**Some Covid-19 related Competency Questions**

**Level 1: Dimension D1: Covid-19 Cases Information**

**Level 1.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What are the statistics for Covid-19 cases?
2. What are the sub-classes of Country class?
3. What are the properties of Country class?
4. What is the different status of Covid-19 cases?
5. Find the different properties required for Covid-19 patient location?
6. Describe the characteristics of Covid-19 continent?
7. How many different values can store the Covid-status?

**Level 1.2: Knowledge Graph** **Based Competency Questions (KGCQ)**

**Cluster 1:**

1. Which country reported the first Covid - 19 case?
2. Which country reported the first Covid - 19 death?
3. Which country reported the first Covid - 19 recovered?
4. On which date was the first Covid-19 case reported?
5. On which date was the first Covid-19 death reported?
6. On which date was the first Covid-19 recovered case reported?
7. When did country C have the first Covid-19 case?
8. When did country C have the first Covid-19 death?
9. When did country C have the first Covid-19 recovered?
10. How many new cases were found at any place p on date t?
11. How many new deaths were found at any place p on date t?
12. How many new recover cases were found at any place p on date t?
13. Total number of confirmed cases on date t?
14. Total number of deaths on date t?
15. Total number of recovered cases on date t?
16. How many Covid-19 cases have been found at any place p on date t?
17. How many Covid-19 deaths have been found at any place p on date t?
18. How many Covid-19 recover cases have been found at any place p on date t?
19. Find Continent-wise maximum number of Covid-19 cases?
20. Find Country-wise maximum number of Covid-19 cases?
21. Find State-wise maximum number of Covid-19 cases of Country C?
22. Find City-wise maximum number of Covid-19 cases of State S?
23. Find Town-wise maximum number of Covid-19 cases?
24. Which Continent reported the highest Covid 19 cases until now?
25. Which Country reported the highest Covid 19 cases until now?
26. Which State reported the highest Covid 19 cases until now?
27. Which City of State’s reported the highest Covid 19 cases until now?
28. Find Continent-wise maximum number of Covid-19 death?
29. Find Country-wise maximum number of Covid-19 death?
30. Find State-wise maximum number of Covid-19 death in a Country C?
31. Find City-wise maximum number of Covid-19 death of State S?
32. Find Town-wise maximum number of Covid-19 death?
33. Which Continent reported the highest Covid 19 death until now?
34. Which Country reported the highest Covid 19 death until now?
35. Which State reported the highest Covid 19 death until now?
36. Which City of State’s reported the highest Covid 19 death until now?
37. Find Continent-wise maximum number of Covid-19 recovered in a day?
38. Find Country-wise maximum number of Covid-19 recovered in a day?
39. Find State-wise maximum number of Covid-19 recovered in a day for Country C?
40. Find City-wise maximum number of Covid-19 recover cases of State S?
41. Find Town-wise maximum number of Covid-19 recover cases?
42. Which Continent reported the highest Covid 19 recover cases until now?
43. Which Country reported the highest Covid 19 recover cases until now?
44. Which State reported the highest Covid 19 recover cases until now?
45. Which City of State’s reported the highest Covid 19 recover cases until now?
46. Find the number of deceased due to Covid 19 in the year 2020?
47. Find the number of deceased due to Covid 19 in the month September, 2020?
48. Find the number of deceased due to Covid 19 in the time-period of 10/04/2020 to 20/04/2020 in a location c?
49. Find the number of Covid 19 confirmed cases in the year 2020?
50. Find the number of Covid 19 confirmed cases in the month September, 2020?
51. Find the number of Covid 19 confirmed cases in the time-period of 10/04/2020 to 20/04/2020 in a location c?
52. Find the number of Covid 19 recovered cases in the year 2020?
53. Find the number of Covid 19 recovered cases in the month September, 2020?
54. Find the number of Covid 19 recovered cases in the time-period of 10/04/2020 to 20/04/2020 in a location c?
55. What was the peak one-day surge in new cases in India?

**Level 2: Dimension D2: Covid-19 Patient Information**

**Level 2.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What is the information of patient stored?
2. What are the symptoms of a Covid patient?
3. What could be the possible status of the Covid patients?

**Level 2.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. How many patients declared Covid positive?
2. What is the travel history of a patient p?
3. What is count of patient travelled from China?
4. Find the patients have travelled to country c?
5. Find all patients have travelled from continent r?
6. Find all patients have travelled to continent c?
7. List the Covid patients have test positive on date t?
8. List the Covid patients have died on date t?
9. Find all patients have Covid-19 test results positive with closed connection Covid patients?
10. Find all people diagnosed with Covid [who are in family relations Covid positive]
11. Gives all the patients who have contracted the virus from another.
12. Gives all the patients who have passed the virus to 2 (or more) possible patients
13. List all the Covid patients age between 18 and 30.
14. List all patients who have recovered between age group of 18 to 30.
15. List all patients who have recovered between age group of 30 to 60.
16. List all patients who have recovered between age group above 60.
17. List all the patients who were diagnosed with Covid 19 in India in 2020?
18. List then number of Covid patients in an area a?
19. List the person whose profession is a doctor?
20. List the person whose profession is police?
21. Count Covid patients with male gender?
22. Find the number of Female Covid patients?
23. List the number of patients admitted in the hospital h?
24. List the number of female patients admitted in the hospital h?
25. List the number of child patients admitted in the hospital h?
26. Find the patients who is a doctor?
27. Find the patients who is policeman?
28. List the Covid patients who don’t have travel history?

**Level 3: Dimension D2: Covid-19 Disease, Symptom and Treatment**

**Level 3.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What are the symptoms of Covid?
2. What are the different vaccine names available for Covid?
3. What are the diagnoses test available for Covid?
4. [What test should I get to see if I have COVID-19?](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19)
5. Determine the type of virus?
6. Find the different variant of Covid?
7. What are the different variant names of Covid?
8. Find the different type of fungal infection?
9. [What is SARS-CoV-2 and SevereCovid-19?](https://covid.giveindia.org/?utm_source=google&utm_medium=cpc&utm_campaign=SB_GI_Corona_Relief_Fund_Generic_India_April2021&utm_adgroup=123183407722&utm_term=help%20to%20fight%20covid&utm_matchtype=b&utm_device=c&gclid=CjwKCAjw682TBhATEiwA9crl3-Djm_KesxS9qIUSbefV_Y7PJyLaM3mpZjaFO_qFdSkWVp_rI0ltfBoCzyEQAvD_BwE)
10. How many types of vaccine are being used to prevent Covid?
11. Provide the details of the test to be used for Covid-19?
12. What are the general tests prescribe by doctors against Covid?
13. What is the normal temperature of a human body for Covid?
14. What is the temperature of a human body to declare fever?
15. What is the normal oxygen saturation of a human body for Covid?
16. What is the critical oxygen saturation of a human body for Covid?
17. What is the measurement of high blood pressure?
18. What is the measurement of low blood pressure?
19. What are the drugs prescribe by doctors for Covid?
20. When need to call the doctors?
21. How long does protection from COVID-19 vaccines last?

**Level 3.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. What are the symptoms of Covid found in a patient p?
2. How many patient diagnoses as SevereCovid-19?
3. How many patient diagnoses as SARS-CoV-2?
4. How many patient diagnoses as Omicron?
5. How many patient diagnoses as ModerateCovid-19?
6. How many patient diagnoses as MildCovid-19?
7. How many people have had a fungal infection?
8. How many people have been affected by the black fungal infection?
9. Number of people have been affected by the yellow fungal infection?
10. How many people have been affected by the white fungal infection?
11. What percentage of the Indian population has been vaccinated against Covid 19 as of now?
12. Number of persons vaccinated against Covid?
13. How many people have been vaccinated with the Covishield vaccine?
14. How many people have been vaccinated with the Covaxin vaccine?
15. How many people have been vaccinated with the SputnikLitevaccine?
16. How many people have been vaccinated with the SputnikV vaccine?
17. How many people have critical oxygen saturation?
18. How many people need oxygen ventilator?
19. How many patients affected by other disease?
20. What is the time duration of vaccine to protect from Covid?
21. How many rRT-PCR testings have done?
22. How many rapid tests have been done in a day?
23. What are the maximum number of rapid tests have been done in a day?
24. How many CT-scans done for Covid?

**Level 4: Dimension D2: Covid-19 Resources**

**Level 4.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What are resources used for Covid?
2. What are the dedicated facilities available for Covid?

**Level 4.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. How many oxygen beds used in hospital h?
2. How many ICU beds used in hospital h?
3. How many beds available in a hospital h?
4. How many ventilator beds used in hospital?
5. How many ventilator beds available in a hospital?
6. How many ventilator beds available with oxygen?
7. How many ambulances available in a hospital?
8. How many dedicated facilities against Covid available in a city?
9. How many doctors available in a hospital h?
10. How many drugs available in a hospital?
11. How many vaccines available in a hospital?
12. How many quarantine centers in a city?
13. How many people quarantine at a place p?
14. What are the maximum number of quarantine persons in a day?
15. How many Hospitals in a country?
16. What’s the daily average of Covid 19 tests conducted in India?
17. List the number of test centers for Covid-19 in a city.
18. List all the Convid-19 health centers.

**Level 5: Dimension D2: Covid-19 Impact on business vertical**

**Level 5.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What are the different business verticals?
2. What are the different public authorities for making decisions?
3. Who has been affected by Covid?

**Level 5.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. Which businesses are affected by Covid-19?
2. What is the impact of lockdown on the society?
3. What is the impact of lockdown on Education sector?
4. What is the impact of lockdown on the Banking sector?
5. What is the impact of lockdown on business verticals?
6. How many organizations have under high risk?

**Level 6: Dimension D2: Covid-19 Related Event and Decision**

**Level 6.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. What are the preventions against Covid?
2. What are the conditions to discharge from the hospital?
3. What are the major exposures to Covid?
4. What are the technical guidelines to prevent Covid?
5. What are the various exposures of Covid due to gathering?

**Level 6.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. How many lockdowns declared at place p?
2. When first lockdown declared by India?
3. How many nights curfew declared at place p?
4. What is the duration of night curfew at place p?
5. How many persons quarantine at place p?
6. What are the Mandates issued by Government of India?
7. What are various decisions issued by Indian Government?

**Level 7: Dimension D2: Covid-19 Research Domain**

**Level 7.1: Schema Based Competency Questions (SCQ)**

**Cluster 1:**

1. Into how many areas can the study of Covid be divided?
2. What are the important fields required to store the Covid research?

**Level 7.2: Knowledge Graph Based Competency Questions (KGCQ)**

**Cluster 1:**

1. What are the symptoms of Covid?
2. How many variants of Covid have been detected until now?
3. How many variants of Covid have been found to be harmful to humans?
4. What is the new research on Covid?
5. When you need a home treatment?
6. When is declared night curfew?
7. When is quarantine required?
8. What is the duration of quarantine?
9. How many variants of Covid 19 have been found to be harmful to humans?