



Silver Oak College of Engineering & Technology

Department of Examinations

Exam Completed - Question Papers

Mid Semester Exam (Winter-2014 Session)

Branch: Civil Engineering

Semester: VII

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H.O.D (Civil)

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GTU COORDINATOR

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**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY
B.E. Semester- (VII) - MID SEMESTER EXAMINATION (Winter'14 Session)
SUBJECT: Urban Transportation Systems (170604)**

Date: 14-10-2014 **TIME: 2:00 to 3:15 P.M** **Total Marks: 30**

- Instructions:** **1. Attempt all questions.**
 2. Make suitable assumptions wherever necessary.
 3. Figures to the right indicate full marks.

- (a) Explain the terms
 (i) Trip generation, (ii) Trip distribution, (iii) Travel time
- (b) Explain the terms with neat sketches
- | | | |
|--|--|----------------------|
| I. Cordon Line | III. CBD | V. Desire Line |
| II. Intra zonal trips and Interzonal trips | IV. Define the terms i) Mobility ii) Accessibility | VI. Centroid of Zone |
| | | VII. Screen Line |
- (a) What are the roles of transportation in society? Describe in detail.
 (b) Difference between stated preference surveys and revealed preference surveys.

OR

- (a) What are the various types of transportation surveys to be carried out for planning process? Explain Home interview survey.
 (b) Discuss in detail factor affecting travel demand.
- (a) Distribute the trips using furness method of trip distribution for following data. carryout out two iterations.

D \ O	1	2	3	4	Total present produced Trips	Total futur trips
1	-	55	45	60	160	375
2	20	-	50	25	95	280
3	70	35	-	50	155	300
4	45	35	55	-	135	225
Total present attracted Trips	135	125	150	135		
Total future attracted trip	210	350	475	250		

- (b) Write a short note on category analysis

OR

- (a) The following data is collected for a town.

Zone	1	2	3	4	5	6	7
Population in Zone (in thousand)	25	19	29	24	17	18	22
Total trip generated (in hundreds)	15	12	18	13	12	14	15

Develop a linear regression model for trips generated from a zone. If the population in a particular zone increases to 86500, Predict the expected trip generation from that zone.

- (b) Distribute the trips using Detroit and average growth factor method using data given in (a). Carry out one iteration.

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**B.E. Semester- (VII) - MID SEMESTER EXAMINATION (Winter'14 Session)****SUBJECT: IRRIGATION ENGINEERING (170602)****Date: 10-10-2014****TIME: 02:00 P.M. to 03:15 P.M.****Total Marks: 30****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a) Define Irrigation. States its advantages & ill effects? 5
- (b) Explain functions of cross regulator and distributor head regulator. 5
- Q.2 (a) Write a short note on Bligh's Creep theory and its limitations. 5
- (b) Differentiate between Weir and Barrage 5
- OR*
- Q.2 (a) Explain Duty & Delta. Also obtain the relation between them? 5
- (b) Calculate the frequency of irrigation for a crop, to ensure the optimum growth, for the following data: 5
 Field Capacity = 33%, Permanent wilting point = 13%
 Relative density of soil = 1.2, Root zone depth of crop = 95 cm
 Daily consumptive use of water = 10 mm. Assume the optimum soil moisture as 80% of the available moisture.
- Q.3 (a) What do you mean by Water logging of soil? How would you prevent it? 5
- (b) Write a short note on: 'Sprinkler Irrigation'? 5
- OR*
- Q.3 (a) Differentiate between the Aqueduct and siphon Aqueduct. 5
- (b) A water course has a culturable command area of 1500 ha. The intensity of irrigation for crop A is 40% and for B is 35%, both the crops being rabi crops. Crop A has a kor period of 20 days and crop B has a kor period of 15 days. Calculate the discharge of the water course if the kor depth for crop A is 10 cm and for B it is 16 cm. 5

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Roll no _____

Enrollment No _____

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY
B.E. 7TH SEMESTER MID-SEMSTER EXAMINATION 2014
SUBJECT: CONTRIBUTOR PERSONLALITY DEVELOPMENT (1990001)

Date: 15/10/2014

Total Marks: 30

Time: 2:00 to 3:15

Instructions: There are 30 questions in this paper. All questions are compulsory. Each question carries 1 mark. Select ONLY ONE option that is the most appropriate and write it on the sheet given to you.

1. Sumit and Shyam work in restaurant. Sumit clears the table and Shyam is a waiter. One day, Sumit has to suddenly rush home as his father is unwell. As a contributor, which choice should Shyam make?
 - a) He tells his seniors that some other temporary worker is needed for clearing the dishes.
 - b) He decided to clear his table himself and tells the other waiters to do the same.
 - c) He call his co-worker to find the best way to deal with the situation together so that customers are not inconvenienced.
 - d) He continues to do his own work.

2. Raman has been promoted to the post of quality supervisor in the factory where he works. As a contributor, how does he view his role?
 - a) My role is to protect my company's reputation.
 - b) My role is to conduct quality checks
 - c) My role is to ensure that our customers are happy with the quality of our products
 - d) My role is to ensure our product fall within the quality requirements.

3. Kanu is doing his MBA and desperately wants to take up a career in investment Banking. What questions should he ask himself before taking a final decision?
 - a) Am I interested in this job because the pay is good and the money will help me fulfill my dreams?
 - b) Am I interested because this is the type of job where through my work others can benefit?
 - c) Am I interested because I am good at numbers and also interact with people well?

4. Ajay's company manufactures a popular brand of soaps. They have found that many people are selling counterfeit soaps using their brand name. Although Ajay prefers to ignore this and concentrate on his business, he decides to do something about it

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**B.E. Semester- (VII) - MID SEMESTER EXAMINATION (Winter'14 Session)****SUBJECT: Construction Management and Equipment's (170601)****Date: 09-10-2014****TIME: 2:00 to 3:15 p.m.****Total Marks: 30****Instructions: 1. Attempt all questions.****2. Make suitable assumptions wherever necessary.****3. Figures to the right indicate full marks.**Q.1 (a) The data for a project is given below 07

Activity	Activity Arrow	Duration t_{ij}	Activities immediately	
			Preceding	Following
A	1-2	8	None	D,E
B	1-3	6	None	F
C	1-4	10	None	G,H
D	2-5	8	A	I,J
E	2-7	15	A	L
F	3-5	10	B	I,J
G	4-5	8	C	I,J
H	4-6	10	C	K
I	5-6	10	D,F,G	K
J	5-7	10	D,F,G	L
K	6-7	8	H,I	L
L	7-8	7	E,J,K	None

Prepare the network diagram and calculate EST, LST, EFT, and LFT for all activities. Also find the critical path.

(b) In the network of Q-1 [A] find the total float, independent float and free float for each activity. 03

Q.2 (a) Name the various methods of management techniques and their classification. Explain 'Gantt charts or bar charts' in detail. 05

(b) Write short notes on (i) Crawler tractor (ii) Wheel tractor. 05

OR

Q.2 (a) Explain the following terms: (i) Direct cost, (ii) Indirect cost, (iii) Crash cost, (iv) Cost slope, (v) Critical Path. 05

(b) What is belt conveyor? Write advantages of belt conveyor. 05

Q.3 (a) Explain "time value of money". What is meant by term depreciation? 05

(b) A bank gives a lone to a company to purchase an equipment worth Rs. 12,00,000 at an interest rate of 15% compounded annually. This amount should be repaid in 15 yearly-equal installments. Find the installment amount that the company has to pay to the bank. 05

OR

Q.3 (a) Discuss importance of construction equipment. 05

(b) Draw a figure of equipment: 05
1) Power shovel , 2) Scraper

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SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY
B.E. Semester- (VII) - MID SEMESTER EXAMINATION (Winter'14 Session)

SUBJECT: STRUCTURAL DESIGN - I (170603)

Date:11-10-2014

TIME: 02:00 P.M. to 03:30 P.M.

Total

Marks: 30

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- Instructions:**
1. Attempt all questions.
 2. Make suitable assumptions wherever necessary.
 3. Figures to the right indicate full marks.
 4. Use of IS:456-2000, IS:800-2007, SP:6 & Steel Table., is permitted.

- Q.1 (a) Detailed design steps for doubly reinforced beam **(5-Marks)** **10**
(b) Advantages and Disadvantages of steel structures **(5-Marks)**
- Q.2 (a) Design steps for isolated square column. **(3-Marks)** **10**
(b) Design an isolated square footing for a square column 500mm x 500mm for axial load of 1400 kN. Take S.B.C of soil as 200 kN/m². Check for one way shear only. Take M20 and Fe-415. **(7-Marks)**
- OR*
- Q.2 (a) Design steps for isolated circular column. **(3-Marks)** **10**
(b) Design an isolated sloped footing for a column 400mm x 400mm for axial load of 1300 kN. Take S.B.C of soil as 200 kN/m². Check for B.M at critical section only. Take M20 and Fe-415 **(7-Marks)**
- Q.3 (a) Advantages of welded connection over riveted connection **(2-Marks)** **10**
(b) Two plates of 6mm thickness are connected by a single bolted lap joint with 20 mm diameter bolts at 60 mm pitch. Calculate the efficiency of the joint. Take f_u of plate as 410 Mpa and assume 4.6 grade bolts. **(8-Marks)**
- OR*
- Q.3 (a) Draw a neat sketch of web cleat angle connection. **(2-Marks)** **10**
(b) A single unequal angle 125 x 75 x 8 mm is connected to a 10mm thick gusset plate at the ends with 6nos. 16mm diameter bolts to transfer tension. Determine the design tensile strength of the angle assuming that the yield and ultimate stress of steel used are 250 Mpa and 410 Mpa. Assume that the longer leg is connected to the gusset plate. Also calculate the efficiency of the member. **(8-Marks)**
