CHANDIGARH UNIVERSITY

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INSTITUTE-UNIVERSITY INSTITUTE OF ENGINEERING

ACADEMIC UNIT-II

Computer Science Engineering

Subject Name-Biology For Engineers

Subject Code- 20SZT148

CORONA VIRUS

CORONA VIRUS

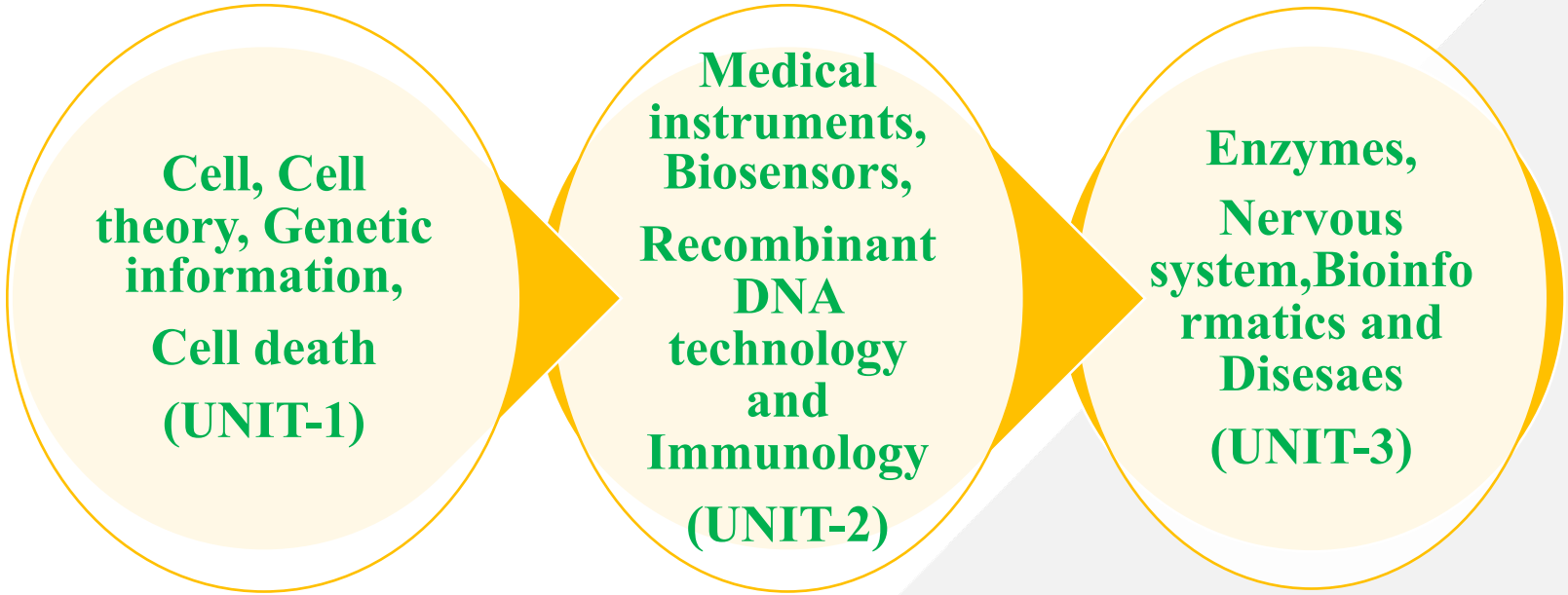
Course Outcome

CO Number	Title	Level
CO1	It gives an idea about the about the basic cell biology.	**Understanding**
CO2	It deals with the idea of uses of biology in engineering.	**Understanding**
CO3	It provide knowledge about the uses of softwares in biology field.	**Remembering**

Will be covered in this lecture

https://www.electronicshub.org/types-of-transducers/

BIOLOGY FOR ENGINEERS



CORONA VIRUS

- Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans.

CORONA VIRUS

- Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans.

CORONA VIRUS

COVID-19 or SARS-CoV-2

- SARS-CoV-2 refers to severe acute respiratory syndrome coronavirus 2 which was announced by ICTV (International Committee on Taxonomy of Viruses) as the name of the new virus on 11 February 2020.

- This name was chosen because the virus is genetically related to the coronavirus responsible for the SARS outbreak of 2003. While related, the two viruses are different.

CORONA VIRUS

COVID-19 is the name of this new disease announced on 11 February 2020, following guidelines previously developed with the World Organisation for Animal Health (OIE) and the Food and Agriculture Organization of the United Nations (FAO).

CORONA VIRUS

Clinical Features:

Incubation period: 1-27 days

Recovery time: 3 weeks to 6 weeks

Frequently reported signs and symptoms of patients include:

- **fever** (77–98%)
- **cough** (46%–82%)
- **myalgia or fatigue** (11–52%)
- **shortness of breath** (3-31%)

less commonly reported respiratory symptoms include sore throat, headache, cough with sputum production and/or hemoptysis.

https://image.slidesharecdn.com/covid-19-200315202203/95/coronavirus-disease-covid19-4-638.jpg?cb=1584305413

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CORONA VIRUS

Diagnosis:

1. Travel history to endemic countries like (China, Iran & Italy)
2. CBC (leukopenia, seen in 30% to 45% of patients, and lymphocytopenia, seen in 85% of the patients)
3. Chest X-Ray (cheaper & easier with 60% sensitivity)
4. PCR (30%-70% sensitivity)
5. Chest CT Scan (95% sensitivity, low specificity)
6. IgM/IgG combo test for COVID-19

CORONA VIRUS

Treatment:

1. Mild cases: Supportive treatments (Antihistamine & Analgesics)
2. Moderate cases: a. Oseltamivir (150 mg BID for 5 days) b. Hydroxychloroquine, Chloroquine (500 mg BID for 14 days) or Ribavirin (for 5 days)
3. Severe cases: a. Oseltamivir (150 mg BID for 5 days) b. Kaletra (Lopinavir/Ritonavir) (for 5 days) c. Hydroxychloroquine, Chloroquine (500 mg BID for 14 days) or Ribavirin (for 5 days)
4. Critical cases: a. Oseltamivir (150 mg BID for 5 days) b. Kaletra (Lopinavir/Ritonavir) (for 5 days) c. Ribavirin (for 5 days) d. Hydroxychloroquine or Chloroquine (for 14 days) Investigational therapies: ● Favilavir (Favipiravir) ● Remdesivir ● Teicoplanin ● Tocilizumab

CONCLUSION

Till now we have discuss:

- Corona virus
- Cause of virus
- Clinical features of
- Diagnosis
- Treatment

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THANK YOU

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