



JpGU 2024 Quiz Rally Course<1>

Question	Q1. FlowCam is using flow imaging technology, which can observe and analyze plankton marine. What kind of instrument is FlowCam?
Exhibitor	[A11] Yokogawa Electric Corporation
Options	(1)Telescope (2)magnifying glass (3)microscope (4)endoscope

Question	Q2. When did the Earth-Life Science Institute (ELSI) start the Earth-Life Science graduate programme?
Exhibitor	[A12] Earth-Life Science Institute (ELSI)
Options	(1)In 2012 (2)In 2022 (3)In 2020 (4)In 2015

Question	Q3. The Argo program, which automatically observes ocean variations in real-time. How many robotic instruments, known as 'Argo floats,' are currently operational worldwide as of November 2023?
Exhibitor	[A25] Tohoku University & JAMSTEC Advanced Institute for Marine Ecosystem Change (WPI-AIMEC)
Options	(1)About 400 units (2)About 1100 units (3)About 3800 units (4)About 15400 units

Question	Q4. Approximately how many SoftBank original reference sites as a GNSS observation network are there in Japan?
Exhibitor	[A38] SoftBank Corp. / ALES Corp. / CSESS
Options	(1)About 300 sites (2)About 1,300 sites (3)About 2,300 sites (4)About 3,300 sites



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Question	Q5. For special issues published in EPS, a collection of abstracts (color booklets) of published papers is created and distributed free of charge at conference venues, etc. Which is the latest collection of abstracts being distributed at the EPS booth at JpGU2024?
Exhibitor	[F03] Earth, Planets and Space
Options	(1)VLF/ELF Remote Sensing of Ionospheres and Magnetospheres (2)Martian Moons eXploration: The scientific investigations of Mars and its moons (3)DynamicEarth: Earth's Interior, Surface, Ocean, Atmosphere, and Near Space Interactions (4)Understanding phreatic eruptions - recent observations of Kusatsu-Shirane volcano and equivalents -

Question	Q6. How many volumes of new book “Weather and Climate Data Analysis with Python”
Exhibitor	[Pub11] Asakura Publishing Company Ltd
Options	(1)2 (2)3 (3)4 (4)5

Question	Q7. How many round-the-world voyages has the current R/V Hakuho Maru (second generation) made?
Exhibitor	[Univ09] Atmosphere and Ocean Research Institute, the University of Tokyo
Options	(1)Never (2)Once (3)Twice (4)Three times



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Question	Q1. The Department of Earth and Planetary Sciences was established in 2000 by merging the four former departments. Which of the following is not included in the former 4 majors?
Exhibitor	[A06] Department of Earth and Planetary Science, The University of Tokyo
Options	(1)Geophysics (2)Geography (3)Mineralogy (4)Seismology

Question	Q2. Which of the following is the largest impact crater in the solar system, located on the Moon?
Exhibitor	[A14] Institute for Planetary Materials, Okayama University
Options	(1)Caloris Basin (2)Hellas Basin (3)South Pole-Aitken Basin (4)Mead Crater

Question	Q3. Which of the following is the name of this mineral that can be observed with the stereo microscope (1) displayed at the booth?
Exhibitor	[A26] MEIJI TECHNO CO.,LTD.
Options	(1)native gold (2)quartz (3)pyrite (4)diamond

Question	Q4. What is the abbreviated name for multibeam echo sounder, a survey instrument that measures seafloor topography with high precision and efficiency ?
Exhibitor	[A39] Marine Works Japan Ltd.
Options	(1)MBES (2)ASV (3)XCTD (4)MWJ

Question	Q5. When is the oldest geological age of radiolarian fossils from the Japanese Islands?
Exhibitor	[Pub05] RC GEAR
Options	(1)Cambrian period (2)Ordovician period (3)Silurian period (4)Devonian period



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Question	Q6. How many letters did the "Minna de Honkoku" transcribe?
Exhibitor	[Pub25] Minna de Honkoku
Options	(1)36 letters (2)36,000 letters (3)36,000,000 letters (4)36,000,000,000 letters

Question	Q7. GP-EES conducts the field trips overseas every year. In AY2023, we visited NZ. When we visited Tongariro National Park, a sacred place for the Maori and a World Heritage Site, we encountered a person who appeared to be a Maori woman singing to a mountain. What is the name of that mountain?
Exhibitor	[Univ02] The International Joint Graduate Program in Earth and Environmental Sciences, Tohoku University
Options	(1)Mt. Kilauea (2)Mt. Athos (3)Mt. Fuji (4)Mt. Ngauruhoe



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Question	Q1. Maps created using by the Ultimate Software for Graphing and Analysis “OriginPro” and 3D Map creator software “Surfer” are exhibited on our booth. Which island is drawn?
Exhibitor	[A05] LightStone Corp.
Options	(1)Sado Island (2)Awaji Island (3)Yakushima Island (4)Tanegashima Island

Question	Q2. What is the official acronym of the IODP Expedition 405 that will be conducted by D/V Chikyu this September?
Exhibitor	[A18] JAMSTEC/J-DESC/Kochi Univ.
Options	(1)J-CORES (2)JFAST (3)J-DESC (4)JTRACK

Question	Q3. Micro-XRF for elements mapping, M4 TORNADO can be mapping of areas up to 16 x 19 cm ² . What is the mapping size of the M6 JETSTREAM?
Exhibitor	[A29] Bruker Japan K.K.
Options	(1)10 x 10 cm ² (2)40 x 30 cm ² (3)60 x 45 cm ² (4)80 x 60 cm ²

Question	Q4. Select the geologic time when the fossil animal exhibited at booth A-46 lived.
Exhibitor	[A46] Kyoto University Geoscience Union
Options	(1)Paleogene Period (2)Cretaceous Period (3)Jurassic Period (4)Triassic Period

Question	Q5. How many years have the peer-reviewed open access journals PEPS operated by the Japan Geoscience Union (JpGU) been in its first publication?
Exhibitor	[F05] Progress in Earth and Planetary Science (PEPS)
Options	(1)5 years (2)10 years (3)15 years (4)20 years



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Question	Q6. There are various methods of geophysical exploration to investigate subsurface structures. Which of the following methods visualizes subsurface structure by emitting radio waves underground and measuring the reflected waves from subsurface objects and strata boundaries?
Exhibitor	[Soc04] The Society of Exploration Geophysicists of Japan
Options	(1)Electro-magnetic exploration (2)Magnetic exploration (3)Electrical exploration (4)Ground-penetrating radar exploration

Question	Q7. What is the name of the new department of CHIBA INSTITUTE OF TECHNOLOGY, which is scheduled to be established in March 2025?
Exhibitor	[Univ06] Planetary Exploration Research Center, CHIBA INSTITUTE OF TECHNOLOGY
Options	(1)Department of Cognitive and Information Science (2)Department of Applied Informatics (3)Department of Space, Semiconductor Mechatronics Engineering (4)Department of Business System Design



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Question	Q1. What is the Japanese nickname for JAXA's next Earth observation satellite to be launched ?
Exhibitor	[A02] JAXA Earth Observation Research Center
Options	(1)Chikyu (2)Tenku (3)Hakuryu (4)Itawari

Question	Q2. What does the name "KCC", which is jointly operated by Kochi University and JAMSTEC, stand for?
Exhibitor	[A19] JAMSTEC/J-DESC/Kochi Univ.
Options	(1)Kochi Cool Center (2)Kochi Core Center (3)Kochi Collaboration Center (4)Kochi Core Collection

Question	Q3. Beta Analytic and Isobar Science provide reliable and high-resolution dating services including Radiocarbon (^{14}C) dating, Strontium (Sr-Sr) dating, and which of the following?
Exhibitor	[A30] Beta Analytic Inc. & Isobar Science, Ltd.
Options	(1)Potassium-Argon (K-Ar) dating (2)Fission track dating (3)Uranium-Thorium (U-Th) dating (4)Thermoluminescence dating

Question	Q4. ISEE has published a series of booklets “50 Whys” on 15 different research themes. Which of the following is the latest edition?
Exhibitor	[A53] Institute for Space-Earth Environmental Research, Nagoya University
Options	(1)50 Whys of the Ocean (2)50 Whys of the Aurora (3)50 Whys of Space Weather (4)New 50 (+3) Whys of the Planets

Question	Q5. Which of the following subdiscipline of geology does kurumiya handle?
Exhibitor	[Pub07] KURUMIYA accessories inspired by natural science
Options	(1)paleontology (2)oceanography (3)meteorology (4)All options



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Question	Q6. Which freezes at the lowest temperature?
Exhibitor	[Soc01] The Oceanographic Society of Japan (JOS)
Options	(1)Lake Biwa water (Salinity: 0%) (2)Dead Sea water (Salinity: 34%) (3)Arctic surface water (Salinity: 3.4%) (4)Soy Sauce (Salinity: 16%)

Question	Q7. The Noto Peninsula earthquake of January 1, 2024 is caused by the fault in the northern part of Noto Peninsula. What material was involved as a direct trigger of the earthquake and what has been proposed as a model for earthquake occurrence? (Hint: ERI Newsletter Plus No. 42)
Exhibitor	[Univ10] Earthquake Research Institute, The University Of Tokyo
Options	(1)Material: Namazu, Model: Fault Valve model (2)Material: Namazu, Model: Slow slip (3)Material: Water, Model: Fault Valve model (4)Material: Water, Model: Japan Sea Opening model



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Question	Q1. What is the correct way to read "IODP ³ " (3 is superscript), the official abbreviation for the International Ocean Drilling Programme which will start January 2025?
Exhibitor	[A22] JAMSTEC/J-DESC/Kochi Univ.
Options	(1)IODP-three (2)IODP-third (3)IODP-cubed (4)triple-IODP

Question	Q2. What is the abbreviation for Geological Survey of Japan?
Exhibitor	[A32] Geological Survey of Japan, AIST
Options	(1)GSJ (2)JGS (3)GSOJ (4)GEOJ

Question	Q3. In the development of a first generation near-infrared instrument IRIS (Infrared Imaging Spectrometer) for TMT, which part is Japan responsible for?
Exhibitor	[A54] National Astronomical Observatory of Japan, TMT Project/ALMA Project
Options	(1)Adaptive Optics (2)On-Instrument Wavefront Sensors (3)Imager (4)Integral Field Spectrograph

Question	Q4. The hardest bulk material in the world is HIME-Diamond, made of polycrystalline diamond with nano-size grains, developed by the Geodynamics Research Center, Ehime University. This diamond is also called "NPD". What does NPD stand for?
Exhibitor	[A55 (Online)] Ehime University, Geodynamics Research Center
Options	(1)Nano-Polycrystalline Diamond (2)Newly Polished Diamond (3)Novel Powder Diamond (4)Natural Plane Diamond

Question	Q5. Which of the following is one of iRIC's development base?
Exhibitor	[A60] General Incorporated Association iRIC-UC
Options	(1)Red Rocks (2)Grand Canyon (3)Zion National Park



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(4)Antelope Canyon

Question	Q6. Which year did AOGS celebrated its 20th Anniversary?
Exhibitor	[F02] Asia Oceania Geosciences Society (AOGS)
Options	(1)2020 (2)2021 (3)2022 (4)2023

Question	Q7. Which international academic journal is the Geochemical Society of Japan publishing?
Exhibitor	[Soc05] Geochemical Society of Japan
Options	(1)Geochemical Letters (2)Geochemistry Today (3)Geochemical Journal (4)We are Geochemists



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Question	Q1. When scientists dove into the Doyo seamount, 50km north of Nishinoshima, by using Shinkai6500, they unexpectedly found strange lava flows. What is the name of rock, which consists of these lava flows?
Exhibitor	[A23] JAMSTEC/J-DESC/Kochi Univ.
Options	(1)picrite (2)ankaramite (3)dunite (4)lherzolite

Question	Q2. What kind of plant's pollen is the huge pollen model displayed at the booth?
Exhibitor	[A36,A37] Paleo labo co.,Ltd., Ritsumeikan Univ., The University of Tokyo
Options	(1)Cedar (2)Dandelion (3)Acacia (4)Sumac

Question	Q3. Which chemical element was found in galaxy MACS1149-JD1 located about 13.3 billion light-years away from us, through observations using the ALMA? (An earlier generations of stars had been already formed and expelled the element just after the beginning of the Universe.)
Exhibitor	[A54 (Online)] National Astronomical Observatory of Japan, TMT Project/ALMA Project
Options	(1)Carbon (2)Nitrogen (3)Oxygen (4)Neon

Question	Q4. HIME-Diamond, developed by the Geodynamics Research Center, Ehime University, is the hardest material in the world. Which tool is exhibited in the exhibition booth A-55?
Exhibitor	[A55] Ehime University, Geodynamics Research Center
Options	(1)a pen that can write and draw on glass using HIME-Diamond diamond as a nib (2)a pencil with a smooth writing feel, mixed with HIME-Diamond powder (3)a magnifying glass with high magnification using HIME-Diamond as a lens (4)scissors with a HIME-Diamond tip that can cut metal



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Question	Q5. What is the name of the technology used in the demonstration of projecting various information on the Red Relief Image Map (RRIM) at booth of Asia Air Survey (#61)?
Exhibitor	[A61] Asia Air Survey co., ltd.
Options	(1)Social Networking Service (SNS) (2)Global Navigation Satellite System (3)Projection Mapping (4)Volcanic Base Map

Question	Q6. What photograph is used to introduce the Geology and Geobiology Group on the poster displayed at the booth?
Exhibitor	[Univ12] Department of Earth and Environmental Sciences, Graduate School of Environmental Studies, Nagoya University
Options	(1)Horn shell concretion (2)Phoenix fold (3)Penguin (4)Mt. Ontake

Question	Q7. How many peer reviewed journals does AGU have?
Exhibitor	[F06] AGU
Options	(1)24 (2)4 (3)15 (4)28

Question	Q8. Please come by booth of the Japan Association of Mineralogical Sciences. Which pairs on the desk are same mineral? Please select three from A to G.
Exhibitor	[Soc10] Japan Association of Mineralogical Sciences
Options	(1)C, F, G (2)A, B, G (3)D, E, F (4)A, E, G