

## **ANNEXURE - 1**

The sample questions from the “personality\_questions” table corresponding to the personality questions section and the “question\_pool” table corresponding to the Major and Minor sample questions section are as follows: (The mapping of options to the Buckets was decided by the developers of the application as to how the options should be segregated)

### **1) Personality Questions Section:**

The question format is as follows:

*Question*

- 1. Option for the SCIENCE Bucket*
- 2. Option for the ENGINEERING Bucket*
- 3. Option for the SOCIAL STUDIES Bucket*
- 4. Option for the BUSINESS STUDIES Bucket*
- 5. Option for the ARTS Bucket*
- 6. Option for the OTHERS Bucket*

Q1. What do you enjoy doing in your free time?

1. Solving riddles and puzzles
2. Building toys and fixing things
3. Reading about different cultures and the past
4. Analyzing different solutions to problems
5. Filling an art journal and creating music
6. Exploring new places and outdoor activities

Q2. What kind of magazines would you subscribe for?

1. Discovery Today!
2. The Bot Review
3. Nation Speaks
4. What does the graph say?
5. The Aesthetica
6. Vogue

Q3. What is your approach for solving tasks?

1. Systematic
2. Detail-oriented
3. People-oriented
4. Result-oriented
5. Creative and Spontaneous

6. Adaptive

Q4. What kind of an environment do you dream of working in?

1. Research Facility
2. Manufacturing Plant
3. Government Institution
4. Corporate Office
5. Studio
6. Flexible

Q5. What is the most important thing to you about your career?

1. A stable source of income with a job that appreciates curiosity
2. A very high paying technical job with high demand in the market
3. A stable source of income with job that allow involvement with global matters
4. A high paying job which involves decision making and analytical skills
5. A job that values creative freedom and imagination
6. A job that involves lot of practical and hands-on-training

Q6. What factors do you consider while making decisions?

1. Consider several options and choose the most suitable one based on prior experience
2. Consider an option after lot of logical and systematic analysis
3. Consider an option based on the political and social factors
4. Consider several options and choose the most suitable one based on the merits and demerits
5. Consider an option based on self-evaluation, intuition and emotions
6. Consider an option based on practical experience and inspiration from a field

Q7. Who among the following personalities do you find the most inspiring?

1. Srinivasa Ramanujan
2. Satya Nadella
3. Raja Rammohan Roy
4. Mukesh Ambani
5. A R Rahman
6. Manish Malhotra

Q8. Which of these would describe you the best?

1. Curious, hardworking, analytical, investigative
2. Problem solver, hardworking, analytical
3. Outgoing, dedicated, investigative
4. Outgoing, wise, analytical

5. Creative, imaginative, intellectual
6. Kind, responsible, creative, motivated

## **2) Major and Minor Questions Section:**

The question format is as follows:

*Question*

1. *Option corresponding to the first subject*
2. *Option corresponding to the second subject*
3. *Option corresponding to the third subject*
4. *Option corresponding to the fourth subject*
5. *Option corresponding to the fifth subject*

Each Bucket has 12 questions to account for the case where the Major and Minor buckets are analyzed to be the same. For each bucket, the questions are organized such that there are 6 fun questions (based on movie trivia, fantasy situations etc) and 6 subject or domain knowledge questions to determine a bias towards a certain subject. The questions are organized such that a fun question is followed by a domain knowledge question and vice versa. This aims to bring homogeneity in the ordering of questions where only the first 6 questions are displayed from each bucket in case the Major and Minor buckets are different.

## **A) SCIENCE**

(Options mapping: 1-Physics, 2-Chemistry, 3-Botany, 4-Zoology/Psychology, 5 - Maths)

Q1. Which of the following best describes your interests?

1. Trying to understand the principles and laws of the physical world and natural phenomena.
2. Mixing various solutions or substances and investigating how the reactions occur.
3. Gardening, collecting plant specimens or taking nature walks
4. Observing animal habitats, learning about their environment and behaviors.
5. Solving puzzles, working with numbers, identifying patterns, finding solutions to problems in everyday life.

Q2. Which of these concepts do you find the most intriguing?

1. Relativity, Gravity and Quantum Physics
2. Atoms and Molecules and Compound reactions
3. Photosynthesis, Transpiration and Genetics
4. Ecology, Nervous system and microorganisms
5. Differential Calculus, Linear Equations and Algebra

Q3. What kind of experiments would you like to conduct?

1. Work with circuits, magnets and machinery
2. Work with chemical substances and study the effects
3. Work with plants and study their behaviors under different conditions
4. Work with animals and study their behaviors under different conditions
5. Work on theorems and complex analytical problems

Q4. Which of these do you find the easiest to grasp and appreciate?

1. Any abstract concept about motion and matter in the physical world
2. Understanding complex reactions and memorizing details
3. Identifying different tree and shrub species
4. Analyzing the evolution and cellular structure of various creatures
5. Understanding various mathematical notations and equations

Q5. What kind of superpowers would you like to have?

1. The ability to turn invisible
2. The ability to fly
3. The ability to control vines and trees
4. The ability to communicate with sea creatures
5. The ability to have super strength and endurance

Q6. If you were stuck on a deserted island, what tool would you prefer to have?

1. A compass
2. A matchbox
3. A variety of fruits
4. A fishing net
5. A toolkit with hammer and knife

Q7. If you could have the power to control the weather for a day, what would you choose?

1. Thunder and lightning
2. Snowy day
3. Bright and sunny day
4. Rainy day
5. A cloudy day

Q8. Choose a creature among the following that amazes you?

1. Flamingo
2. Octopus
3. Algae

4. Elephant
5. Spider

Q9. Which natural disaster are you terrified of the most?

1. Tornadoes
2. Volcanic eruptions
3. Earthquakes
4. Hurricanes
5. Tsunamis

Q10. Which recreational activity would you prefer during a summer break?

1. Stargazing
2. Cooking
3. Have a herbarium
4. Birdwatching
5. Video games

Q11. Which of these do you think is mankind's greatest innovation?

1. Electricity
2. Polythene
3. Agriculture
4. Medicine
5. Computers

Q12. Which of these Marvel movies is your favorite?

1. Avengers: Endgame
2. Iron Man
3. Guardians of the Galaxy
4. Black Panther
5. Doctor Strange

## **B)ENGINEERING**

(Options mapping: 1-Computer Science, 2-Mechanical/Chemical, 3-Architecture, 4-Aeronautical, 5 - Electrical and Electronics)

Q1. What kind of problems would you like to solve in your career?

1. Developing new software systems applications and systems
2. Designing and building new machines and structures
3. Planning, sketching and modeling physical structures
4. Designing and developing flight-capable machines
5. Designing and developing circuitry or electrical systems

Q2. What kind of skills would you like to learn?

1. Programming and Software Development
2. Analyzing and designing mechanical systems
3. Sketching and designing innovative building projects
4. Designing aerospace systems
5. Designing and testing power and smart systems

Q3. What kind of math skills are you most comfortable with?

1. Algebra and discrete mathematics
2. Calculus and differential equations
3. Geometry and trigonometry
4. Linear algebra and vector calculus
5. Advanced calculus and Mathematical modeling

Q4. There is a news report about several global projects. Which of these seems the most interesting?

1. A new software to manage large datasets across organizations.
2. A revolutionary engine design that reduces fuel consumption and emissions in automobiles.
3. A sustainable housing development that utilizes innovative materials and techniques to reduce energy consumption.
4. A project to develop a new generation of supersonic aircraft for commercial travel.
5. A new technology for producing and storing renewable energy at a large scale.

Q5. What kind of technologies would you like to familiarize yourself with?

1. Various programming languages and web development tools
2. Computer aided design and modeling applications
3. Machine tools and equipment for fabrication
4. Aerospace simulation tools and software
5. Electronic testing equipment and design tools

Q6. What kind of superpowers would you like to have for a successful career?

1. Super strength to lift heavy objects
2. Invisibility for hiding in different places
3. X-ray vision to see through objects
4. Telekinesis to move objects with thoughts
5. Ability to fly to anywhere in the world

Q7. Which of these do you think is mankind's greatest innovation?

1. Personal computers and the internet
2. Cars and airplanes
3. Skyscrapers and bridges
4. Satellites and telescopes
5. Smartphones and Telephones

Q8. Which global phenomenon would you like to contribute to with your career?

1. Developing more sophisticated AI and Machine Learning systems
2. Developing more eco-friendly manufacturing processes
3. Developing disaster resistant buildings
4. Developing new forms of reliable transportation
5. Developing cost-efficient renewable energy systems

Q9. If you were assigned to work on building a ride in an amusement park, what aspect of the development would you prefer to handle?

1. Design the ride's control systems and animations
2. Design the ride's mechanics and safety protocol
3. Design the ride's layout and theme
4. Design the ride's movement and motion
5. Design the ride's lighting and sound effects

Q10. If you could travel into the future, what device or technology would you like to bring back to work with?

1. A high-tech computer and hacking tools
2. A multi-tool with several high functioning hardware components
3. A portable 3D printer
4. Jetpacks or advanced transportation devices
5. A suit with sensors for surveillance purposes

Q11. Which futuristic developments are you the most excited about?

1. Virtual Reality
2. Robotics
3. 3D printing
4. Quantum Computing
5. Biotechnology

Q12. What global challenge is your top priority to solve?

1. Climate change
2. Sustainable agriculture
3. Clean water access