

*SH-I/ENV/102C-2/(PR)/19*

**B.Sc. 3rd Semester (Honours) Practical Examination, 2019-20**

**ENVIRONMENTAL SCIENCE**

**Course ID : 11822**

**Course Code : SHENV-102/C-2(PR)**

Course Title: Physics and Chemistry of Environment

**Time: 2 Hours**

**Full Marks: 15**

*The figures in the right hand side margin indicate full marks.*

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

1. Determine chloride / sulphate / nitrate composition from supplied soil sample. 8
  2. Submission of laboratory notebook / report. 3
  3. Viva voce. 4
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**B.Sc. 1st Semester (Programme) Practical Examination, 2019-20**

**ENVIRONMENTAL SCIENCE**

**Course ID : 11828**

**Course Code : SP/ENV-101/C-1A(PR)**

Course Title: Fundamentals of Environmental Science and Social issues

**Time: 2 Hours**

**Full Marks: 15**

*The figures in the right hand side margin indicate full marks.*

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

1. Submission of Project report on relevant topics related to: 10
    - (i) Soil profile. Measurement of soil temperature and moisture, NPK, Organic Carbon, Determination of pH, chloride, sulphate and nitrate
    - (ii) Urban traffic survey to assess the vehicular pollution
    - (iii) Preparation of project report as Environmental Impact Assessment of any developmental project
  2. Viva-Voce 5
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*SH-I/ENV/101C-1/(PR)/19*

**B.Sc. 1st Semester (Honours) Practical Examination, 2019-20**

**ENVIRONMENTAL SCIENCE**

**Course ID : 11821**

**Course Code : SHENV-101C-1(PR)**

Course Title: Earth and Earth Surface Processes

**Time: 2 Hours**

**Full Marks: 15**

*The figures in the right hand side margin indicate full marks.*

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

1. Identify the supplied rocks and mineral Specimens (A-D) with reasons. 2×4=8
  2. Submission of laboratory note book / report. 4
  3. Viva voce 3
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**B.Sc. 1st Semester (Honours) Examination, 2019-20****ENVIRONMENTAL SCIENCE****Course ID : 11812****Course Code : SHENV-102-C-2**

Course Title: Physics and Chemistry of Environment

**Time: 1 Hour 15 Minutes****Full Marks: 25***The figures in the right hand side margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer *any five* questions from the following: 1×5=5
- (a) What is meant by electromagnetic spectrum?
  - (b) How does Coriolis force work?
  - (c) What is Darcy's Law equation?
  - (d) What is pH?
  - (e) What Gaussian plume model?
  - (f) What are the components of soil?
  - (g) What is the main cause of photochemical smog?
  - (h) What is the main difference between aliphatic and aromatic compounds?
2. Answer *any two* questions from the following: 5×2=10
- (a) Write a short note on adiabatic lapse rate (dry and moist adiabatic). 5
  - (b) What are the differences between diffusion and dispersion? What is buffer? 4+1=5
  - (c) What is the concept of thermodynamic system? 5
  - (d) What is the meanings of alkalinity and acidity of water? What is hardness of water? 3+2=5
3. Answer *any one* question from the following: 10×1=10
- (a) Write a note on the formation of acid rain. Briefly discuss the role of CFCs in ozone layer depletion. 6+4=10
  - (b) Briefly discuss Kirchhoff's law. Write a short note on Boltzmann equation. 4+6=10
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**B.Sc. 1st Semester (Programme) Examination, 2019-20**  
**ENVIRONMENTAL SCIENCE**

Course ID : 11818

Course Code : SPENV-101C-1A

Course Title: Fundamental of Environmental Science and Social Issues

Time: 1 Hour 15 Minutes

Full Marks: 25

*The figures in the right hand side margin indicate marks.  
Candidates are required to give their answers in their own words  
as far as practicable.*

*দক্ষিণ প্রান্তস্থ সংখ্যাগুলি প্রশ্নের পূর্ণমানের নির্দেশক।  
পরীক্ষার্থীদের যথাসম্ভব নিজের ভাষায় উত্তর দিতে হবে।*

1. Answer any five from the following:

1×5=5

নিম্নলিখিত যে কোনো পাঁচটি প্রশ্নের উত্তর দাও :

(a) What is sustainable development?

স্থিতিশীল উন্নয়ন কী?

(b) Who are the leaders of the 'Chipko Movement'?

চিপকো আন্দোলনের প্রধান নেতাদের নাম কী?

(c) Define Energy Resource.

শক্তিসম্পদের সংজ্ঞা দাও।

(d) State one importance of Ramsar Convention.

রামসার সম্মেলনের একটি গুরুত্ব লেখ।

(e) What is the full form of PAPs?

PAPs -এর পুরো অর্থ কী?

(f) What is the maximum limit of arsenic prescribed by WHO?

বিশ্বস্বাস্থ্য সংস্থা প্রদত্ত আর্সেনিকের উর্ধ্বসীমা কত?

(g) What is desired population?

কাম্য জনসংখ্যা কী?

(h) In which year Forest (Conservation) Act was introduced?

কত সালে অরণ্য (সংরক্ষণ) আইন প্রণয়ন হয়?

2. Answer *any two* from the following:

5×2=10

নিম্নলিখিত যে কোনো দুটি প্রশ্নের উত্তর দাও :

(a) Mention about the measures for forest conservation according to Forest (Conservation) Act.

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Forest (Conservation) Act অনুযায়ী অরণ্য সংরক্ষণ সম্পর্কে যা জান লেখ।

(b) Write a short note on 'Appiko Movement'.

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টীকা লেখ : 'অ্যাপিকো আন্দোলন'

(c) How is environment affected by Urbanization?

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পরিবেশের উপর নগরায়ণের প্রভাব সম্পর্কে লেখ।

(d) What do you mean by deep ecology and shallow ecology? Differentiate between them.

2+3=5

Deep ecology এবং Shallow ecology বলতে কী বোঝ? তাদের মধ্যে পার্থক্য নিরূপণ কর।

3. Answer *any one* of the following:

10×1=10

নিম্নলিখিত যে কোনো দুটি প্রশ্নের উত্তর দাও :

(a) Explain: Environmental NGO. Mention the role of it.

3+7=10

ব্যাখ্যা কর : Environmental NGO, এবং এর কাজ ব্যাখ্যা কর।

(b) Describe in brief about consequences of water pollution and its possible causes. Name two water borne diseases.

8+2=10

জল দূষণের কারণ ও ফলাফল সংক্ষেপে আলোচনা কর। দুটি জলবাহিত রোগের নাম লেখ।

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**B.Sc. 1st Semester (Honours) Examination, 2019-20****ENVIRONMENTAL SCIENCE****Course ID : 11811****Course Code : SHENV-101-C-1**

Course Title: Earth and Earth Surface Processes

**Time: 1 Hour 15 Minutes****Full Marks: 25***The figures in the right hand side margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer *any five* questions from the following: 1×5=5
- (a) What is the importance of geological time scale?
  - (b) How many major tectonic plates are found to hold Earth's crust?
  - (c) What causes the rock cycle?
  - (d) What is the atmosphere-ocean interface?
  - (e) What is the result of weathering process?
  - (f) Define Metamorphism.
  - (g) What is 'Orogenesis'?
  - (i) What is the main difference between the eastern ghats and the western ghats?
2. Answer *any two* questions from the following: 5×2=10
- (a) Briefly describe the evolution of earth's atmosphere. 5
  - (b) Give examples of igneous, sedimentary and metamorphic rocks by defining them first. 2½+2½=5
  - (c) What are the differences between minerals and rocks? What is lithification? 3+2=5
  - (d) What is the concept of continental drift? Briefly describe it. 5
3. Answer *any one* question from the following: 10×1=10
- (a) Briefly discuss the formation of the Indo-Gangetic plains. 10
  - (b) Write about the structure and composition of core, mantle and crust of the earth. 10
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