

SPPU In-Sem Offline Examination-April 2022

Class: B.E Branch : Civil Engg. Semester: II

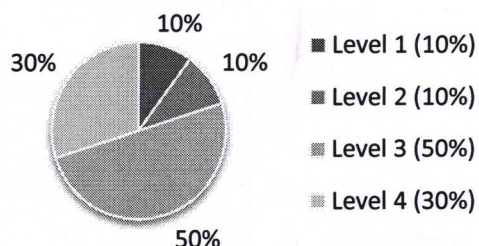
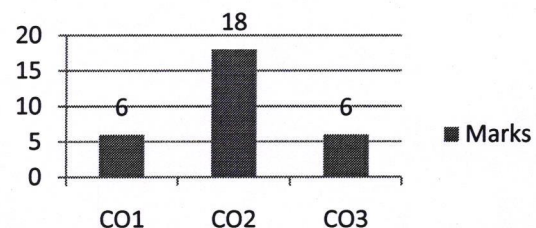
Subject: Dams and Hydraulic Structures (Code: 401 007)

Maximum Marks: 30

Duration: 60 Minutes: 3.30pm - 4.30pm Date: April 4, 2022

Solve all questions

Que. No.	Question	Marks	C O	B L	P O
1 a	Why large dams are opposed on the issue of Displacement and Rehabilitation?	3	1	2	7
1b	Differentiate between... i) Longitudinal and Transverse joints in gravity dam ii) Hydraulic structure and RCC structure iii) Gorge and Abutment	3	2	4	1, 2,3
1c	Write any 6 points for governing selection of site for dam	3	1	1	1
2a	What is significance of drainage gallery on stability of dam? Explain with pressure distribution diagram and equations for dam full with tail water case.	3	2	3	3
2b	A gravity dam has summation of all moments as 10,000 kN-m and summation of all vertical forces as 5,000 kN. If the base width of dam is 20 m, what will be eccentricity of resultant force?	3	2	3	2,3
2c	Hydrodynamic pressure on a gravity dam is 1000kg/ m ² . Calculate Hydrodynamic force and moment due to it on dam at 30 m height using Zanger's equation .	3	2	3	2,3
3a	A gravity dam has summation of all moments as 21,000 kN-m and summation of all vertical forces as 7,000 kN. If the base width of dam is 15 m, what will be eccentricity of resultant force?	3	2	3	2,3
3b	Differentiate between i) Constant angle arch dam and Constant radius arch dam OR ii) Variable radius arch dam and Double curvature arch dam	3	2	4	1,2
3c	Write the equations for i) Discharge over an Ogee spillway ii) Height of spillway iii) Downstream profile of spillway	3	3	3	1,2
3d	Why the Tainter (Radial) gates are preferred for spillway?	3	3	4	1,2

Blooms Levelwise marks Distribution**Course Outcomewise Marks Distribution**

SPPU In-Sem Offline Examination-April 2022

Class: B.E. Branch: Civil Engineering Semester_ VIII

Subject: Air Pollution and Control (Code: 401009)

Maximum Marks: 30

Duration: 60 Minutes

Date :07/04/2022

Special Instructions: i) Use Suitable data if necessary ii) Solve Q.1 OR Q.2, Q.3 OR Q.4 and Q.5 OR Q.6

Q. No.	Question	Marks	CO	BL	PI
1.a	State limitations of Gaussian Model?	4	1	1	
b	Determine effective height of stack with following data. - Physical stack = 203 m tall and diameter 1.07 m - Wind velocity = 3.56 m/sec - Air temperature 15°C - Barometric pressure = 1000 millibars - Stack gas temperature = 149°C	6	1	3	
OR					
2.a	State the different scales of Meteorology? Explain any three.	4	1	1	
b	A thermal Power plant burns 100 tons of coal with 6.0 % of sulphur content. Calculate minimum stack height required. The particulate concentration in plume is 9000mg/m ³ and flow rate is 25 m ³ /s .	6	1	4	
OR					
3.a	Explain the purpose of ambient air sampling and stack gas monitoring	5	2	2	
b	What is isokinetic sampling? Explain with a neat sketch. Why it is required?	5	2	2	
OR					
4.a	Explain High Volume Sampler with neat label sketch.	5	2	2	
b	Describe any one method of collecting gaseous samples from stack.	5	2	2	
OR					
5.a	Define and explain odor pollution, what are the different sources of odor pollution. Also explain various effects caused by IAP.	5	3	1	
b	Explain chemical and physical changes in indoor air quality.	5	3	2	
OR					
6.a	Discuss in details about control of indoor air pollution	5	3	2	
b	Explain Natural and artificial ventilation of building.	5	3	2	

SPPU In-Sem Offline Examination-April 2022

Class: BE

Branch: Civil Engineering

Semester: II

Subject : Construction Management (Code:401010)

Maximum Marks: 30

Duration: 60 Minutes

Date : 08/04/2022

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary

Q. No.	Question / Description	Marks	CO	BL	PI
1	Discuss in detail various components of Infrastructure sector	5	1	2	12.1.1
2	Describe various reasons for project cost overrun and suggest few remedies to overcome.	5	1	2	1.3.1
3	Explain the role of Infrastructure development in Economic Development	5	1	2	11.1.1
4	Summarise the role of Project Management consultants in on any Infrastructure Project.	5	1	2	1.4.1
5	Discuss in detail various factors affecting project scheduling	5	2	2	11.3.2
6	Write note on - Flow Process chart used in work study	5	2	1	2.1.3
7	Draw Work breakdown structure of any Infrastructure project	5	2	2	2.2.2
8	Differentiate between Method Study and Time Study	5	2	2	2.1.3
9	Discuss the various aspects of Workmen's Compensation act 1923	5	3	2	3.1.5
10	Write short note on: Balance sheet	5	3	1	11.1.2
11	Explain in detail Building & other Construction Worker's act 1996	5	3	2	3.1.5
12	List the various Long term means of Finance and Explain any one of them.	5	3	1,2	11.1.2

SPPU In- Sem Examination - April 2022

Class: **B.E.**

Branch: **CIVIL**

Semester: **VIII**

Subject : **Quantity Surveying Contracts & Tenders (Code: 401008)**

Maximum Marks: **30**

Duration: **60 Minutes**

Date: **5/04/2022**

Instructions: 1) Answer **Q. No. 1 or 2, Q. No. 3 or 4 & Q. No. 5 or 6**

2) Figures to the right indicate full marks

3) Electronic pocket calculator allowed

4) Assume suitable data if necessary.

Q. No.	Question/ Description	Marks	CO	BL	PI
Q1 a)	State different types of estimates. Explain any two of them	6	1,4	1,	
b)	Explain i) Contingencies ii) work charged establishments	4	1	1	
	OR				
Q2 a)	Explain in detail deductions for following as per IS-1200	4	1	1,2	
	i) Brick masonry in superstructure ii) Plastering to wall surface				
b)	Prepare an approximate estimate of a G+1 R.C.C. building.	6	4	2,	
	i) Floor Area = 350 sq.m. ii) Built up area = 1.2 x Floor area				
	iii) Plinth Area Rate = Rs. 1950 / sq.m.				
	iv) Work charged establishments & Contingencies = 8%				
	v) Cost of water supply, Drainage & Electrification = 16%				
Q3	Figure 1 shows plan of residential building. Determine quantities		4	2,3	
	a) Excavation in foundation	2			
	b) P.C.C. M15(1:2:4) in foundation	2			
	c) UCR Masonry in CM (1:6) in foundation & plinth.	2			
	d) Brickwork in superstructure with deductions as per IS-1200.	4			
	OR				
Q4	Figure 1 shows plan of residential building. Determine quantities		4	2,3	
	a) R.C.C. in Lintels over openings	3			
	b) R.C.C in slab	3			
	c) Reinforcement in lintels in kg (Assume 0.8% steel)	2			
	d) Reinforcement in slab in kg (Assume 1 % steel)	2			
Q5 a)	Explain factors affecting the rate of an item	2	5	1,2	
b)	Assuming suitable data, determine quantities of material for 15 Cu.m of M20 grade of concrete for RCC slab.	2	5	2,	
c)	Draft detailed specification for brickwork	6	5	1,2	
	OR				
Q6 a)	Workout rate analysis for R. C. C. of M20 (1:1.5:3) for slab	6	5	2,3	
	Excluding Reinforcement. Consider following data.				
	Material Rate				
	Cement: Rs.320 / bag				
	Sand: Rs. 2500 / cu.m				
	Aggregate: Rs.1500 / cu.m.				
	Labour Rate				
	Head Mason: Rs 1000/ day				
	Mason: Rs.800/day				
	Mazdoor: Rs. 500/day				
	Bhisti: Rs. 450/day				
b)	State the types of specifications and explain any one	4	5	1,2	

SPPU In-Sem Examination - April 2022

Subject : Quantity Surveying Contracts & Tenders (Code: 401008)

SPPU INSEM EXAM. APRIL-2022
Sub: Quantity Surveying contracts and Tenders.

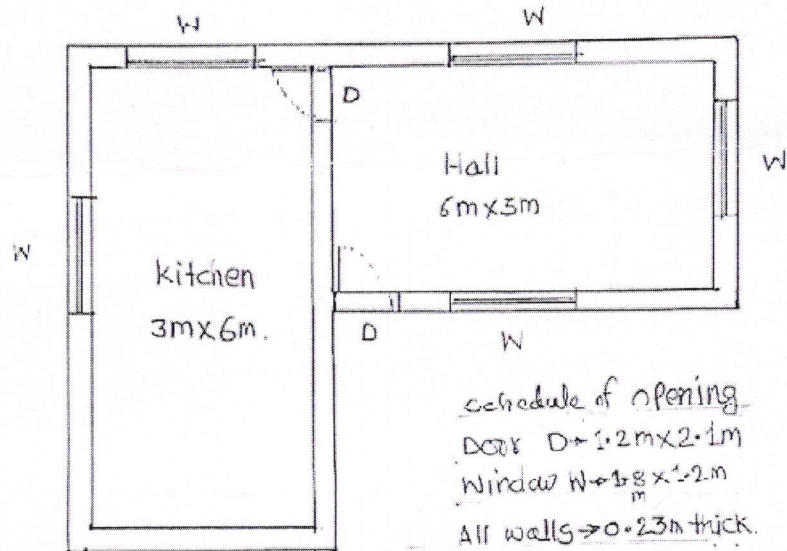


Figure 1(A)

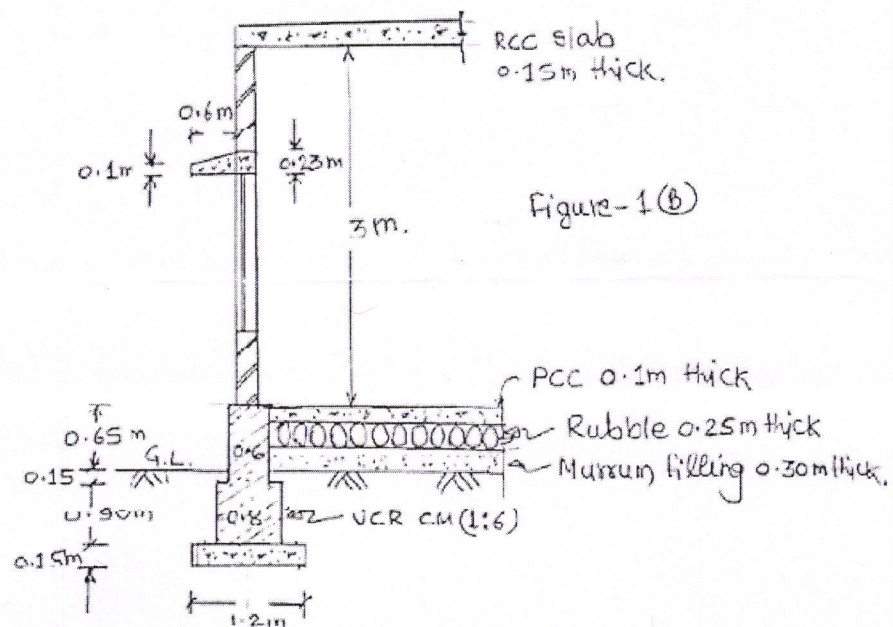


Figure-1