

QUIZ: FUN WITH ENGINEERING FACTS

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We commenced a new feature, entitled ‘Quiz: Fun with Engineering Facts’, since Vol.14, no.2 issue. 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.

1. Weaponization of **social media** is a disturbing phenomenon with far-reaching implications. Concern has been expressed that Social media platforms have been exploited to spread:
 - (a) Misinformation/ disinformation;
 - (b) Fake news, deep-fakes;
 - (c) Manipulate public opinion;
 - (d) Incite violence;
 - (e) All of these;
 - (f) None of these
2. Profound impact of **Artificial intelligence** in shaping the human activities is now recognized. Nevertheless, concern has been expressed about AI’s ethical implications. These refer to:
 - (a) Data protection;
 - (b) Privacy;
 - (c) Optimizing network architectures;
 - (d) Misinformation/ disinformation
 - (e) All of these;
 - (f) None of these
3. Wi-Fi operating in the 6-GHz frequency band is termed as **Wi-Fi 6E**, the new frontier in wireless communication. Not delicensing this band will result in:
 - (a) preventing Indian companies to realize their export potential;
 - (b) long-duration events with broad range of frequencies exhibiting variable magnitudes;
 - (c) None of these
 - (d) Both (a) and (b)
4. Commercial deployment of **6G** is expected from 2030. India targets to develop global 6G standards. Benefits accruing from 6G include:
 - (a) Peak speed of 1000 Gbps
 - (b) Improved energy efficiency;
 - (c) Use of Python;
 - (d) Ushering smart agriculture;
 - (e) Improved manufacturing;
 - (f) All of these
5. **Knowledge sharing** in an organization enhances productivity, quality and efficiency of all participants. It entails:
 - (a) Brain storming;
 - (b) Informal meetings;
 - (c) Top-down approach;
 - (d) All of these;
 - (e) None of these
6. Living amidst tsunami of information, **screen addiction** is a modern-day predicament, with big technology using algorithms to keep us engaged for long time, causing:
 - (a) Sleep-deprivation
 - (b) Soured-relationships
 - (c) Impact on subconscious mind
 - (d) Gaming disorders
 - (e) All of these
7. **Wireless sensor networks** represent a vital component of IoT, enabling real-time monitoring and data collection across a wide range of applications. This entails:
 - (a) The sensor nodes collect and transmit information about their surrounding environment;
 - (b) Use of software is not essential for collecting, processing, and analyzing large volumes of data generated by the sensor nodes.
8. Select the most appropriate choice in connection with **supply chains**:
 - (a) Immersive communication is imperative;
 - (b) Use of LEO satellites is needed;
 - (c) Use of Block-chain improves effectiveness
9. **Load frequency control** ensures consumers receive optimal and reliable electricity. In this connection, following is true:
 - (a) Power systems interconnected with neighboring regions result in a significant increase in system complexity;
 - (b) Tie-lines make it easier to establish connections between power systems;
 - (c) Response of PID controller is enhanced by Particle Swarm Optimisation;
 - (d) All of these
10. **AI** is emerging as an attractive technique in treatment of diseases to enable:
 - (a) Rearranging large amount of unstructured data to obtain actionable insights;
 - (b) Robotic surgery;
 - (c) Drones to supplement the delivery services
 - (d) Healthcare personnel must be experts in software

Answers

(v) 01, (p) 6, (c) 8, (v) 7, (e) 9, (p) 5, (c) 1, (v) 4, (v) 3, (q) 8, (v) 2, (e) 1