

# MAHARASHTRA JEEVAN PRADHIKARAN

Examination Conducted by  
**MAHARASHTRA ENVIRONMENTAL ENGINEERING TRAINING &  
RESEARCH ACADEMY (MEETRA) NASHIK**

Professional Examination of AEE/AE-I/SDE/SDO (Civil)

November 2020

Roll No.

**Subject** : General Engineering (Civil) – (Oral)

**Date** : 03/11/2020

**Time** : 14.00 To 14.30

**Marks** : 75

- Note** : 1) All questions are compulsory.  
2) Use of Calculator, Log table are allowed

Question No.	1	2	3	4	5	Total
Marks obtained						

**Signature of Supervisor**

**Signature of Examiner**

**Question No. 1 : Fill in the blanks**

**(15)**

- The minimum dissolved oxygen for survival of fish in a river stream is ..... ppm.
- 25 MLD is equal to ..... lit / Hour
- The foundation in which a cantilever beam is provided to join footing is known as .....footing.
- Specific weight of water is .....
- BOD of treated water should be .....
- Maximum permissible nitrite in public water supply is .....

- vii) For cities provided with sewerage system, the per capita water supply is ..... LPCD.
- viii) Temporary hardness of water is caused by ..... of calcium & magnesium.
- ix) Value of C for design of M.S. pipe .....
- x) As per IS 456; 1978 modular ratio for M.20 grade concrete is .....

**Question No. 2 : Give long form**

**(15)**

- a) J J M :- \_\_\_\_\_
- b) I E C :- \_\_\_\_\_
- c) D W S M :- \_\_\_\_\_
- d) A M R U T :- \_\_\_\_\_
- e) G I S :- \_\_\_\_\_
- f) M O U :- \_\_\_\_\_
- g) C P H E E O :- \_\_\_\_\_
- h) R S J :- \_\_\_\_\_
- i) P F :- \_\_\_\_\_
- j) I S M B :- \_\_\_\_\_

k) M C F T     :- \_\_\_\_\_

l) M S L        :- \_\_\_\_\_

**Question No.3 :**

**(5)**

(A) State Basic Rate with units.

- i) Cement
- ii) Brick
- iii) Sand
- iv) Aggregate
- v) Alum

(B) Give the weight per meter length.

**(5)**

- a) 6 M M dia M S bar
- b) 8 M M dia M S bar
- c) 10 M M dia M S bar
- d) 12 M M dia M S bar
- e) 16 M M dia M S bar

(C) i) Various type of cement used in concrete for water retaining structure. **(2.5)**

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ii) Various type of appertenses used to arrest water hammer pressure. **(2.5)**

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**Question No.4 : (A)State True or False**

**(10)**

- a) For design purpose safe bearing capacity of B.C. soil is taken as 20 MT/M<sup>2</sup>. \_\_\_\_\_
- b) P H value of B.C. soil is 8.5 \_\_\_\_\_
- c) The defect liability period of WTP & S.T.P. on contractors own design is 3 years. \_\_\_\_\_
- d) Cavity wall are constructed for heat & Sound insulation. \_\_\_\_\_
- e) In lap joints, the member to be connected are made to overlap each other & are then connected by means of rivets. \_\_\_\_\_
- f) The residue of ordinary port land cement when sieved through IS sieve no. 9 should not exceed 10 %. \_\_\_\_\_
- g) As per MJP practice usually 85% payment is released after supply of pipe. \_\_\_\_\_
- h) While designing pumping machinery 10% increase in H.P. is considered for temperature & altitude variation. \_\_\_\_\_
- i) As per condition of contract, in cl. 36 all quarry fees, royalties if any should be paid by MJP. \_\_\_\_\_
- j) The rise of center of pavement above its edge along the straight portion of the road is called camber. \_\_\_\_\_

**(B)State the cover required for RCC member.**

**(5)**

- i) Slab :- \_\_\_\_\_
- ii) Beam :- \_\_\_\_\_
- iii) Column :- \_\_\_\_\_
- iv) Footing :- \_\_\_\_\_
- v) Thrust block :- \_\_\_\_\_

**Question No.5 :**

A) Give main constituents of cement. (3)

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B) Write any four methods of population forecasting. (3)

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C) Give any two methods (name) of increasing Bearing Capacity of soil. (3)

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D) What is meant by Cusec? Write conversion of Cusec to Cum/sec. (3)

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E) Write any four types of cement. (3)

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