

QUIZ: FUN WITH ENGINEERING FACTS

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We commenced a new feature, entitled ‘Quiz: Fun with Engineering Facts’, since the previous issue, namely, Vol.14, no.2. It is based on mind-boggling technology advances published in recent issues of *AKGEC International Journal of Technology*. Aim is to highlight emerging scenario engulfing us. It will be interesting to try these questions: Answers are given at the end.

- Benefits accruing from the recently invented **6GEdge Technology** are:
(a) Augmented visualization modules; (b) IoT integration with smart court infrastructure; (c) Ultra-low latency; (d) Exponential compute capacity; (e) All of these; (f) None of these
- Profound impact of **Digital Twins** in shaping the networks of tomorrow refers to: (a) Planning and optimizing complex network architectures; (b) Decentralization; (c) Trust & resilience; (d) All of these; (e) None of these
- Controlled explosions during mining operations, called **Blast loading** result in:
(a) short-duration, high-frequency events; (b) long-duration events with broad range of frequencies exhibiting variable magnitudes; (c) None of these
- 3D Interactive Holographic Display** holds promise in remote-training scenarios. It can:
Create the illusion of a 3D object; (b) Use Python; (c) Offer immersive visual experience; (d) Mimic the way light interacts with objects in the real world; (e) All of these; (f) None of these
- IT Continuity Management** entails:
Understanding risks and impacts of a disaster; (b) Zero down time; (c) Network recovery; (d) Lifecycle (e) BCP audit (f) All of these; (g) None of these
- Specific energy-density in context of **electric vehicles** is least in the following type of battery:
Li-ion; (b) Ni-MH; (c) Ni-Cd; (d) Lead acid
- Indians are concerned about **environment protection**, for which they intend to buy recycled, energy-efficient products. For this movement to become effective, they:
(a) Are well-aware of UN’s 17 Sustainable Development Goals; (b) Feel firms’ promotion of green products is a publicity gimmick; (c) Don’t need marketers’ promotional strategy; (d) Are prepared to pay higher price
- Rapid advances in mobile network industry from 1G to **5G and beyond** revolutionized the way we communicate. The 6G will: (a) Embrace 300 GHz-3THz band; (b) Achieve energy-efficiency; (c) Be reality by 2030-2035; (d) Use LEO satellites; (e) Immersive communication (f) All of these; (g) None of these
- Emerging application of artificial intelligence is detection of human emotions, termed **Affective computing** or Emotional AI, which uses Deep learning tools and image processing. Key features of such a system are: (a) Adaptability to ambient conditions; (b) Accessory and Appearance tolerance; (c) Real-time processing; (d) All of these; (e) None of these
- India secured over 200 patents in **6G domain** and set up a formal ‘Bharat 6G Alliance’. The upcoming faster speed of 1 terrabit per second enables: (a) overcoming cyber-threats; (b) Robots performing dangerous jobs; (c) Drones to supplement the hospital and delivery services; (d) Resilience network adaptability to ambient conditions; (e) All of these

Answers

(c) & q) 01, (d) 6 (f), 8 (d), 7 (d), 9 (f), 5 (d), 4 (a), 3 (a), 2 (e), 1 (e)