

KATHMANDU UNIVERSITY
End Semester Examination
August/September, 2017

Mark Scored:

Level : B. E.

Year : II

Exam Roll No. :

Time: 30 min

Course : CEEG 201

Semester : II

F. M. : 10

Registration No.:

Date : SEP 04 2017

SECTION "A"
[20 Q. × 0.5 = 10]

Tick (✓) the most appropriate answer

1. The value of dismantled materials after ends of utility period is
a. Salvage value b. Market value c. Book value d. Scrap value
2. The expenses of items which do not come under regular head of items and the cost of unforeseen items are called
a. Lump sum b. Estimate c. Overhead d. Contingencies
3. A hydrograph is a plot of
a. Stream discharge against time b. Rainfall intensity against time
c. Cumulative runoff against time d. Cumulative rainfall against time
4. The position or the layout of the center line of the highway on the ground is called
a. Gradient b. Alignment c. Obligatory points d. Pointing
5. The braking distance L is given by
a. $L = v/2g$ b. $L = v/2gf$ c. $L = v^2/2gf$ d. $L = v/2f$
6. When there are multiple spans in Beam Bridge, the intermediate supports are known as
a. Piers b. Strut c. Anchors d. Abutment
7. Arrange drill and blast excavation cycle in order of occurrence
a. Mucking b. Charging c. Dumping d. blasting
e. Drilling
a. a,b,c,d,e b. e,b,d,a,c c. c,d,a,b,e d. b,c,d,e,a
8. Rock Quality tunneling index Q is given by
a. $Q = (RQD/J_n) * (J_a/J_r) * (J_w/SRF)$ b. $Q = (RQD/J_n) * (J_a/J_r) * (SRF/J_w)$
c. $(RQD/J_n) * (J_r/J_a) * (J_w/SRF)$ d. $Q = (RQD/J_a) * (J_n/J_r) * (J_w/SRF)$
9. The most reliable estimate is
a. Detailed estimate b. Preliminary estimate
c. Plinth area estimate d. Cube rate estimate
10. Weight of roof, partition wall and finishing material are taken as
a. Concentrated load b. Line load c. Live load d. Dead load
11. The structure is externally statically determinate if number of equations
a. Equal to number of unknowns b. twice the number of unknowns
b. not equal to number of unknowns d. three times the number of unknowns

12. Thiessen polygons are drawn by
- Joining rain gauge stations
 - drawing perpendiculars of lines joining rain gauge stations
 - drawing lines of equal elevations
 - drawing lines of equal precipitation depth for a given duration
13. The total infiltrated water divided by the effective time period of rainfall gives the value of
- basic intake rate
 - infiltration rate
 - Φ_{index}
 - initial abstraction
14. The information which cannot be included in drawings is conveyed to estimator through
- specification
 - cover note
 - progress chart
 - Gantt chart
15. Width of two lane pavement is
- 3.75m
 - 5.5m
 - 7.0m
 - 7.5m
16. Members of truss are subjected only to _____
- Shear force
 - Axial force
 - Bending moment
 - Friction
17. In analysis of truss, if $m+r > 2j$, the truss is
- Statically determinate
 - unstable
 - Inderminate
 - Mechanism
18. The earthen embankment constructed parallel to the banks of the river is called _____
- Dikes
 - Spurs
 - artificial cutoff
 - Dam
19. _____ are structures constructed transverse to the river flow extending from the banks into the river to train the river
- Embankments
 - Spurs
 - Guide bunds
 - artificial cutoff
20. The temporary structure that is used to divert water from an area where a permanent structure has to be constructed is called _____
- Weirs
 - Barrages
 - Guide bund
 - Coffer dam

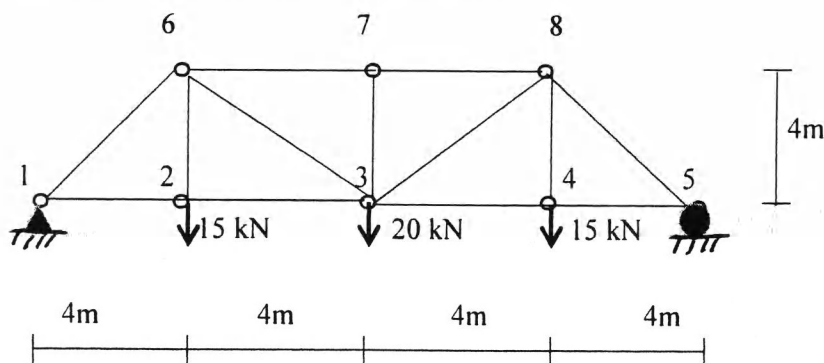
Level : B. E.
Year : II
Time : 2 hrs. 30 mins.

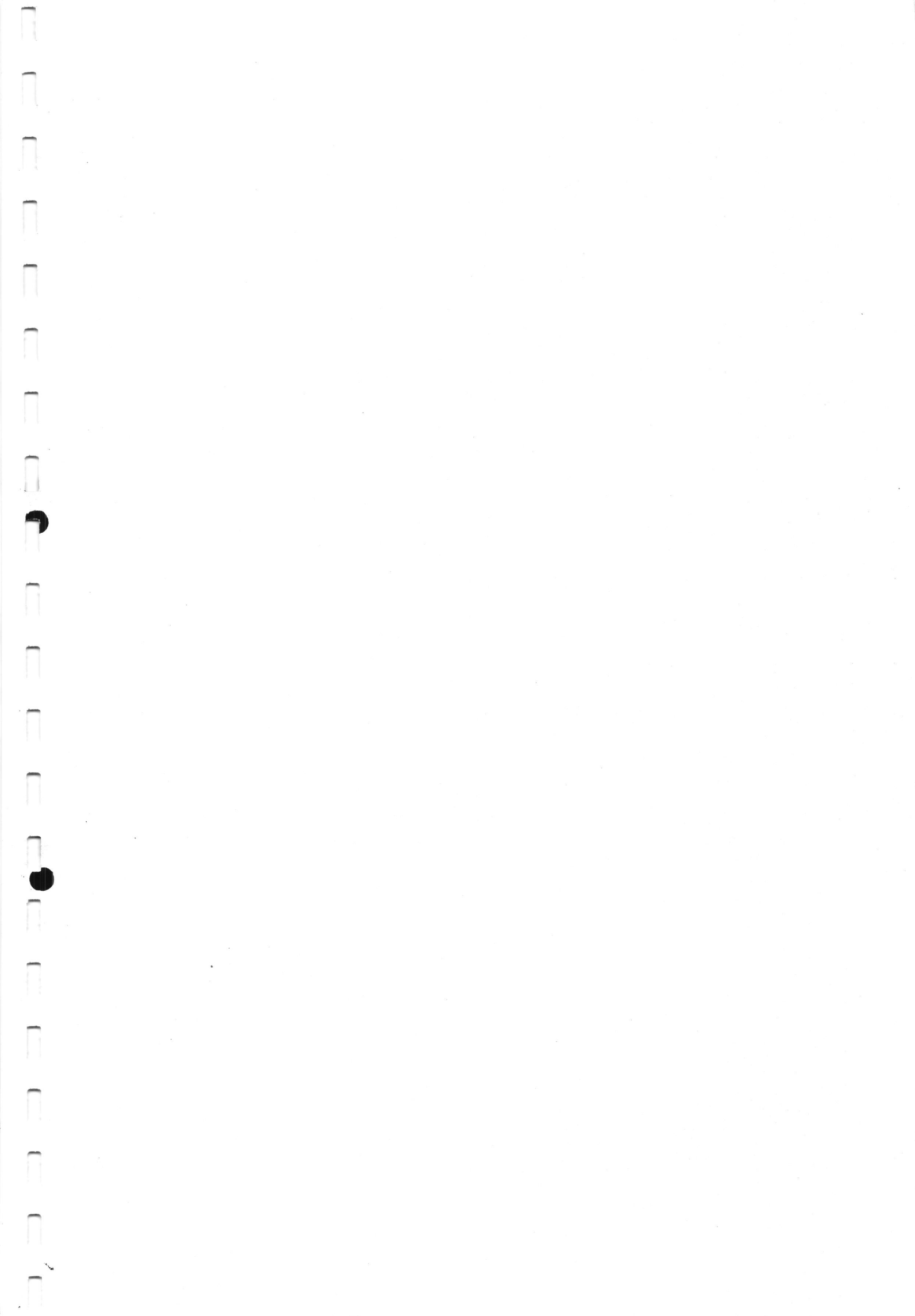
Course : CEEG 201
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F. M. : 40

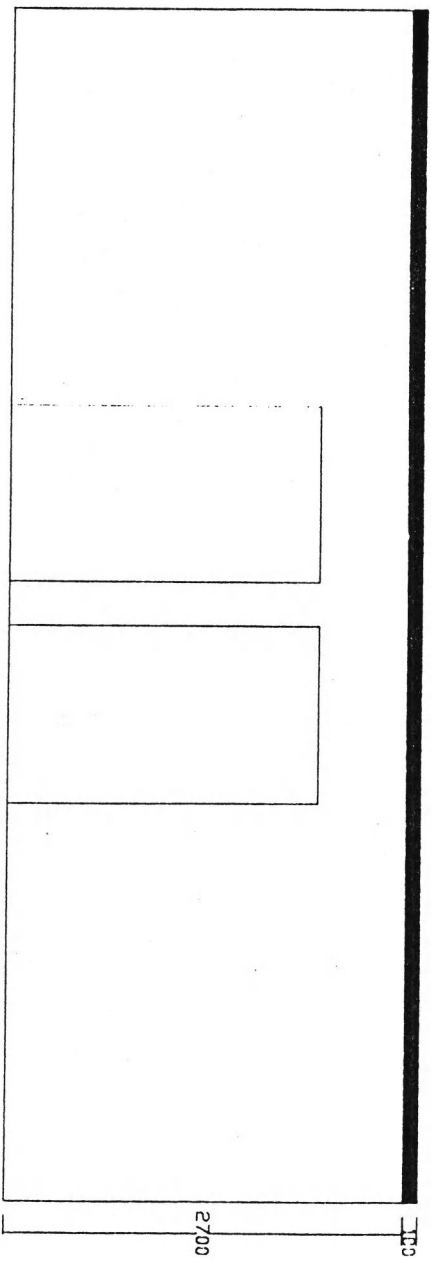
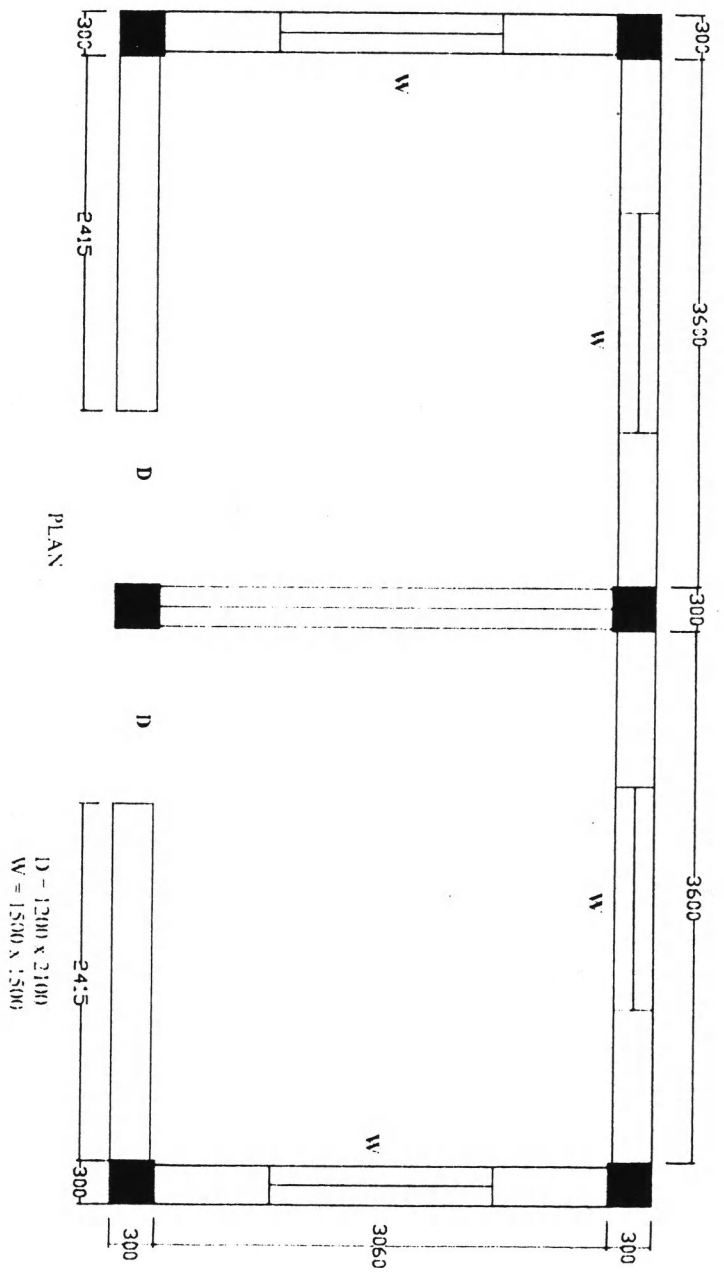
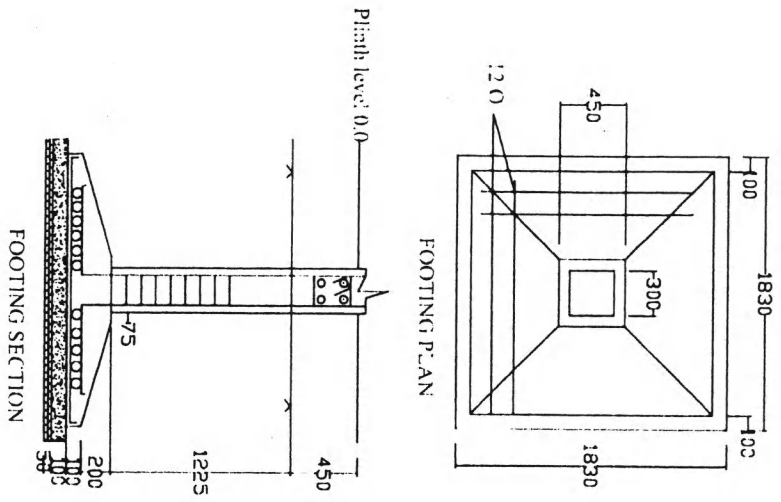
SECTION "B"

Make suitable assumptions wherever needed. The figures in the parenthesis indicate the marks allocated for the question. Attempt all Questions

1. Write short notes on (*ANY THREE*) [3 × 3 = 9]
 - a. Dam and its types
 - b. Tender and tendering process
 - c. Hydrologic model and its classification
 - d. Flow duration curve
 - e. Drip irrigation and its advantages
 2. The speed of overtaking and overtaken vehicles are 70 and 40 kmph, respectively on a two way traffic road. If the acceleration of overtaking vehicle is 0.99m/s^2 [5]
 - a. Calculate safe overtaking sight distance
 - b. Mention the minimum length of overtaking zone and
 - c. Draw a neat sketch of the overtaking zone and show positions of sign post
 3. Estimate the quantities of following items from the drawings provided (Fig.1) [6]
 - a. Earthwork in footings
 - b. Brick soling in footings
 - c. PCC (1:2:4) in footings
 - d. RCC (1:1.5:3) in footings up to plinth level
 4. What is a tunnel? Describe any one method of tunneling. [3]
 5. What is river training? Describe the various methods of river training with neat sketches. [4]
 6. What are the functions of settling basin? Show the components of settling basin with neat sketches. [3]
 7. Show with neat sketches detail layout of barrage. [4]
- OR
- Show with neat sketches the head works of Run-of-River project.
8. Analyze the truss shown in Figure below. [6]







All Dimension are in mm

Fig. 1

