

17607

15116

3 Hours / 100 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) 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) Why the co-ordination with different agencies are necessary with plumbing services?
 - b) Define Gray water and Reclaimed water.
 - c) State the importance of AHI in plumbing.
 - d) Explain with neat sketch catch basin.
 - e) Explain advantages of centralized hot water system.
 - f) State the purpose of proving vent.
 - g) Explain with neat sketch grease interceptor.

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) Explain with neat sketch Hot and Cold water distribution.
 - b) Draw a neat sketch of hanger and state its type.
 - c) What is airbrake? Illustrate with neat sketch.
 - d) Explain MOP sink and clinic sink.
 - e) State the purpose of antiscaled valve and also mention their location in plumbing.
 - f) State importance of smoke test in plumbing.
- 3. Attempt any TWO of the following:** **16**
- a) (i) How many WC, urinals, lavatories and drinking fountains are required for cinema hall as per UPC?
(ii) Describe the working of atmospheric vacuum breaker.
 - b) Explain with neat sketch bottle trap. Why bottle trap are prohibited in plumbing?
 - c) Draw a typical irrigation layout for gray water system.
- 4. Attempt any TWO of the following:** **16**
- a) Explain with neat sketch two pipe system. What are the advantages of two pipe system?
 - b) What is hydraulic Jump? Describe its formation at offset with neat sketch.
 - c) What are the different types of material used in plumbing and give their method of jointing?
- 5. Attempt any TWO of the following:** **16**
- a) (i) Explain with neat sketch P and S traps.
(ii) Explain with neat sketch Bidet.
 - b) Why disinfection of Potable water system is necessary? Explain the procedure of disinfection.
 - c) (i) What are the methods of testing storm drainage system.
(ii) What is aeration? State its purpose.

6. Attempt any FOUR of the following:**16**

- a) Give the meaning of following terms:
 - (i) Clean out
 - (ii) Building sewer
 - b) Explain the term water hammer. How it can be controlled?
 - c) State the flush volumes of following fixtures as per code:
 - (i) Water closet
 - (ii) Urinals
 - (iii) Sink
 - (iv) Bidet
 - d) What are the basic requirements of plumbing fixtures?
 - e) Explain with neat sketch Bed Pen Sink.
 - f) What are the different types of valves used in water supply scheme? Explain one of them.
 - g) Explain fog disposal system and suds relief.
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