MAHARASHTRA JEEVAN PRADHIKARAN

Examination Conducted by

MAHARASHTRA ENVIRONMENTAL ENGINEERING TRAINING & RESEARCH ACADEMY (MEETRA) NASHIK

Professional Examinatiion of A.E.–I /SDE/SDO

(Civil)October 2017

Subject : Practical Drawing (Civil)

Date : 13/10/2017 **Time** : 8.00 To 13.00 **Marks**: -50

Note : 1) All Questions are compulsory.

2) Draw neat and clean drawing.

3) Figure in bracket on right hand side indicates full marks.

4) Marks are reserved for cleanliness.

Question No. 1 : (20)

Prepare a detailed foundation plan of RCC Elevated Service. Reservoir of 2,00,000 lakh litres capacity. The plan is enclosed . The foundatioin plan shall be set up on the ground.

Question No. 2 : (10)

Carry out the survey from given TBM & workout reduced levels for given points A, B, C,D, E. by Rise & fall method or height of collimation method. Rute out the page of field book and mention all details. Apply field check by fly leveling survey & give usual checks.

Question No. 3 : (10)

Set up the Theodolite at point ' o' given to you and measure vertical angle AOB between A & B . Also measure vertical angle between plane of collimation & point A.

Question No. 4 : (10)

Draw HGL between 1 & 2 and 2 & 3.(Residual Head in each section shall be 2.00 M.

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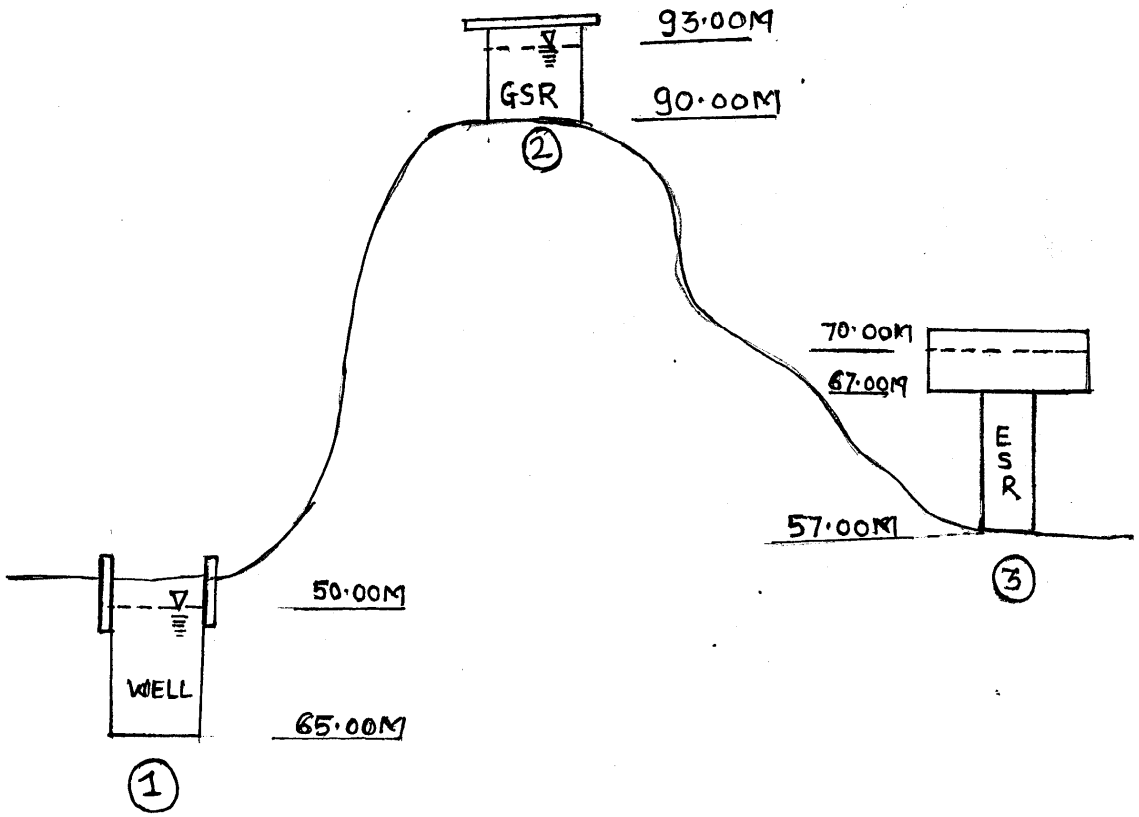
Q.NO:-4 FIG.



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Professional Examinatiion of AEE/A.E. –I /SDE/SDO

(Civil)October 2017

Subject : General Engineering (Civil) – (Oral)

Roll No. [ ]

Date : 10/10/2017 **Time** : 14.00 To 14.30 **Marks**: -75

Note : 1) All Questions are compulsory.
2) Use of Calculator, Log table is allowed.
3) Figure in bracket on right hand side indicates full marks.
4) Use of mobile, Laptop and tab are not allowed.

Question No.	1	2	3	4	5	Total
Marks Obtained						

Signature of Supervisor Signature of Examiner

Question No. 1 :- Define the following terms. (Any five) (15)

i)) Igneous rocks. :-

ii) Seasoning of timber:-

iii) Bitumen

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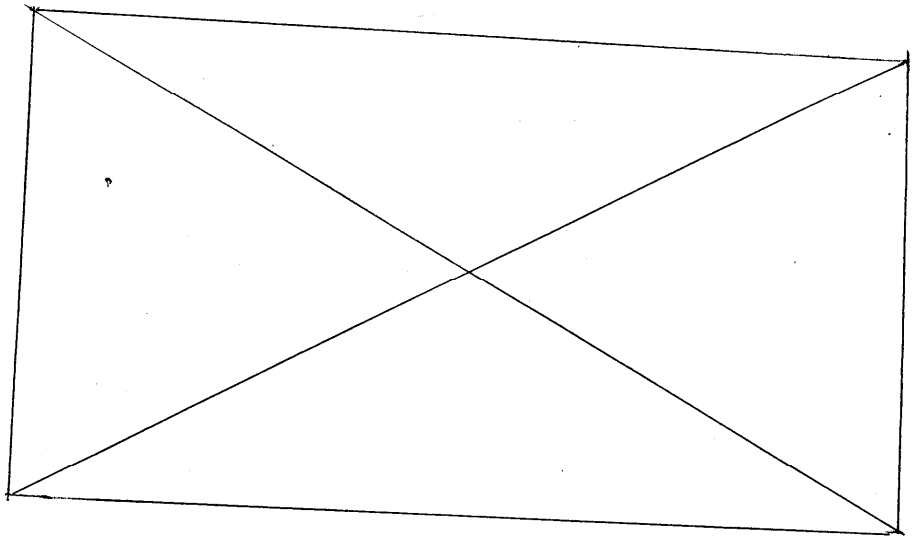

iv) Setting of Cement.

v) Hardening of Cement

vi) Earliest starting time and latest finishing time.

vii) Critical path in construction management

viii) Dummy activity

Question No. 2 :-

a) What is the SBC of the following (7.5)

i) B.C. Soil ----------

ii) Hard murum ----------

iii) Soft rock ----------

iv) Hard rock ----------

v) Sand ----------

b) Write down material required for following items. (7.5)

i) No.of bricks required for 1 cum. B.B. masonary ----------

ii) Stones of 1 cum UCR masonary ----------

iii) Sand for 1 cum of C.C. M-150 ----------

iv) Graded aggregate for 1 cum. of C.C. M-150 ----------

v) Water for 1 cum. of C.C. M-150 ----------

Question No. 3 :- Fill in the blanks (15)

a) The final setting time of Quick setting cement is ----------

b) ---------- test covers the procedure for determining the quantity of water required to produce a cement paste of standard or normal consistency. This test is conducted with the help of ---------- apparatus.

c) If cement and steel are to be arranged by the contractor, then ---------- % of actual cost should be added as profit of contractor in the rate anylysis In general.

d) For 100 cum of finished concrete the sum of total volume of dry ingredient materials may be taken as ---------- cum. in practice

e) Number of standard bricks of nominal size may be taken as ---------- Nos per cum. of brickwork.

f) ---------- is the value of dismantled materials of the structures when the life is over at the end of its utility period.

g) ---------- is the value of structure or machine at the end of the utility period without being dismantled.

h) The value of a property or structure becomes less by its becoming out of data in style, in structure, in design, etc. and this is termed as ----------

i) Specific weight of water =---------- N/Cum

j) At sea level under normal conditions the equivalent value of atmospheric pressure is ---------- m. of water

Question No. 4 :- Give long form of the following (Any 10) (15)

a) CDMA :----------

b) WSSO :----------

c) DWSM :----------

d) IEC :----------

e) GSM :----------

f) MLSS :----------

g) CPHEEO :----------

h) P.F. :----------

i) BOD :----------

j) D.W.F. :----------

k) UASB R :----------

l) SCADA :- ----------

Question No. 5:- Answer in short (Any three) (15)

1) Explain Graphical method based on single city and Graphical method based on cities with similar Growth Pattern for population projection.