NATIONAL SCIENCE WEEK QUIZ 2024 - GRADE 8 to 12

Day 1: Technology in Education

1. What is one major advantage of using smartphones in education?
A) They are expensive.
B) They can provide access to a wide range of educational resources.
C) They cause distractions.
D) They are heavy.

Answer: B) They can provide access to a wide range of educational resources.

2. How does online learning benefit students?
A) By offering flexibility and personalized learning experiences.
B) By limiting access to course materials.
C) By reducing interaction with peers.
D) By making coursework less accessible.

Answer: A) By offering flexibility and personalized learning experiences.

3. How can technology improve accessibility to education?
A) By increasing the cost of learning materials.
B) By providing online courses and resources.
C) By limiting educational content.
D) By making learning environments less interactive.

Answer: B) By providing online courses and resources.

4. What is a benefit of e-books over traditional print books?
A) They are less portable.
B) They lack interactive features.
C) They are more expensive.
D) They offer adjustable text size and integrated search features.

Answer: D) They offer adjustable text size and integrated search features.

5. How can overuse of technology affect academic performance?
A) By causing distractions and reducing productivity.
B) By increasing focus and study time.
C) By enhancing learning experiences.
D) By improving time management skills.

Answer: A) By causing distractions and reducing productivity.

6. Which technology has significantly enhanced access to education in South Africa by providing online learning resources and virtual classrooms?
A) Radio
B) Television
C) Internet
D) Print media

Answer: C) Internet

7. How does technology help reduce social inequality?
A) By increasing access to education, healthcare, and job opportunities
B) By widening the gap between urban and rural areas
C) By replacing human workers with machines
D) By having no significant impact on disadvantaged communities

Answer: A) By increasing access to education, healthcare, and job opportunities

8. Which of the following is a key principle of technology access and use in South Africa?
A) Equity and inclusivity
B) Lack of control
C) Corruption and crime
D) Restriction of human rights

Answer: A) Equity and inclusivity

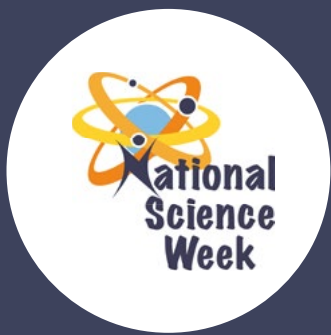**9. Which of the following is a benefit of technology use and access in South African education?**
A) Improved student outcomes and achievement
B) Increased access to educational resources and materials
C) Enhanced teacher training and development
D) All of the above

Answer: D) All of the above

10. What is the role of the South African government in promoting digital literacy and skills development?
A) To remove funding and support for digital literacy programs
B) To restrict digital literacy and skills development
C) To promote digital literacy and skills development through policy and initiatives
D) To reduce digital literacy and skills development

Answer: C) To promote digital literacy and skills development through policy and initiatives

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Day 2: Technology in Healthcare, Fitness, and Accessibility

1. How can technology improve healthcare?
A) By increasing wait times for appointments.
B) By reducing the accuracy of diagnoses.
C) By enabling telemedicine and remote consultations.
D) By decreasing the availability of medical information.

Answer: C) By enabling telemedicine and remote consultations.

2. How can technology assist people with disabilities?
A) By making it harder to access information.
B) By offering assistive devices like screen readers and speech-to-text software.
C) By creating additional barriers.
D) By reducing accessibility options.

Answer: B) By offering assistive devices like screen readers and speech-to- text software.

3. How can wearable technology benefit fitness and health?
A) By reducing exercise motivation.
B) By tracking health metrics and providing fitness feedback.
C) By making workouts less engaging.
D) By creating distractions during exercise.

Answer: B) By tracking health metrics and providing fitness feedback.

4. In what way can technology aid in disaster response?
A) By delaying communication.
B) By providing real-time data and improving coordination.
C) By hindering rescue operations.
D) By making resource distribution less efficient.

Answer: B) By providing real-time data and improving coordination.

5. What is the role of technology in economic development?
A) To hinder growth
B) To promote growth
C) To have no impact
D) To replace human workers

Answer: B) To promote growth

6. Which technology has improved access to financial services in South Africa?
A) Mobile banking
B) Internet banking
C) ATM machines
D) All of the above

Answer: D) All of the above

7. Which company is a leader in cybersecurity technology and originated in South Africa?
A) MTN
B) Vodacom
C) Telkom
D) Dimension Data

Answer: D) Dimension Data

8. Which of the following is a benefit of technology use and access in South African healthcare?
A) Improved patient outcomes and care
B) Increased access to healthcare services and resources
C) Enhanced healthcare worker training and development
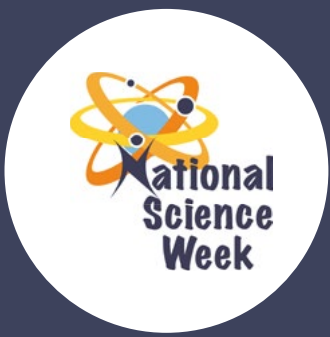D) All of the above

Answer: D) All of the above

9. Technology can be beneficial and destructive
A) Only beneficial
B) Only destructive
C) Both
D) None

Answer: C) Both

10. Which technology is more related to load shedding
A) Medical technology
B) Electrical technology
C) Mining technology
D) Agricultural technology

Answer: B) Electrical technology

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Day 3: Technology in Business and Economic Development

1. What role does technology play in enhancing business productivity?
A) It causes more paperwork.
B) It leads to fewer communication tools.
C) It streamlines processes and improves efficiency.
D) It creates more manual tasks.

Answer: C) It streamlines processes and improves efficiency.

2. What advantage do online platforms provide for businesses?
A) They limit customer reach.
B) They offer a global marketplace and customer base.
C) They decrease market visibility.
D) They reduce sales opportunities.

Answer: B) They offer a global marketplace and customer base.

3. Which South African start-up is using AI to improve customer service?
A) Jumo
B) Yoco
C) Zapper
D) SnapScan

Answer: A) Jumo

4. What is the impact of technology on small businesses in South Africa?
A) Only negative
B) Only positive
C) Both positive and negative
D) No impact

Answer: C) Both positive and negative

5. Which South African startup is using blockchain technology to enhance transparency in the agricultural supply chain?
A) Aerobotics
B) Yoco
C) Custos Media Technologies
D) SweepSouth

Answer: C) Custos Media Technologies

6. What is the role of the South African government in promoting technology innovation and entrepreneurship?
A) To reduce funding and support for start-ups
B) To compete with technology start-ups
C) To promote technology innovation and entrepreneurship through policy and initiatives
D) To reduce technology innovation and entrepreneurship

Answer: C) To promote technology innovation and entrepreneurship through policy and initiatives

7. Which of the following is a challenge to technology innovation and entrepreneurship in South Africa?
A) Limited funding and support
B) High regulatory barriers and restrictions
C) Limited access to technology and internet
D) All of the above

Answer: D) All of the above

8. Which of the following is a challenge to digital literacy and skills development in South Africa?
A) Limited access to technology and internet
B) High cost of digital literacy programs and training
C) Limited qualified trainers and educators
D) All of the above

Answer: D) All of the above

9. What is the purpose of the South African Electronic Communications and Transactions Act (ECTA)?
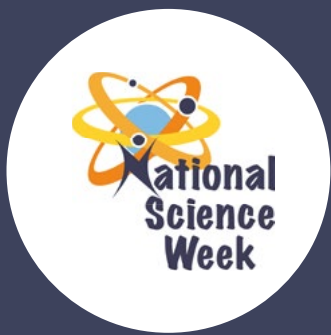A) To regulate electronic communications and transactions
B) To make business harder for electronic communications companies
C) To reduce electronic transactions security
D) To decrease the amount of electronic communications

Answer: A) To regulate electronic communications and transactions

10. Which of the following technologies is least essential for human survival?
A) Information and communication technology
B) Medical technology
C) All of the above
D) None of the above

Answer: A) Information and communication technology

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Day 4: Technology, Environment, and Social Issues

1. Which technology can help reduce energy consumption in homes?
A) Traditional light bulbs.
B) Smart thermostats and energy-efficient appliances.
C) Older, non-digital devices.
D) Unconnected home systems.

Answer: B) Smart thermostats and energy-efficient appliances.

2. How does technology contribute to environmental conservation?
A) By enabling smart grids and renewable energy technologies.
B) By increasing the use of non-renewable resources.
C) By polluting more.
D) By promoting wasteful practices.

Answer: A) By enabling smart grids and renewable energy technologies.

3. What is a potential downside of automation in the workforce?
A) Job displacement and reduced employment opportunities.
B) Increased job opportunities.
C) Enhanced job satisfaction.
D) Better work-life balance.

Answer: A) Job displacement and reduced employment opportunities.

4. What is a disadvantage of digital divide?
A) Increased access to technology.
B) Unequal access to technological resources and information.
C) Improved global connectivity.
D) Increased technological literacy.

Answer: B) Unequal access to technological resources and information.

5. How does technology contribute to environmental pollution?
A) By decreasing waste production.
B) By increasing electronic waste and energy consumption.
C) By reducing carbon footprints.
D) By promoting recycling.

Answer: B) By increasing electronic waste and energy consumption.

6. What is the purpose of the South African Protection of Personal Information Act (POPIA)?
A) To regulate personal information collection and use
B) To enable people to easily commit fraud
C) To make the country more unsafe
D) To reduce personal information regulation and oversight

Answer: A) To regulate personal information collection and use

7. Which technology has improved transportation in South Africa?
A) High-speed rail
B) Electric vehicles
C) Mobile ride-hailing apps
D) All of the above

Answer: D) All of the above

8. What is a term for the use of technology to improve environmental sustainability?
A) Green technology
B) Clean technology
C) Sustainable technology
D) All of the above

Answer: D) All of the above

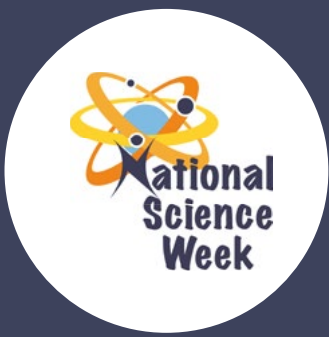**9. Which of the following is a challenge to technology access and use in South Africa?**
A) Limited infrastructure and connectivity
B) High cost of technology and internet
C) Limited digital literacy and skills
D) All of the above

Answer: D) All of the above

10. What is the purpose of the South African National Cybersecurity Policy?
A) To increase cybercrime
B) To make it possible for online fraud to take place
C) To increase cybersecurity and data protection measures and incident response
D) To reduce cybersecurity and data protection regulation and oversight

Answer: C) To increase cybersecurity and data protection measures and incident response

Day 5: Challenges and Risks of Technology

1. What is a benefit of using social media for communication?
A) It helps people stay connected across long distances.
B) It can limit face-to-face interactions.
C) It always invades privacy.
D) It guarantees high levels of productivity.

> **Answer: A) It helps people stay connected across long distances.**

2. What advantage does cloud storage offer?
A) Limited access from various devices.
B) Inability to share files.
C) Ability to store and access data from anywhere.
D) Increase data loss and security issues.

> **Answer: C) Ability to store and access data from anywhere.**

3. What is one advantage of using digital banking services?
A) Increased bank visit requirements.
B) The ability to manage finances conveniently from anywhere.
C) Reduced security measures.
D) Limited access to account information.

> **Answer: B) The ability to manage finances conveniently from anywhere.**

4. What is a common disadvantage of excessive screen time?
A) Improved physical health.
B) Better sleep quality.
C) Increased risk of eye strain and sleep disturbances.
D) Enhanced social interactions.

> **Answer: C) Increased risk of eye strain and sleep disturbances.**

5. What is a major concern regarding online privacy?
A) Increased anonymity.
B) Data breaches and identity theft.
C) Reduced data sharing.
D) Enhanced security.

> **Answer: B) Data breaches and identity theft.**

6. How can reliance on technology affect social skills?
A) It can lead to decreased face-to-face interaction and social skills.
B) It can enhance face-to-face communication.
C) It promotes more social gatherings.
D) It encourages better interpersonal relationships.

> **Answer: A) It can lead to decreased face-to-face interaction and social skills.**

7. What is one negative impact of social media on mental health?
A) Improved self-esteem.
B) Decreased feelings of isolation.
C) Enhanced social support.
D) Increased risk of anxiety and depression.

> **Answer: D) Increased risk of anxiety and depression.**

8. What is one risk associated with using public Wi-Fi networks?
A) Enhanced security.
B) It is cheaper.
C) Increased risk of data theft and hacking.
D) Better encryption.

> **Answer: C) Increased risk of data theft and hacking.**

9. How can technology affect sleep patterns negatively?
A) By improving sleep quality.
B) By causing disruptions through blue light exposure and constant notifications.
C) By enhancing sleep schedules.
D) By reducing sleep disturbances.

> **Answer: B) By causing disruptions through blue light exposure and constant notifications.**

10. What is a common concern with children using technology?
A) Exposure to inappropriate content and potential cyberbullying.
B) Increased physical activity.
C) Improved social skills.
D) Better academic performance.

> **Answer: A) Exposure to inappropriate content and potential cyberbullying.**