

17607

11920

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

20

- (a) Explain the importance of plumbing services.
- (b) Explain the procedure of smoke test.
- (c) Draw a neat labelled sketch of European water closet.
- (d) State the objects of venting and list the types of vents.
- (e) List any four materials used for drainage piping.
- (f) Define backflow and state precautions regarding it.
- (g) List any four valves used in water supply and explain any one.

2. Attempt any FOUR of the following :

16

- (a) Explain the working of AHJ.
- (b) Differentiate between air gap and air break.
- (c) List any four ablution fixtures and explain any one.
- (d) Explain any one prohibited trap with a neat sketch.
- (e) Define sub-drain and strainer.
- (f) Explain cleanout with a neat sketch.

- 3. Attempt any FOUR of the following : 16**
- (a) Explain installation standards for fixing of European water closet.
 - (b) Define trap seal and development length.
 - (c) Explain the methods used for protection of drainage pipes.
 - (d) Explain with a neat sketch discharge of fixtures below invert level.
 - (e) Define potable water and non-potable water.
 - (f) State various sources of water.
- 4. Attempt any TWO of the following : 16**
- (a) Explain with examples significance of co-ordination between various agencies involved in plumbing services.
 - (b) Explain with a neat sketch the working of AAV.
 - (c) Explain with a neat sketch the working of hot and cold water system.
- 5. Attempt any TWO of the following : 16**
- (a) Explain FOG disposal system with a neat sketch.
 - (b) Explain with a neat sketch one pipe and two pipe system of building drainage.
 - (c) Explain with a neat sketch hydraulic jump in plumbing drainage.
- 6. Attempt any TWO of the following : 16**
- (a) State any eight requirements of a good trap.
 - (b) Explain the significance of gray water and reclaimed water in plumbing system.
 - (c) Explain with a neat sketch rain water harvesting in plumbing system.
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