

# QUIZ: FUN WITH ENGINEERING FACTS

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We commenced a new feature, entitled ‘Quiz: Fun with Engineering Facts’, since the 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. More than 2 billion people in over 180 countries use WhatsApp to stay in touch with friends & family, anytime and anywhere. WhatsApp is free and offers simple, secure, reliable messaging and calling, available all over the world. Who founded it? : (a) Sunder Pichai; (b) Satyan Nadella; (c) Tim Cook; (d) Jan Koum and Brian Acton (e) Vinod Dham; (f) None of these
2. To keep aviation industry’s impact on environment in check, the International Civil Aviation Organization set a goal of achieving net-zero CO<sub>2</sub> emissions by 2050. Percentage of world’s carbon-emissions that the aviation industry contributes currently: (a) 2.5% ; (b) 1.5%; (c) 5% ; (d) None of these
3. Advances in Artificial intelligence (AI) have changed the face of healthcare through innovations that enhance decision-making, medical research and operational efficiency. New generations of AI are changing the ways of diagnosis, treatment and patient care. Such a new technology that appears to be particularly effective includes: (a) Retrieval Augmented Generation (RAG); (b) Large Context Models (LCMs); (c) both of these; (d) None of these
4. Convergence of block-chain technology and AI paved the way for innovative solutions to overcome challenges in academic-credential verification. How many fake certificates and degrees were sold in India in the year 2022: (a) >1 crore; (b) around 10 lakh; (c) around five million; (d) None of these
5. Artificial Intelligence is revolutionizing education and tools like ChatGPT are emerging as invaluable assets for engineering students, offering them an accessible and versatile means to deepen their understanding of complex subjects. Who created ChatGPT? (a) OpenAI; (b) Apple; (c) Microsoft; (d) Google; (e) None of these
6. Theoretically, the performances of both voltage-mode (VM) and current-mode (CM) circuits are identical. Select the correct statement: (a) Better high-frequency performance is obtained from CM circuits when physical models of the active devices are considered; (b) Better high-frequency performance is obtained from VM circuits when physical models of the active devices are considered; (c) None of these; (d) In the VM circuits, when voltages have a common terminal, additional circuitry is not needed for summing up voltages
7. Smart grid plays an important role in reducing green house gas emissions and other pollutants. Select the wrong statement: (a) The smart grid is expected not to require human intervention in characterizing power requirements and energy distribution; (b) A smart meter can measure electricity consumption by the hour at each point of delivery; (c) Incorporating cellular mobile communication systems over power-line systems cannot achieve objectives of a smart grid; (d) Smart grid allows customer to sell excess electricity to the grid; (e) All are wrong
8. Crypto-currency is a form of digital money based on block-chain as core technology. Select the correct statement: (a) Maintains a tamper-resistant record of transactions; (b) Transactions are recorded on a decentralized public ledger; (c) India leads the world in crypto-currency adoption, with estimated over 100 million active crypto investors surpassing, China and USA ; (d) Mining, the creation of crypto-currency consumes large amount of energy; (e) All are correct
9. Deployment of renewable sources of energy faces number of challenges. Select the correct statement: (a) Variation in the load frequency occurs (b) Due to weather conditions, the output of solar & wind turbine varies; (c) Decentralized PI control has been used to maintain the system frequency; (d) Soft-computing technologies can better control frequency of the load; (e) All are correct
10. We are on the brink of a new age in human performance and longevity by fusing biohacking principles, artificial intelligence, and cutting-edge wellness techniques. Biohacking refers to: (a) creative ways to enhance only physical well-being (b) to play with the biology including cutting-edge technologies like genetic testing and nootropics to dietary changes and exercise routines; (c) Enabling people to track health indicators, like heart rate, sleep habits, and physical activity levels, by using wearable technology & health-tracking apps; (d) None of these; (e) All of these

## Answers

(c) 3 (d) 01 (e) 6 (a) 8 (c) 4 (b) 9 (b) 5 (c) 4 (b) 3 (d) 7 (b) 1