

“Emerging Technologies”

A- Rules of Quiz Buzz Competition Grade 3 to 5:

- 1. Team Composition:** Each team must consist of 2 students.
- 2. Student Manual:** Teams will be provided with a manual at the time of registration for preparation.
- 3. Buzzer System:** A buzzer system will be used during the competition. The first team to press their buzzer gets the chance to answer.
- 4. Answering Format:** After buzzing, the team must provide their answer within a specified time limit.
- 5. Scoring System:** Correct answers will receive positive marks, while incorrect answers will result in negative marks.
- 6. Knockout Rounds:** The competition will be conducted in multiple rounds, with teams being eliminated based on their scores in each round.
- 7. Question Format:** Questions will cover a range of topics relevant to the emerging technologies curriculum and general knowledge in science.
- 8. Fair Play:** Teams must adhere to the principles of fair play and sportsmanship throughout the competition.
- 9. Judges' Decision:** The decisions made by the judges are final and binding in all aspects of the competition.
- 10. Timeliness:** Teams must be present at their designated times for each round of the competition.

"In this booklet, we have prepared a comprehensive set of questions to enhance your understanding and knowledge. **80% of these questions are directly drawn from the core content mentioned within this booklet. The remaining 20% are meticulously crafted to cover Emerging Technologies,** offering you insights into the latest advancements and trends. The subdomains of these Emerging Technologies include:

- 1. Robotics:** The creation and use of robots to do tasks, like a mechanical friend that can help with work or play.



2. **Machine:** A tool or device that makes work easier, like a bicycle that helps you go faster or a mixer that helps in the kitchen.
3. **Technology:** The use of scientific knowledge to make tools and gadgets that help us in our daily lives, like smartphones or electric cars.
4. **Science Fiction:** Stories about amazing adventures and inventions that haven't happened yet, like traveling to other planets or meeting robots.
5. **Computer:** An electronic device that stores information and follows instructions to help us solve problems, play games, and learn new things.

B-Multiple Choice:

1. What can robots help us with?
 - A) Homework
 - B) Cooking
 - C) Both A and B**
2. Which is a type of renewable energy?
 - A) Solar**
 - B) Coal
 - C) Gasoline
3. VR lets you:
 - A) Watch TV
 - B) Experience new worlds**
 - C) Play radio
4. What can robots do?
 - A) Dance

B) Cook

C) Both A and B

5. What can robots be used for?

A) Helping in factories

B) Exploring space

C) Both A and B

6. What is AI?

A) A type of food

B) A computer program that can think and learn

C) A new planet

7. What does AR do?

A) Lets you see real-world locations from your phone

B) Adds digital images to the real world

C) Creates a completely new world

8. What do you wear to experience VR?

A) Glasses

B) Gloves

C) Shoes

9. What do you need to experience VR?

A) Special gloves

B) VR headset

C) A magic wand

10. What can an IoT device do?

- A) Send information
- B) Receive instructions

C) Both A and B

11. What is IoT?

- A) A new game
- B) Internet of Toys

C) Connecting everyday objects to the internet

12. What is Blockchain mainly used for?

- A) Making video calls

B) Storing digital information securely

- C) Playing online games

13. What is 5G?

- A) A type of airplane
- B) A new video game

C) The latest mobile network technology

14. Which is a renewable energy source?

- A) Coal

B) Wind

- C) Gasoline

15. What is renewable energy?

A) Energy from the Sun

- B) Energy from batteries
- C) Energy from toys
- 16.** What can you do with a robotics kit?
- A) Build your own robot**
- B) Cook a meal
- C) Drive a car
- 17.** Which of the following countries is known for being a global leader in the production of consumer electronics?
- A) China
- B) South Korea**
- C) Brazil
- 18.** What does the term "STEM" stand for in education?
- A) Social Studies, Theater, English, and Mathematics
- B) Science, Technology, Engineering, and Mathematics**
- C) Sports, Technology, Entertainment, and Music
- 19.** Which South Korean company is actively involved in the development of industrial robotics, particularly in manufacturing processes?
- A) Sony
- B) Hyundai Robotics**
- C) Apple
- 20.** What technology has South Korea been actively testing and deploying, making it one of the first countries to adopt it on a large scale?
- A) 4G
- B) 5G**
- C) 3G
- 21.** In which educational focus does South Korea place a strong emphasis to ensure a skilled workforce for the technology sector?
- A) Arts and Crafts
- B) STEM (Science, Technology, Engineering, and Mathematics)**
- C) Physical Education
- 22.** What can drones be used for?

- A) Taking aerial photos
- B) Delivering packages

C) Both A and B

23. Which of these is an example of artificial intelligence?

A) A talking robot

- B) A calculator
- C) A television

24. How does solar energy work?

- A) By burning fuel
- B) By using batteries

C) By converting sunlight into electricity

25. Which of these is a benefit of using renewable energy?

- A) It pollutes the air
- B) It never runs out**
- C) It's very expensive

26. What does VR stand for?

- A) Variable Reality
- B) Virtual Reality**
- C) Visionary Reality

27. What is one use of 3D printing?

- A) Cooking food
- B) Building houses**

C) Driving cars

28. How do robots help in hospitals?

A) They perform surgeries

B) They deliver medicine

C) Both A and B

29. What is an example of IoT (Internet of Things)?

A) A smartwatch

B) A regular clock

C) A basketball

30. What does AR stand for in technology?

A) Actual Reality

B) Augmented Reality

C) Automated Reality

31. Which of these is not a function of drones?

A) Swimming underwater

B) Flying in the air

C) Taking videos

C-True False

1. AI can only play chess. **F**
2. You can build your own robot with a robotics kit. **T**
3. Blockchain is only for creating digital money. **F**
4. Robots can only move if someone is controlling them. **F**
5. Robots can only be used in science labs. **F**
6. AI can learn and improve on its own. **T**

7. Artificial Intelligence can learn to recognize faces. **T**
8. Augmented Reality can make fictional characters appear in the real world. **T**
9. AR can be used to try on clothes virtually. **T**
10. In VR, you can visit places that don't exist in the real world. **T**
11. In VR, you can feel like you're underwater without getting wet. **T**
12. Blockchain is only used for Bitcoin. **F**
13. The Internet of Things can only be used in homes. **F**
14. With IoT, your fridge can tell you when you're out of milk. **T**
15. 5G technology is only about making phone calls clearer. **F**
16. 5G is much faster than the older 4G networks. **T**
17. Solar panels can make electricity from the Moon. **F**
18. Samsung and LG are global leaders in the production of consumer electronics. **T**
19. South Korea was one of the last countries to adopt and deploy 5G networks. **F**
20. Hyundai Robotics and KUKA Korea are involved in the development of industrial robotics. **T**
21. South Korea is not actively investing in AI research and development. **F**
22. Autonomous vehicles have been actively tested and developed in South Korea, with companies like Hyundai leading the way. **T**
23. Solar panels can work at night. **F**
24. Virtual Reality can be used for learning in schools. **T**
25. Robots can only be as big as humans. **F**
26. Using AI, computers can create art. **T**
27. Drones can only be used by adults. **F**
28. Renewable energy sources can run out like oil and gas. **F**
29. Augmented Reality can help in learning about history. **T**
30. 3D printers can only print using plastic. **F**
31. IoT devices can help save energy at home. **T**
32. Blockchain technology can be used for more than just cryptocurrencies. **T**



D-Trivia Questions

1. AR stands for:
 - A) Advanced Reality
 - B) Augmented Reality**
 - C) Artificial Reality

2. What language do computers understand?
 - A) English
 - B) Code**
 - C) French

3. IoT devices are usually connected to:
 - A) The Internet**
 - B) A library
 - C) A refrigerator

4. What is the term for a robot that looks and acts like a human?
 - A) Android**
 - B) Cyborg
 - C) Automaton

5. Which AI program won the game show "Jeopardy!"?
 - A) Siri

B) Watson

C) Alexa

6. Who is considered the father of modern robotics?

A) Isaac Asimov

B) Nikola Tesla

C) George Devol

7. In which field is AR NOT commonly used?

A) Gaming

B) Construction

C) Baking

8. What can an IoT device do in your home?

A) Turn lights on automatically

B) Make your bed

C) Cook meals

9. What is VR mainly used for?

A) Education

B) Gaming

C) Cooking

10. Which industry is NOT currently exploring the use of blockchain?

A) Healthcare

B) Education

C) Toy manufacturing

11. What can 5G technology improve?

A) Internet speed

B) Car speed

C) Bicycle speed

12. What does 5G stand for?

A) 5th Generation

B) 5 Gigabytes

C) 5 Great speeds

13. What is NOT a source of renewable energy?

A) Wind

B) Coal

C) Water

14. What is an essential part of most robotics kits?

A) Batteries

B) Paint

C) Seeds

15. Robotics kits are used in schools to teach what?

A) Cooking

B) Robotics

C) History

16. Which country was one of the first to adopt and deploy 5G networks on a large scale?

A) Japan

B) South Korea

- C) Germany
17. Name one major South Korean company that is a global leader in the production of smartphones.
- A) Sony
- B) Samsung**
- C) Apple
18. What type of robots have been deployed in South Korean hospitals to assist with patient care and medication delivery?
- A) Industrial robots
- B) Service robots**
- C) Entertainment robots
19. What is one way AI is used in everyday life?
- A) Weather forecasting**
- B) Playing board games
- C) Riding a bicycle
20. Which type of energy is captured by wind turbines?
- A) Wind energy**
- B) Solar energy
- C) Nuclear energy
21. How can virtual reality be used in education?
- A) To play video games
- B) To explore historical sites**
- C) To watch movies
22. What can a smartwatch do when connect to the Internet?
- A) Tell time only
- B) Make phone calls**
- C) Cook food
23. Which is not a use of drones?
- A) Delivering food
- B) Teaching a class**
- C) Filming movies
24. How do robots help in space exploration?
- A) They can travel farther than humans**
- B) They sing songs
- C) They write books
25. What is a feature of augmented reality games?
- A) They can only be played outside
- B) They mix real and virtual worlds**

- C) They require a board and pieces
26. What is a benefit of using 5G networks?
A) Slower internet speeds
B) Faster internet speeds
C) It makes food taste better
27. How is solar energy captured?
A) Using telescopes
B) Using solar panels
C) Using microscopes
28. What is a benefit of learning with robotics kits in school?
A) It helps understand technology
B) It's only for fun
C) It teaches about history
29. What educational focus does South Korea emphasize to ensure a skilled workforce for the technology sector?
A) Arts and Crafts
B) STEM (Science, Technology, Engineering, and Mathematics)
C) Physical Education

E-Riddle Questions

1. I come in pieces and can move once you build me. What am I? **(Answer: Robot from a Robotics Kit)**
2. I can turn lights on without touching them. What am I? **(Answer: IoT device)**
3. I can think and learn but don't have a brain. What am I? **(Answer: AI)**
4. I add dragons to your world, but you can only see them through a screen. What am I? **(Answer: AR)**
5. I am a chain but not made of metal, I secure data but don't need a lock. What am I? **(Answer: Block chain)**
6. I can help keep your house safe while you are away, but I never move. What am I? **(Answer: IoT Home Security Camera)**
7. I am invisible but can connect you to the world. What am I? **(Answer: 5G Network)**
8. It comes from the sky but it does not rain. It can power homes but not electricity. What is it? **(Answer: Solar Energy)**

9. I shine in the sky and power your lights, but I am not a lightbulb. What am I? **(Answer: The Sun/Solar Energy)**
10. I have parts and wires and can be programmed to move. What am I? **(Answer: A Robot from a Robotics Kit)**
11. I am a country known for my technology and robots, Where Samsung and LG make cool gadgets for all. In robotics, I excel, with machines in every sector, Guess the nation, where innovation is the director. Who am I? **(Answer: South Korea)**
12. I'm full of circuits and can follow a track, I clean your floors, and then I go back. What am I? **(Answer: A robotic vacuum cleaner)**
13. I'm not a bird, but I can fly, carrying messages across the sky. What am I? **Answer: A drone.**
14. I'm a car without a driver, moving on my own. I follow the rules and get you home. What am I?
Answer: An autonomous vehicle
- 15) I'm not a human, but I can chat, helping you find this and that. What am I?
Answer: A chatbot.
- 16) I don't have eyes, but I can scan, I keep track of every item you can. What am I?
Answer: A barcode scanner.
- 17) I'm not a doctor, but I can check your health, sitting quietly on a shelf. What am I?
Answer: A health monitoring device.
18. I live in your phone and make life a breeze, I help with directions and find places with ease. What am I?
Answer: A GPS app.
19. I'm not a spy, but I can see, helping you know who's at the door with glee. What am I?
Answer: A smart doorbell.
20. I capture your moves and make a game, bringing virtual worlds to fame. What am I?
Answer: A motion sensor.
- 21). I'm a book that's not made of paper, I store your reads, making them safer. What am I?
Answer: An e-reader.