U.G. 3rd Semester Examination-2021
ENVIRONMENTAL SCIENCE
[HONOURS]
Skill Enhancement Course (SEC)
Course Code : ENVS-H-SEC-L-01(A&B)-T

Full Marks : 40   Time : 2 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all the questions from selected Option.

OPTION-A
ENVS-H-SEC-L-01A
(Remote Sensing, Geographic
Information System & Modelling)

1. Answer any **five** of the following: 2×5=10
   i)   What is electromagnetic radiation?

   ii)   Define remote sensing.

   iii) What is coefficient of variation?

   iv)   What is meant by remote sensing platform?

   v)   Give two properties of vector data.

   vi)   Mention two advantages of standard deviation.

   vii) What is atmospheric window?

   viii) What is regression?

2. Answer any **two** from the following: 5×2=10
   i)   Classify remote sensing sensors with examples.

   ii)   How does NDVI method help in the study of forest resources?

   iii) Differentiate between parametric and non-parametric tests.

   iv)   Define mean, median and mode citing examples.

3. Answer any **two** from the following: 10×2=20
   i)   Critically evaluate the uses, significances and problems of aerial photographs / satellite images in the geospatial study and management.

   ii)   Give an overview of image classification technique for land use and land cover mapping and change detection analysis.

   iii) Briefly describe the application of remote sensing and GIS techniques in agricultural management.

   iv)   Discuss different sampling techniques with suitable examples.

OPTION-B

ENVS-H-SEC-L-01B

(Occupational Health and Environmental Safety)

1. Answer any **five** from the following: 2×5=10

    i)   Name two occupational health hazards related to bidi industry.

    b)   Define pneumoconiosis and name its types.

    c)   Give names of two industries where noise-canceling ear muffs are necessary and why?

    d)   What is risk assessment?

    e)   Why health insurance is mandatory for every factory worker?

    f)   Why environmental safety is important?

    g)   Classify environmental hazards.

    h)   Give examples of four non-respiratory PPEs.

2. Answer any **two** of the following: 5×2=10

    a)   Differentiate between chronic and acute occupational health effects with examples.

    b)   Classify industrial accidents with examples.

    c)   Briefly describe the design and development of a safety program for the workers of brick kiln factory.

    d)   Describe occupational health hazards associated with textile industry.

3. Answer any **two** of the following: 10×2=20

    a)   Describe different types of respiratory PPE with examples to avoid occupational accidents. How factory workers can be trained to use respiratory PPE during working hours and in the case of emergency? 6+4=10

    b)   How do the physiological factors of industry workers need to be assessed? Briefly discuss different modes of prevention of industrial accidents. 4+6=10

    c)   Evaluate diagnosis and methods of prevention of occupational health hazards in a specific industry of your choice. Describe the mode and effects of the occupational health hazard of this particular industry. 7+3=10

    d)   What are the major categories of occupational hazards as described by the National Institute of Occupational Safety and Health (NIOSH)? Summarize "National Programme for Control and Treatment of Occupational Diseases". 3+7=10

—————————