

SUBJECT CODE NO: - BNP-2723
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc (NEP) (P-2024) S.Y Sem III
Examination November / December 2025
Physics (Soil Physics)

[Time: 1:00 Hours]**[Max. Marks: 30]**

Please check whether you have got the right question paper.

N. B

- i) Question No. 1 is compulsory from part - A. It carries 10 marks
- ii) Attempt any four questions from part-B
- iii) Figures to the right indicates full marks.

PART – A**Q1 Answer all the Multiple-choice questions.****10**

- 1) Soil physics deals with:
 - a) Soil chemistry
 - b) Soil physical properties
 - c) Soil microbiology
 - d) Soil organic matter
- 2) The process of breakdown and development of soil horizons is called:
 - a) Soil formation
 - b) Soil aggregation
 - c) Soil texture
 - d) Soil moisture
- 3) Bulk density is defined as:
 - a) Mass per unit volume of soil solids
 - b) Ratio of pore volume to total volume
 - c) Mass per unit volume including pore space
 - d) Weight of water in soil
- 4) Which soil structure is most favorable for plant growth?
 - a) Blocky
 - b) Granular
 - c) Platy
 - d) Columnar
- 5) A soil sample weighs 150 g when oven-dry and occupies 100 cm³. What is its bulk density?
 - a) 1.2 g/cm³
 - b) 1.5 g/cm³
 - c) 1.8 g/cm³
 - d) 2.0 g/cm³

PART – B**Q2 Explain the importance of soil physics and its relationship with other disciplines.****05****Q3 Define soil texture. Describe the methods of particle size measurement****05**

- Q4** A soil sample has a bulk density of 1.5 g/cm^3 and a particle density of 2.65 g/cm^3 . Calculate the porosity of the soil. **05**
- Q5** Write a short note on types of soil structure with neat sketches. **05**
- Q6** Explain the different components of soil water potential. **05**
- Q7** A soil sample at field capacity contains 30% water by volume and at wilting point 12%. If the bulk density is 1.4 g/cm^3 , calculate the available water content (mm/m). **05**

