TED (21)6011A
(Revision – 2021)

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Reg. No……
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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)

<table>
<tr><th></th><th></th><th>Module Outcome</th><th>Cognitive level</th></tr>
<tr><td>III.</td><td>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</td><td>M1.02</td><td>A</td></tr>
<tr><td>IV.</td><td>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></td><td>M1.02</td><td>A</td></tr>
<tr><td>V.</td><td>Draw the Flow diagram of different treatment units for surface sources and explain each units.
OR</td><td>M2.01</td><td>U</td></tr>
<tr><td>VI.</td><td>Differentiate between Slow sand, Rapid sand filters in water treatment.</td><td>M2.03</td><td>U</td></tr>
<tr><td>VII.</td><td>Draw and explain the layout of dead end and radial water distribution system.
OR</td><td>M2.05</td><td>U</td></tr>
<tr><td>VIII.</td><td>Explain physical analysis of water on taste, odour and colour.</td><td>M2.04</td><td>U</td></tr>
<tr><td>IX.</td><td>Distinguish conservancy and water carriage system of sewage disposal.
OR</td><td>M3.02</td><td>U</td></tr>
<tr><td>X.</td><td>Discuss the requirements of surface drainage.</td><td>M3.03</td><td>U</td></tr>
<tr><td>XI.</td><td>Describe briefly primary treatment, secondary treatment and disinfection in sewage treatment.
OR</td><td>M4.01</td><td>U</td></tr>
<tr><td>XII.</td><td>Illustrate trickling filter.</td><td>M4.03</td><td>U</td></tr>
<tr><td>XIII.</td><td>Describe Skimming tanks in sewage treatment plant.
OR</td><td>M4.02</td><td>U</td></tr>
<tr><td>XIV.</td><td>Draw and explain activated sludge process.</td><td>M4.03</td><td>U</td></tr>
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