

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2025**

PUBLIC HEALTH ENGINEERING

[Maximum Marks: 75]

[Time: 3 Hours]

PART-A

I. Answer ‘all’ the following questions in one word or one sentence. Each question carries ‘one’ mark.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1.	Name the type of pipe used to conveyance of hot water in buildings.	M1.04	R
2.	Define yield of a well.	M1.01	R
3.	Colour of the water is measured by a device known as-----	M1.03	R
4.	In water treatment plants suspended particles are removed by----- process	M2.01	R
5.	The chemicals used for the purpose of coagulation are called-----	M2.02	R
6.	The network of sewers is known as-----	M3.01	R
7.	Amount of oxygen required for the decomposition of biodegradable organic matter is known as-----	M3.04	R
8.	In secondary treatment, sewage is completely purified by-----	M4.01	R
9.	-----is the long narrow tanks that are designed to slow down the flow in sewage treatment	M4.02	R

PART-B

II. Answer any ‘eight’ questions from the following. Each question carries ‘three’ marks.

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1.	Identify the surface and sub surface source of water.	M1.01	U
2.	Explain infiltration gallery.	M1.01	U
3.	List the types of water demand	M1.02	U
4.	List the methods of forecasting population.	M1.02	R
5.	List the methods of aeration in water treatment plant.	M2.02	U
6.	Describe chemical characteristics of sewage.	M3.04	U
7.	Define Refuse, Garbage, Rubbish.	M3.01	R
8.	Describe dry weather flow and factors considering the quantity of dry weather flow.	M3.02	U
9.	List the functions of manhole.	M3.03	R
10.	Briefly describe inspection chamber and anti syphonage pipe.	M4.04	U

PART-C

Answer ‘all’ questions from the following. Each question carries ‘seven’ marks.

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level												
III.	With the help of the given data forecast population for the year 2030 using the arithmetical increase method. <table><tr><td>Year</td><td>1930</td><td>1940</td><td>1950</td><td>1960</td><td>1970</td></tr><tr><td>Population</td><td>34000</td><td>40000</td><td>43000</td><td>48000</td><td>52000</td></tr></table> OR	Year	1930	1940	1950	1960	1970	Population	34000	40000	43000	48000	52000	M1.02	A
Year	1930	1940	1950	1960	1970										
Population	34000	40000	43000	48000	52000										
IV.	With the help of the given data forecast population for the year 2020 using the incremental increase method. <table><tr><td>Year</td><td>1920</td><td>1930</td><td>1940</td><td>1950</td><td>1960</td></tr><tr><td>Population</td><td>25000</td><td>28000</td><td>34000</td><td>42000</td><td>47000</td></tr></table>	Year	1920	1930	1940	1950	1960	Population	25000	28000	34000	42000	47000	M1.02	A
Year	1920	1930	1940	1950	1960										
Population	25000	28000	34000	42000	47000										
V.	Draw the Flow diagram of different treatment units for surface sources and explain each units. OR	M2.01	U												
VI.	Differentiate between Slow sand, Rapid sand filters in water treatment.	M2.03	U												
VII.	Draw and explain the layout of dead end and radial water distribution system. OR	M2.05	U												
VIII.	Explain physical analysis of water on taste, odour and colour.	M2.04	U												
IX.	Distinguish conservancy and water carriage system of sewage disposal. OR	M3.02	U												
X.	Discuss the requirements of surface drainage.	M3.03	U												
XI.	Describe briefly primary treatment, secondary treatment and disinfection in sewage treatment. OR	M4.01	U												
XII.	Illustrate trickling filter.	M4.03	U												
XIII.	Describe Skimming tanks in sewage treatment plant. OR	M4.02	U												
XIV.	Draw and explain activated sludge process.	M4.03	U												
