mode, the UPS uses the utility-fed bypass path as the normal source for the load when input power quality remains within the configured limits. The inverter is available to take over when the utility source is abnormal, allowing the system to improve operating efficiency during stable grid conditions. ECO mode must be selected only after evaluating the load sensitivity, utility quality, and transfer-time requirements of the application. Huawei UPS products provide multiple operating modes to balance power protection and efficiency; see the [Huawei Critical Power UPS portfolio](#).

QUESTION NO: 17

What is the cooling capacity of a single air conditioner used by the Fusion Module800? ()

- A. 7.5 kW
- B. 9kW
- C. 11 kW
- D. 12.5 kW

ANSWER: D

Explanation:

The cooling capacity of a single air conditioner used in the FusionModule800 is **12.5 kW**. FusionModule800 is Huawei's small modular data-center solution, in which precision cooling is selected to match the IT load, enclosure arrangement, and required redundancy. The 12.5 kW figure is the nominal cooling capacity used for a single applicable precision air-conditioning unit in this solution. It is therefore the capacity value used when estimating the module's thermal removal capability and when determining how many cooling units are needed for a particular deployment.

It is important to use the stated unit cooling capacity during presales design rather than deriving it solely from UPS capacity or rack count. Actual site-level cooling planning must also account for the installed IT power, airflow containment, ambient conditions, redundancy requirements, and any derating specified for the installation environment. Huawei describes FusionModule800 as an integrated modular data-center solution with dedicated infrastructure, including precision cooling. Product information is available on the [Huawei FusionModule800 product page](#); further official technical documentation and support resources can be accessed through [Huawei Enterprise Support](#).

QUESTION NO: 18

Which of the following statements are correct about the UPS5000-A smart battery management? (Multiple Choice)

- A. Support battery hibernation
- B. Support battery temperature compensation
- C. Support switchover between equalized charging and float charging
- D. Adjustable number of batteries

ANSWER: A B C D

Explanation:

The UPS5000-A's smart battery-management capability covers both battery-life optimization and configuration flexibility. "Support battery hibernation" is correct because hibernation allows the system to place battery strings into a protected low-activity state when applicable, reducing unnecessary battery discharge and helping preserve stored energy. "Support battery temperature compensation" is also correct: charging voltage must be adjusted according to battery temperature so that batteries receive an appropriate charge and are protected from chronic undercharge or overcharge. Huawei documentation describes intelligent battery charging and temperature-related battery protection as important UPS battery-management functions.

"Support switchover between equalized charging and float charging" is correct because these charging modes serve complementary purposes. Equalized charging restores and balances battery capacity under controlled conditions, while float charging maintains fully charged batteries during normal standby operation. The UPS manages charging-mode transitions to maintain battery readiness. "Adjustable number of batteries" is correct as well, since battery-string configuration parameters must correspond to the installed battery quantity; this enables the UPS to apply appropriate charging, monitoring, and runtime-management settings. These functions collectively support reliable backup availability and more effective battery maintenance. See Huawei's [UPS5000-A support-document search](#) and the [Huawei UPS product documentation overview](#).

QUESTION NO: 19

Which of the following communication functions does the UPS5000-E support? (Multiple Choice)

- A. Dry contact card
- B. RS485
- C. SNMP
- D. RS232

ANSWER: A B C

Explanation:

The UPS5000-E supports a range of monitoring and integration methods intended for data-center and facility-management environments. **Dry contact card** support enables the UPS to exchange discrete status and alarm signals with external equipment, such as building-management systems, generators, or environmental monitoring platforms. This is useful where hardwired signals are required for conditions including utility failure, battery discharge, bypass operation, or general alarm status.

RS485 is supported for serial communications, providing a robust interface for connection to monitoring systems and equipment that uses industrial serial communication. It is commonly used where longer cable runs and electrically resilient communications are needed. **SNMP** is also supported for network-based management, normally through the applicable network-management capability or card. SNMP allows supervisory software to collect UPS status, alarms, measurements, and event information across an IP network, enabling centralized management of power infrastructure. Huawei positions the UPS5000-E as an intelligent UPS platform with monitoring and management integration capabilities. See the [Huawei UPS5000-E product page](#) and Huawei's [UPS5000-E support documentation portal](#) for product documentation and communication-related configuration details.

QUESTION NO: 20

The apparent power of a UPS is expressed in (), while the active power supplied to the load is expressed in ().

- A. kW; kVA
- B. kVA; kW
- C. kWh; kW
- D. A; V

ANSWER: B

Explanation:

kVA; kW is correct. Apparent power is measured in kilovolt-amperes (kVA), while active power is measured in kilowatts (kW). UPS selection must verify both values because the usable kW output depends on the UPS output power factor. For example, a UPS with a 100 kVA rating and an output power factor of 0.9 can provide a maximum of 90 kW active power. Huawei UPS specifications identify both kVA and kW ratings to support correct system sizing; see the [Huawei UPS product portfolio](#).

QUESTION NO: 21

Which of the following parallel system does the UPS5000-A support? (Multiple Choice)

- A. N+X parallel system
- B. Dual-bus system
- C. Parallel system not supported

ANSWER: A B

Explanation:

The UPS5000-A supports an **N+X parallel system**, allowing multiple UPS units to operate in parallel and share the critical load. In this architecture, N represents the capacity needed by the load and X represents additional redundant UPS capacity. The parallel arrangement improves power availability because the load can remain supplied when a unit is unavailable, while also allowing capacity to be expanded by adding compatible units according to the system design. Huawei specifies parallel capability as a key availability and scalability characteristic of the UPS5000-A series.

The UPS5000-A also supports a **dual-bus system**. A dual-bus design uses two independent UPS power paths to provide highly available power to suitably designed critical loads, commonly equipment with dual power inputs or loads supplied through appropriate downstream distribution arrangements. This topology reduces dependence on a single UPS bus and is used where continuity requirements justify independent power paths. Huawei's UPS5000-A documentation describes parallel and dual-bus application capabilities as part of the product's solutions for data-center and critical-power scenarios. For product information, see [Huawei UPS5000-A](#) and Huawei's [UPS5000-A documentation](#).

QUESTION NO: 22

Which of the following statements is incorrect about the configuration principle? (Multiple Choice)

- A. There is no need to consider the redundancy factor when designing the UPS basic capacity for a computer room.
- B. If loads of motor type are used, the UPS capacity shall be calculated with the rated power.
- C. Calculating the battery capacity with the galvanostatic method is preferred for short-time backup.
- D. For a power cable, the higher the redundancy is, the better the system reliability is.

ANSWER: B C D

Explanation:

"If loads of motor type are used, the UPS capacity shall be calculated with the rated power." is incorrect because motor loads impose substantial inrush current during starting and can have a low power factor. UPS selection must therefore account for the motor's starting characteristics, peak apparent power, and the ability of the UPS inverter and bypass path to support the transient demand; rated running power alone is not a sufficient sizing basis.

"Calculating the battery capacity with the galvanostatic method is preferred for short-time backup." is also incorrect. Short-duration UPS discharge is normally assessed using a constant-power discharge model, because the UPS draws approximately constant output power and the battery current changes as battery voltage declines. Constant-current (galvanostatic) calculations are more applicable where the discharge current is essentially fixed, rather than as the preferred approach for short UPS autonomy periods.

"For a power cable, the higher the redundancy is, the better the system reliability is." is incorrect because cable-path redundancy must be designed appropriately for the availability target and physical topology. Effective reliability depends on independent routes, correct protection coordination, maintainability, and avoidance of common-mode failures; simply increasing redundant cables does not inherently improve reliability. Huawei's UPS portfolio and data-center power designs emphasize appropriately engineered, reliable power architectures rather than redundancy in isolation. See [Huawei UPS solutions](#) and [Huawei data center facility solutions](#).

QUESTION NO: 23

Which of the following products is similar to the modular UPSs of the UPS5000-E series in product features?

- A. Hipulse-U
- B. APM
- C. NXr
- D. 80-NET

ANSWER: B

Explanation:

APM is the closest comparable product because it is a modular, scalable three-phase UPS platform intended for critical data-center and enterprise power protection. Like Huawei UPS5000-E modular systems, it uses power modules that can be configured for capacity growth and redundancy, allowing deployments to be sized according to the protected load and expanded as requirements increase. This modular architecture also supports serviceability: modules can be maintained or replaced with reduced impact on the overall UPS system, which is a central product-feature comparison point for modular UPS solutions.

Huawei describes the UPS5000-E as a modular UPS family designed for high availability and flexible capacity configuration in critical facilities. The APM platform is similarly positioned as a modular UPS architecture with scalable power capacity and redundancy capabilities. Therefore, when the comparison concerns product features rather than brand, generation, or an exact power rating, **APM** is the appropriate match. Huawei UPS product information is available at [Huawei Digital Power UPS](#), and Vertiv's modular UPS portfolio information is available at [Vertiv UPS products](#).

QUESTION NO: 24

Which of the following practices are correct for a valve-regulated lead-acid battery installation used with a UPS? (Multiple Choice)

- A. Maintain a stable ambient temperature for the battery installation.
- B. Configure appropriate DC protection for each battery string.
- C. Use batteries of the same model and capacity in one string.
- D. Tighten battery terminals according to the specified torque.

E. Mix new batteries with aged batteries to increase backup time.

ANSWER: A B C D

Explanation:

Battery strings should be installed in a clean, suitably ventilated location with a stable ambient temperature, because high temperature accelerates battery aging and shortens service life. Each battery string requires appropriate DC protection and isolation so that faults can be cleared and maintenance can be performed safely. Batteries in one series string should have the same model, capacity, and service condition to maintain consistent charging and discharge behavior. Loose terminals can cause high contact resistance, overheating, and voltage imbalance, so torque requirements must be followed during installation. Mixing batteries with significantly different capacities or ages in the same string is not recommended. Huawei battery and UPS installation requirements should be confirmed in the applicable product documentation available through [Huawei Enterprise Support](#).

QUESTION NO: 25

The number of batteries can be adjusted in the process of UPS configuration.

A. TRUE

B. FALSE

ANSWER: A

Explanation:

TRUE is correct. Battery quantity is a configurable UPS design parameter because the battery system determines the required backup time at a given load and must also match the UPS DC-bus voltage, battery-string arrangement, charging capability, and installation design. During solution configuration, the designer selects a suitable number of battery strings or battery cabinets according to the customer's required autonomy time, critical-load capacity, battery type, and environmental conditions. Increasing battery capacity or the number of parallel strings generally extends available discharge time, while the UPS and its battery-management/charging design must support the selected arrangement. Huawei's UPS portfolio is designed for scalable power-protection solutions and supports battery configurations sized for different application requirements, from shorter bridging runtimes to longer backup periods. The final configuration should follow the relevant UPS model documentation, including limits for the number of batteries in a string, supported battery cabinets, and recommended charging settings. Huawei also emphasizes matching the power-supply solution to the load and availability requirements of the site. See the [Huawei UPS product overview](#) and Huawei's [UPS documentation resources](#) for product-specific configuration guidance.

QUESTION NO: 26

Which of the following actions does the UPS2000-G take when the main input exceeds the allowable range? ()

A. Switch to battery mode.

B. Switch to bypass.

C. Initiate overvoltage protection or undervoltage protection.

D. Initiate derating and continue operating.

ANSWER: A

Explanation:

Switch to battery mode. is correct. The UPS2000-G continuously monitors its mains input to determine whether the utility source remains within the voltage and frequency limits required for normal rectifier operation. If the main input exceeds the permitted range, it is treated as an abnormal or unavailable utility source. The UPS then draws energy from its battery

system and supplies the load through the inverter, maintaining a regulated output without interrupting connected equipment. This is a fundamental online UPS continuity function: the load remains supported even when the incoming utility power is unsuitable for reliable operation.

Battery-mode transfer protects sensitive IT and network equipment from the effects of utility abnormalities, such as an input voltage that is too high, too low, or otherwise outside the configured acceptance window. The duration of support depends on the connected battery capacity and load level. When the utility input returns to an acceptable range, the UPS can resume normal operation and recharge the batteries. Huawei describes the UPS2000-G as an uninterruptible power system designed to provide continuous, reliable power for critical loads; see the [Huawei UPS2000-G product page](#) and [Huawei Enterprise Support for UPS2000-G](#).