

RPSC-A.En

Main Examinations

CIVIL ENGINEERING

Mains Practice Workbook

PAPER - II

BMC & Environment

Booklet

10

Key Features: Includes

- ☞ **Include 2, 5 & 20 Marks Practice Problems**
- ☞ **Cover RPSC-AE Latest Syllabus & Pattern**
- ☞ **Workbook are design according to RPSC Pattern**

BMC & ENVIRONMENT

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— **BMC** —

BUILDING MATERIAL AND CONSTRUCTION

PART - A

Note : Each questions carries **2 marks**. Answer should not exceed **15 words**.

1 (i) What is flash setting of cement?

(ii) What is false set?

2. What is a stone?

3. What are the uses of stone?

4. What are the various tests for stones?

PART - B

Note : Each questions carries **5 marks**. Answer should not exceed **50 words**.

57. What do you understand by bulking of sand? How does it affect quantity of sand by volume batching?

58. Write about fire resistance of timber.

PART - C

Note : Each questions carries **20 marks**. Answer should not exceed **200 words**.

72. Explain briefly the Bogue's compounds and their properties in the cement.

— **ENVIRONMENT** —

WATER SUPPLY AND SANITARY ENGINEERING

PART - A

Note : Each questions carries **2 marks**. Answer should not exceed **15 words**.

1. What are the factors affecting population growth.

2. Name two water borne diseases.

3. Write down the acceptable standards of total dissolved solids, chlorides, fluorides an nitrates in potable water as per Indian.

4. Define the term Most Probable Number-MPN.

PART - B

Note : Each questions carries **5 marks**. Answer should not exceed **50 words**.

26. What is meant by 'design period' and 'population forecast'? Describe the 'incremental increase' method of future population forecast of a city, stating its advantages.

27. The chemical analysis of water indicates the presence of cations as $\text{Na}^+ = 20 \text{ mg/L}$; $\text{Mg}^{++} = 60 \text{ mg/L}$; $\text{Ca}^{++} = 45 \text{ mg/L}$. Compute the hardness (as equivalent of CaCO_3). The combining weights of Ca, Mg and CaCO_3 , are 20, 12 and 50 respectively.

PART - C

Note : Each questions carries **20 marks**. Answer should not exceed **200 words**.

- 47. What do you mean by the term per Capita Demand? How is it estimated? The population of a locality as obtained from census record is as follows:

Year	1970	1980	1990	2000	2010
Population	15000	20000	24500	29500	32500

Estimate the population of the locality in 2040 by Arithmetic increase, geometric increase, incremental increase and rate of decrease of methods.
