

Technical Part

1. (a) A fluid having density 900kg/m^3 , kinematic viscosity $0.0002\text{ m}^2/\text{s}$, flows at x through a pipe. Pipe length 500m , diameter 200mm . i) head loss, ii) pressure drop if 1 in 10 , friction factor 0.0025 .

(b) Sewer pipe, determine velocity and discharge if depth of flow is 100mm .

2. SFD and BMD

3. Fill in the blanks with appropriate word:

i) Height of cone of slump ___ cm.

ii) Minimum setting time of cement ___ minutes.

iii) Plastic limit 30 and pasticity index 50 , so liquid limit is ___.

iv) Length of standard brick ___ inch.

v) Meander ratio

vi) Weight of hammer of SPT

vii) FM of Sylhet Sand

viii) Allowable limit of As according to ECR'97 ___ ppb.

ix) In sewage treatment BOD is ___ than COD value.

x) The yield strength of 40 grade steel is ___ psi.

xi) Noise pollution value unit ____.

4. (a) BOD, COD definition

(b) BOD₅ is 120 mg/L at 20°C and k is 0.22 /day , what is ultimate BOD?

5. (a) Closed traverse, included angle=? $BA = S80^\circ55'51"$, $CB = N30^\circ48'36"$, $CA = N40^\circ46'52"$.

(b) What is requirement of Cement bags for 100cft concrete if ratio is $1:2:4$?

ERL Exam-2022 📌

Exam Date: 02 December

Exam Time: 09:00AM -- 10:00AM (1 hour)

Non-Technical 20 MCQ = 20 Marks

Technical 5 Questions = 11*5 = 55 Marks

Total = 75 Marks

Non-Technical Part

1. "আমীর হামজা" কাব্য কার রচনা?
2. কোনটি শব্দটি শুদ্ধ? শুশ্রূষা
3. "ভালো" শব্দটি বিশেষ্য হিসেবে কোন বাক্যে ব্যবহৃত হয়েছে?
4. "পর্যালোচনা" শব্দের সন্ধি বিচ্ছেদ কোনটি?
5. গুরুচণ্ডালী দোষ কি?
6. Musa Ebrahim Hautha relates which organisation? OIC
7. The Largest airport in which country in terms of land?
8. Present conditions of CNG looking glass ply in Dhaka?
9. Number of Bir Uttam in BAF?
10. Fastest goal in football WC history?
11. She is beautiful, but not ---- her mother.
12. Aborigines spelling?
13. "Help help", he shouted, indirect speech?
14. Antonym of "Urbane"
15. Love er adjective form?
16. $\sqrt{5}$ percent of $5\sqrt{5}$ =?
17. 14 workers work 44 hours a week. If 4 are ill, rest workers in how hours do the work a week?
18. $\log_4(x) = 12$, $\log_2(x/4) = ?$
19. A man go at speed 20 and back at speed 30, what is average speed?
20. $(a+b)^2 = 5$, $(a-b)^2 = 3$, Find ab ?