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 _____

(15)

Question No. 1 : Fill in the blanks

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

vii)For cities provided with sewerage system, the per capita water supply is LPCD.

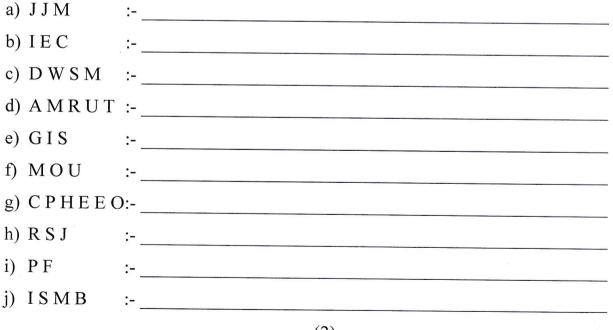
viii) Temporary hardness of water is caused byof calcium & magnesium.

(15)

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



(2)

- k) MCFT
- 1) M S L

Question No.3 :

(A) State Basic Rate with units.

i) Cement

ii) Brick

iii) Sand

iv) Aggregate

v) Alum

(B) Give the weight per meter length.

- 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)

(5)

(5)

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

- a) For design purpose safe bearing capacity of B.C. soil is taken as 20 MT/M^2 .
- 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 considerd 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 pavemet 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)
B) Write any four methods of population forecasting.	(3)
C) Give any two methods (name) of increasing Bearing Capacity of soil.	(3)
D) What is meant by Cusec? Write conversion of Cusec to to Cum/sec.	(3)
E) Write any four types of cement.	(3)

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