

Q.P.Code No. 15139

First Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSA 870: Paper I : Introduction to Environmental Science

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Environmental Geology
2. Weather
3. Endangered species
4. Condensation
5. Hydrosphere
6. Adaptation
7. Solar system.

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Write a note on study state theory.
9. Describe El-nino and La-nino effect.
10. Briefly explain the Environmental Education and its importance.
11. Briefly describe the threats to Biodiversity.
12. Explain the atmosphere and its layers.
13. Explain Shelfords law of tolerance.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain environmental science and its scope in different branches in detail.
15. Explain the hydrological cycle with schematic diagram.
16. Describe the classification of climate.

First Semester B.Sc., Degree Examinations

May/ June 2022

(CBCS NEP Scheme)

ENVIRONMENTAL SCIENCE

NSA0310 : Divisions of Environment

Time: 2 hrs.]

[Max.Marks:60

SECTION - A

1. *Select the most appropriate answer from options provided : 10X 1= 10 Marks*

- i. The zone of earth comprising living organisms is called
 - A) Biosphere
 - B) Hydrosphere
 - C) Stratosphere
 - D) Thermosphere
- ii. UN conference on Human and Environment in Stockholm was held in the year
 - A) 1972
 - B) 1982
 - C) 1992
 - D) 2002
- iii. World forest Day is celebrated on
 - A) 21st April
 - B) 21st June
 - C) 21st March
 - D) 21st December
- iv. The term Ecosystem was coined by
 - A) Odum
 - B) A.G. Tansley
 - C) Haeckel
 - D) Medha Patkar
- v. The organisms which actively swims in water called
 - A) Plankton
 - B) Nekton
 - C) Neuston
 - D) Periphyton
- vi. The term environment is derived from French word called
 - A) Environer
 - B) Ecology
 - C) Evolution
 - D) Encircle
- vii. The main reason for global warming
 - A) Water pollution
 - B) Air pollution
 - C) Soil pollution
 - D) Noise pollution

Contd...2

- viii. 71% of earth surface surrounded by
A) Water
B) Minerals
C) Rock
D) Soil
- ix. Which is the universal solvent
A) Liquid
B) Water
C) Milk
D) Mist
- x. The joining point of fresh water and salt water is called
A) Delta
B) Tundra
C) Estuaries
D) Coral reef

SECTION - B

Answer/Write notes on any FIVE of the following.

5X 3= 15 Marks

2. Atmosphere
3. Objectives of Environmental education
4. Weather
5. Control measures for ozone depletion
6. Global warming
7. Thermal stratification
8. Soil weathering
9. Earthquake

SECTION - C

Medium Answer questions.

Answer any THREE questions from the following.

3X 5= 15 Marks

10. Write a note on Biosphere.
11. Control measures for global warming - explain.
12. Write a note on Hydrological cycle.
13. Explain pond ecosystem.
14. Explain soil erosion and its type.

SECTION - D

Answer the following:

2X 10= 20 Marks

15. a) Give a detail note on definition, Aim, objectives and scope of Environmental education.

OR

Contd...3

- b) Give a detailed note on composition of Atmosphere.
16. a) Give a detailed note on ground water Zonation and types of wells

OR

- b) Explain soil biota and soil management.

**Second Semester B.Sc.,/BA/B.Com/BCA/BSW Degree
Examinations**

September / October 2022

(CBCS NEP Scheme)

ENVIRONMENTAL STUDIES

NAB9011 : Paper : AECC Environmental Studies

Time: 1 hr.]

[Max.Marks:30

SECTION - A ವಿಭಾಗ - ಎ

1. *Select the most appropriate answer from the options provided :*

ಕೊಟ್ಟಿರುವ ಆಯ್ಕೆಗಳಲ್ಲಿ ಸರಿಯಾದ ಉತ್ತರವನ್ನು ನೀಡಿ.

5X1=5 Marks

i. UN Conference on Environment in Stockholm was held in the year

A) 1947

B) 1972

C) 1969

D) 1983

ಸ್ವಾಹ್ ಹೋಮ್ ನಲ್ಲಿ ನಡೆದ ಪರಿಸರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವಿಚಾರ ಸಂಕಿರಣ ನಡೆದ ವರ್ಷ ?

A) 1947

B) 1972

C) 1969

D) 1983

ii. According to 2001 estimate _____ percentage of energy consumption is from coal in India.

A) 25

B) 35

C) 45

D) 55

ಭಾರತದಲ್ಲಿ 2001 ರ ಲೆಕ್ಕಾಚಾರದಂತೆ ಶೇಕಡಾ _____ ರಷ್ಟು ಶಕ್ತಿ ಬಳಕೆ ಕಲ್ಪಿಸಲಾಗಿದೆ.

A) 25

B) 35

C) 45

D) 55

iii. In an aquatic environment microscopic plants and animals are collectively known as

A) Commensals

B) Herbivores

C) Fauna & Flora

D) Planktons

ಜಲ ಪರಿಸರದಲ್ಲಿರುವ ಸೂಕ್ಷ್ಮ ಸಸ್ಯಗಳು ಹಾಗೂ ಪ್ರಾಣಿಗಳ ಗುಂಪಿನ ಹೆಸರು ?

A) ಸಹಜೀವಿಗಳು

B) ಸಸ್ಯಪ್ರಾಣಿಗಳು

C) ಪ್ರಾಣಿ ಮತ್ತು ಸಸ್ಯ

D) ಪ್ಲಾಂಕ್ಟನ್‌ಗಳು

Contd...2

- iv. PAN, O₃ etc., are considered to be _____
- A) Primary pollutant B) Secondary pollutant C) Degradable Pollutant D) Insignificant pollutant

PAN, O₃ ಮುಂತಾದವನ್ನು ಹೇಗೆ ಪರಿಗಣಿಸುತ್ತಾರೆ.

- A) ಪ್ರಾಥಮಿಕ ಮಲಿನಕಾರಿ B) ದ್ವಿತೀಯ ಮಲಿನಕಾರಿ
C) ವಿಘಟನೆಯಾಗುವ ಮಲಿನಕಾರಿ D) ಗಮನಾರ್ಹವಲ್ಲದ ಮಲಿನಕಾರಿ

- v. Rain water is turned acidic when its pH falls below _____

- A) 5.6 B) 6.6
C) 7.6 D) 8.6

ಮಳೆ ನೀರು ಆಮ್ಲೀಯವಾಗಲು ಅದರ pH _____ ಕ್ಕಿಂತ ಕಡಿಮೆಗೊಳ್ಳುತ್ತದೆ

- E) 5.6 F) 6.6
G) 7.6 H) 8.6

SECTION - B ವಿಭಾಗ - ಬಿ

Answer any THREE questions from the following.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರಕ್ಕೆ ಉತ್ತರಿಸಿ.

3X 5= 15 Marks

- Environmental impacts of excessive usage of ground water.
ಅತಿಯಾದ ಅಂತರ್ಜಲದ ಬಳಕೆಯಿಂದಾಗುವ ಪಾರಿಸಾರಿಕ ಪರಿಣಾಮಗಳು.
- Write a note on food chain with an example.
ಉದಾಹರಣೆಯೊಂದಿಗೆ ಆಹಾರ ಸರಪಳಿ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.
- Biodiversity classification with example.
ಉದಾಹರಣೆಯೊಂದಿಗೆ ಜೈವಿಕ ವೈವಿಧ್ಯತೆಯ ವರ್ಗೀಕರಣ.
- Effects of noise pollution on human health.
ಶಬ್ದ ಮಾಲಿನ್ಯದಿಂದ ಮನುಷ್ಯನ ಆರೋಗ್ಯದ ಮೇಲಾಗುವ ಪರಿಣಾಮಗಳು
- Salient features of Wildlife Protection Act.
ವನ್ಯಜೀವಿ ಸಂರಕ್ಷಣಾ ಕಾಯಿದೆಯ ಪ್ರಮುಖ ಗುಣಲಕ್ಷಣಗಳು.

SECTION - C ವಿಭಾಗ - ಸಿ

Answer any ONE question from the following.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದಕ್ಕೆ ಉತ್ತರಿಸಿ.

1X 10= 10 Marks

- Explain non-conventional energy resources.
ಅಸಂಪ್ರದಾಯಕ ಶಕ್ತಿ ಸಂಪನ್ಮೂಲಗಳನ್ನು ವಿವರಿಸಿ.
- Explain biodiversity conservation methods.
ಜೈವಿಕ ವೈವಿಧ್ಯತೆ ಸಂರಕ್ಷಣಾ ಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.
- What is green house effect? Explain the effects of enhanced global warming.
ಹಸಿರು ಮನೆ ಪರಿಣಾಮವೆಂದರೇನು? ಅತಿಯಾದ ಜಾಗತಿಕ ತಾಪಮಾನದಿಂದಾಗುವ ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿ.

**Second Semester B.Sc., / BA/ B.Com /BSW/ BBM
Degree Examinations**

September / October 2022

(CBCS NEP Scheme)

ENVIRONMENTAL SCIENCE

OEB5380 : Climate Change and its Implications

Time: 2 hrs.]

[Max.Marks:60

SECTION - A ವಿಭಾಗ - ಎ

1. *Select the most appropriate answer from the options provided :*

ಕೊಟ್ಟಿರುವ ಆಯ್ಕೆಗಳಲ್ಲಿ ಸರಿಯಾದ ಉತ್ತರವನ್ನು ನೀಡಿ.

10X1=10 Marks

i. Which is the innermost layer of the earth's atmosphere?

- A) Mesosphere
B) Troposphere
C) Thermosphere
D) Ionosphere

ಭೂಮಿಯ ವಾತಾವರಣದಲ್ಲಿರುವ ಪದರು ಯಾವುದು?

- A) ಮೀಸೋಸ್ಪಿಯರ್
B) ಟ್ರೋಪೋಸ್ಪಿಯರ್
C) ಥರ್ಮೋಸ್ಪಿಯರ್
D) ಐಯನೋಸ್ಪಿಯರ್

ii. Synthetic chemical CFC is used in _____

- A) Television
B) Fans
C) Refrigerators
D) Motors

ಸಿಂಥೆಟಿಕ್ ಕೆಮಿಕಲ್ CFC ಅನ್ನು ಯಾವುದರಲ್ಲಿ ಬಳಸುತ್ತಾರೆ

- A) ಟಿ.ವಿ
B) ಫ್ಯಾನ್
C) ಫ್ರಿಜರ್
D) ಮೋಟಾರ್ಸ್

iii. Instrument which measures rainfall.

- A) Thermometer
B) Rain gauge
C) Anemometer
D) Barometer

ಮಳೆಯನ್ನು ಅಳೆಯುವ ಮಾಪನ

- A) ಥರ್ಮೋಮೀಟರ್
B) ರೇನ್ ಗೇಜ್
C) ಅನಿಮೋಮೀಟರ್
D) ಬಾರೋಮೀಟರ್

iv. World Environmental day celebrated on _____

- A) June 5
B) July 5
C) April 5
D) March 5

Contd...2

ವಿಶ್ವಪರಿಸರ ದಿನ ಎಂದು ಆಚರಣೆ ಮಾಡುವುದು _____

A) ಜೂನ್ 5

B) ಜುಲೈ 5

C) ಏಪ್ರಿಲ್ 5

D) ಮಾರ್ಚ್ 5

v. Bhopal gas tragedy year _____

A) 3 Dec, 1984

B) 1 Dec, 1984

C) 10 Dec, 1985

D) 15 Dec, 1986

ಭೋಪಾಲ್ ಅನಿಲ ದುರಂತ ನಡೆದ ವರ್ಷ _____

A) 3 Dec, 1984

B) 1 Dec, 1984

C) 10 Dec, 1985

D) 15 Dec, 1986

vi. An overflow of water that submerges land called

A) Tsunami

B) Flood

C) Avalanches

D) Cloud burst

ನೀರಿನ ಹೆಚ್ಚಿನ ಹರಿವು ಮತ್ತು ಜಲಾವೃತಕ್ಕೆ _____ ಎನ್ನುವರು

A) ಸುನಾಮಿ

B) ಪ್ರವಾಹ

C) ಅವಲಾಂಚಿ

D) ಮೇಘಸ್ಫೋಟ

vii. Primary cause for sea level rise is

A) Global warming

B) Volcano

C) Earth quake

D) Cyclone

ಸಮುದ್ರ ಮಟ್ಟ ಏರಿಕೆಗೆ ಪ್ರಾಥಮಿಕ ಕಾರಣ

A) ಜಾಗತಿಕ ತಾಪಮಾನ

B) ಜ್ವಾಲಾಮುಖಿ

C) ಭೂಕಂಪ

D) ಚಂಡಮಾರುತ

viii. Which of the following is not a green house gas

A) Carbon dioxide

B) Carbon monoxide

C) Oxygen

D) Methane

ಕೆಳಗಿರುವ ಆಯ್ಕೆಗಳಲ್ಲಿ ಯಾವುದು ಹಸಿರುಮನೆ ಅನಿಲದ ಪಟ್ಟಿಗೆ ಸೇರಲಿಲ್ಲ

A) ಇಂಗಾಲದ ಡೈಆಕ್ಸೈಡ್

B) ಇಂಗಾಲದ ಮಾನಾಕ್ಸೈಡ್

C) ಆಮ್ಲಜನಕ

D) ಮೀಥೇನ್

ix. World water day celebrated on _____

A) 22 April

B) 22 March

C) 21 February

D) 22 December

ವಿಶ್ವ ಜಲದಿನಾಚರಣೆ _____

ರಂದು ಆಚರಿಸುತ್ತಾರೆ.

A) 22 April

B) 22 March

C) 21 February

D) 22 December

x. 'Chipko movement' was first started by

A) Arundhati Roy

B) Medha Patkar

C) Ila Bhatt

D) Sunderlal Bahuguna

'Chipko movement' ಮೊದಲು ಹಮ್ಮಿಕೊಂಡಿದ್ದು

A) ಅರುಂಧತಿ ರಾಯ್

B) ಮೇಧಾ ಪಾಟೀಲ್

C) ಇಲಾ ಭಟ್

D) ಸುಂದರ್ ಲಾಲ್ ಬಹುಗುಣ

SECTION - B ವಿಭಾಗ - ಬಿ

Answer/Write short notes on any FIVE questions from the following.

ಕಿರುಟಿಪ್ಪಣಿಗಳನ್ನು ಬರೆಯಿರಿ. ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಐದು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. 5X 3= 15 Marks

2. Write a note on Ozone layer

ಓಜೋನ್ ಪದರದ ಬಗ್ಗೆ ವಿವರಿಸಿ.

3. Write any three causes for the climate change.

ಹವಾಮಾನ ಬದಲಾವಣೆಗೆ ಮೂರು ಕಾರಣಗಳನ್ನು ತಿಳಿಸಿ.

4. What is Green House effect? List out the green house gases.

ಹಸಿರುಮನೆ ಪರಿಣಾಮ ಎಂದರೇನು? ಹಸಿರುಮನೆ ಅನಿಲಗಳ ಪಟ್ಟಿಮಾಡಿರಿ.

5. Write a note on Kyoto Protocol.

ಕ್ಯೂಟೋ ಶಿಷ್ಟಾಚಾರದ ಬಗ್ಗೆ ವಿವರಿಸಿ.

6. Write a note on floods

ಪ್ರವಾಹದ ಬಗ್ಗೆ ವಿವರಿಸಿ.

7. What are El-nino and La Nina?

El-nino ಮತ್ತು La Nina ಎಂದರೇನು?

8. What are vector borne diseases? Give example.

ವಾಹಕದಿಂದ ಹರಡುವ ರೋಗಗಳ ಬಗ್ಗೆ ವಿವರಿಸಿ.

Contd...4

9. What is carbon foot print ? Write any two impacts.

ಇಂಗಾಲದ ಹೆಜ್ಜೆಗುರುತು ಎಂದರೇನು? ಯಾವುದಾದರೂ ಎರಡು ಪರಿಣಾಮಗಳನ್ನು ಬರೆಯಿರಿ.

SECTION - C ವಿಭಾಗ - ಸಿ

Answer any **THREE** question from the following.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

3X 5= 15 Marks

10. Write a note on atmosphere and its components.

ವಾತಾವರಣದ ಮತ್ತು ಅದರ ಘಟಕಗಳ ಬಗ್ಗೆ ವಿವರಿಸಿ.

11. Briefly explain the effect of global warming.

ಜಾಗತಿಕ ತಾಪಮಾನದಿಂದ ಆಗುವ ಪರಿಣಾಮಗಳನ್ನು ತಿಳಿಸಿ.

12. Discuss briefly about 'Chipko Movement'

ಚಿಪ್ಕೋ ಚಳುವಳಿ ಬಗ್ಗೆ ವಿವರಿಸಿ.

13. Explain any 3 consequences of ozone depletion.

ಓಜೋನ್ ಸವಕಳಿಯ 3 ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿ.

14. Mention any three causes for sea level rise.

ಸಮುದ್ರಮಟ್ಟ ಏರಿಕೆಗೆ ಮೂರು ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿ.

SECTION - D ವಿಭಾಗ - ಡಿ

Answer any **TWO** of the following.

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

2X 10= 20 Marks

15. Briefly explain the possible consequences of climate change.

ಹವಾಮಾನ ಬದಲಾವಣೆಯ ಪರಿಣಾಮಗಳನ್ನು ಸವಿವರವಾಗಿ ವಿವರಿಸಿ.

OR ಅಥವಾ

Explain briefly the current environmental issues in India.

ಭಾರತದ ಈಗಿನ ಪರಿಸರದ ಸಮಸ್ಯೆಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಿ.

16. Briefly explain the climate change effect on biodiversity.

ಹವಾಮಾನ ಬದಲಾವಣೆಯಿಂದ ಜೀವವೈವಿಧ್ಯತೆ ಮೇಲೆ ಆಗುವ ಪರಿಣಾಮಗಳನ್ನು ವಿವರಿಸಿ.

OR ಅಥವಾ

Discuss the alternate energy resources in achieving sustainable development goals.

ಸುಸ್ಥಿರ ಅಭಿವೃದ್ಧಿಗೆ ಪರ್ಯಾಯ ಶಕ್ತಿ ಸಂಪನ್ಮೂಲಗಳು ಹೇಗೆ ಸಹಕಾರಿಯಾಗಿವೆ ವಿಶ್ಲೇಷಿಸಿ.

Third Semester B.Sc., Degree Examination s

September / October 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSC 870: Paper III : Natural Resources and Environmental Geology

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Write classification of energy resources with an example.
2. Mention types of fisheries.
3. What are Igneous rocks? Mention its classification.
4. Write any two roles of soil structure in relation to plant growth.
5. What is weathering? Mention its types.
6. Mention any two inter – state water conflict of India.
7. What is nuclear energy? Mention its types.

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Write a note on world food problems.
9. Explain soil profile.
10. Give an account on rock cycle.
11. Briefly explain any three non-conventional energy resources.
12. Explain ecological impacts of mining.
13. Write a note on scope of environmental geology.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Give a detailed note on components of soil system.
15. Explain the following
 - a) Waste land reclamation
 - b) Preventive measures for sedimentation

Contd...2

16. Write a note on :

- a) Effects of deforestation
- b) Types of soil erosion

Fourth Semester B.Sc., Degree Examinations

September / October 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSD 870: Paper IV : Environmental Chemistry and Pollution

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Write any two natural sources of radioactive pollution.
2. What is Eutrophication ?
3. Define soil pollution. Mention any two anthropogenic source of soil pollution.
4. What are secondary air pollutants ? Give two examples.
5. Mention sources for ozone layer depletion.
6. What is Noise ? Mention the unit used to measure the intensity of noise.
7. What is photochemical smog ?

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Give an account on acid rain.
9. Explain effects of industrial pollution.
10. Briefly explain impacts of radiation on animals.
11. Explain control of noise pollution.
12. Write a short note on scope of environmental chemistry.
13. Explain effects of air pollution on vegetation.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain the following :
 - a) Chemistry of atmosphere
 - b) Effects of soil pollution.

Contd...2

15. Write a note on :

- a) Sources of noise pollution
- b) Properties of photon radiation.

16. Explain the causes and effects of ground water pollution in detail.

Q.P.Code No. 15569

Fifth Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSE 870: Paper V : Environmental Microbiology and Biotechnology

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Pasteurization.
2. Soil Algae
3. Sewage
4. Legionellosis
5. Bioremediation
6. Biosensors
7. Protozoan diseases.

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Explain sources of Airborne micro organisms
9. Describe moist heat methods of sterilization.
10. Give a detailed note on Airborne diseases.
11. Explain scope and importance of biotechnology in environmental science.
12. Describe positive interaction in soil micro organisms.
13. Give a detailed note on Biofertilizers.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain bioremediation methods for contaminated soils and aquifers.
15. Describe significance of soil micro organism.
16. Write a note on following:
 - a) Chemical methods of sterilization
 - b) Ultra structure of Eukaryotes

Q.P.Code No. 15570

Fifth Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

**SSE 871: Paper VI : Environmental Health Safety and Environmental
Toxicology**

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Bagassosis
2. Personal hygiene
3. Mist
4. Toxicants
5. Acute Toxicity
6. Toxic Chemicals
7. LD 50

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Write a note on Occupational Pneumoconiosis
9. Role of an Industrial Hygienist.
10. Write a note on Chemical Hazards.
11. Importance of safety and training in Industries.
12. Explain the concept of threshold limit values.
13. Write a note on Bio-magnification.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain Bureau of Indian standards on safety and health elaborately.
15. Explain the toxicological effects of lead and Mercury in detail.
16. Explain about toxic chemicals in Environment in detail.

Fifth Semester B.Sc., Degree Examinations

September / October 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSE 871: Paper VI : Environmental Health Safety and Environmental Toxicology

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. What is physical Hazard ? Mention any two physical Hazards.
2. Define importance of personal hygiene.
3. Define pneumoconiosis. Give examples.
4. What are toxins ? Give example.
5. Define Biomagnifications and bioaccumulation.
6. What is threshold limit values ?
7. Write a note on process safety management.

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Explain dangerous properties of chemicals.
9. Write a note on biological Hazards.
10. Explain role of industrial Hygienist.
11. Briefly explain dose-response relationships.
12. Write a note on importance of safety and training.
13. Give a detailed note on OSHA.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain control measures for chemical hazards.
15. Explain the factors affecting toxicity of toxicants.
16. Explain the following :
 - a) Silicosis and Bagassosis
 - b) Safety training methods

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Fifth Semester B.Sc., Degree Examinations

September / October 2022

(Semester Scheme) (New Syllabus 2013-14 - Onwards)

ELECTRONICS

SSE720 : Paper - V : Digital Electronics

Time: 3 hrs.]

[Max.Marks:50

Instruction to the Candidates :

1. Section A should be answered in the first two pages of the answer book.
2. Scientific Calculator is allowed.

SECTION - A

I. Answer ALL the questions :

5X 1= 5 Marks

1. What is the 2's complement representation of decimal 15 ?
2. What is non-weighted code?
3. What is Encoder?
4. Draw the circuit diagram of D flip flop using JK flip flop.
5. What is ripple counter?

SECTION - B

II. Answer any FIVE questions.

5X 3= 15 Marks

6. Describe the working AND gate using diodes.
7. a) Perform $35 - 10$ using 1's complement method
b) Convert $(9D)_{16}$ in to decimal and Binary number.
8. Construct AND, OR & XOR gates using NAND gates.
9. Design 4 bit even parity system.
10. State and prove Demorgan's 1st theorem.
11. Explain the construction and working of a T flip flop using JK flip flop.
12. Explain the construction and working of a 4:1 Multiplexer.

SECTION - C

III. Answer any FIVE of the following questions.

5X6= 30 Marks

13. a) Convert $Y=(A\bar{B} + B\bar{C})$ in to Σ form
b) Simplify $Y = \overline{AB} (\bar{A} + B) (\bar{B} + B)$ using Boolean laws.

3+3 Marks

Contd...2

14. a) Simplify using K map $F(A,B,C,D) = \sum m (0, 1, 3, 5, 7, 8, 9, 11, 13, 15)$
b) Explain weighted codes. 4+2 Marks
15. a) Describe working of BCD to decimal decoder.
b) Design half subtractor using NAND gates 3+3 Marks
16. a) Explain the working of Full adder using half adders.
b) Write a note on Parallel adder. 4+2 Marks
17. Describe the working of J K flip flop with relevant diagram. 6 Marks
18. Explain the working of 4 bit SISO shift register. Also draw the timing diagram. 6 Marks
19. Describe the working of 3 bit ripple counter with the help of timing diagram. 6 Marks
20. Write a note on :
a) IC 74147
b) Ring counter. 3+3 Marks

Q.P.Code No. 15569

Fifth Semester B.Sc., Degree Examinations

September / October 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSE 870: Paper V : Environmental Microbiology and Biotechnology

Time: 3 hrs.]

[Max.Marks:50

I. *Short answer questions.*

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Soil profile
2. Physical methods of sterilization.
3. Aspergillosis.
4. Biofungicides and its example
5. Biosensors
6. Aquatic micro organisms (Plankton and periphyton).
7. Mention any four significance of soil microorganism.

II. *Medium answer questions.*

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Describe ultrastructure of Bacterial cell.
9. Explain soil micro organisms.
10. Write a note on Giardiasis and Scarlet fever.
11. Explain applications of biotechnology in pollution control
12. Give a note on Xenobiotic pollutants.
13. Give a note on enumeration of air borne micro organisms.

III. *Long answer questions.*

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain distribution of aquatic micro organisms.
15. Describe water borne diseases.
16. Write a note on following :
 - a) Disadvantages of Bio control agents
 - b) Historical perspectives of microbiology

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G.P.Code No. 15670

Sixth Semester B.Sc., Degree Examinations

September / October 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSF 771: Paper VIII : Environmental Conservation and Management

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Agro forestry.
2. Endangered species
3. Natural Hazards
4. National parks
5. Rain water harvesting
6. Floods
7. Endemism

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Write a note on social forestry.
9. Write a note on application of GIS in Environmental Management.
10. Brief note on watershed management.
11. Write a note on Forest (Conservation) Act 1980.
12. Describe the Environmental movements.
 - a) Chipko movement
 - b) Appiko movement
13. Write a note on conservation of water resources.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Describe the methods in Environmental Impact Assessment in detail
15. Explain the different rain water harvesting methods.
16. Explain the sustainable energy resources in detail.

Q.P.Code No. 15669

Sixth Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSF 770: Paper 7 : Environmental Monitoring and Control

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Biological Indicators
2. Particulate matter
3. Gaseous pollutant
4. Municipal water
5. Industrial effluent
6. Sanitary Land fill
7. 3R Concept

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Indian standards for water quality (WHO).
9. Stack gas measurements.
10. Wet and dry Scrubbers.
11. Physico - Chemical characteristics of sewage.
12. Characteristics of effluent of textile industry.
13. Disposal method of municipal solid waste.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain ambient air sampling and ambient air measurements.
15. Give a detailed note on solid waste disposal methods.
16. Explain sewage treatment and its disposal methods.

Q.P.Code No. 15670

Sixth Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

ENVIRONMENTAL SCIENCE

SSF 771: Paper VIII : Environmental Conservation and Management

Time: 3 hrs.]

[Max.Marks:50

I. Short answer questions.

Answer any FIVE of the followings.

5X 2= 10 Marks

1. Write the objectives of conservation of environment.
2. What is the significance of environmental impact assessment.
3. What are endangered species give some examples.
4. Write about Chernobyl nuclear disaster.
5. Enlist the environmental legislation acts with year of enactment.
6. What are natural disasters.
7. What is the significance of rain water harvesting.

II. Medium answer questions.

Answer any FOUR of the followings.

4 X 5= 20 Marks

8. Explain briefly about Agro – forestry.
9. Write about significance of Chipko movement.
10. Explain the importance of air prevention and control of pollution act 1981.
11. Write about the causes and remedies for flood.
12. Explain Bhopal gas tragedy.
13. Explain the methods of ground water recharging.

III. Long answer questions.

Answer any TWO of the followings.

2X10= 20 Marks

14. Explain in detail *in situ* and *Ex - situ* conservation of biodiversity with respect to wild life management.
15. Explain in detail the methods of rain water harvest with suitable diagrams.
16. Explain in detail the sustainable use of energy resources.
