

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.**QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.**

(4*3=12)

a)	What is the importance of metro system for current environment
b)	How the planning of metro rails project is critical and challenging.
c)	What is noise legislation in India
d)	What is emergency evacuation system
e)	What is side evacuation system gravity
f)	What is coupling arrangement?

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	What do you understand by metro system?
b)	What are the metro policies of 2017
c)	What are the key points of metro bill
d)	Explain the functional requirements of couplers.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	What is piers and abutments in metro also draw its diagram
b)	What is deck slab used in construction
c)	Which are the different metro system are established in India
d)	DMRC recommendations during construction of metro.

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Discuss the various methods adopted for the stabilization of metro track.
b)	What are the usual forms of cross sections of metro line?
c)	What are the requirements for drainage for metro track

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Define a tunnel and describe the various methods adopted for tunneling in hard ground.
b)	Explain what is meant by tractive effort of a locomotive.
c)	What is meant by slotting of signals in metro track? What are its principle and purposes?

ENROLLMENT NO.

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B.TECH. (CE)
3RD YEAR, 6TH SEMESTER EXAMINATION
BUILDING CONSTRUCTION PRACTICE

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.**QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.**

(4*3=12)

a)	Discuss the role of building construction practice in civil engineering.
b)	Explain the various piling techniques in detail.
c)	Discuss the Load transfer mechanism with neat sketch .
d)	Explain various types of offshore-platforms .
e)	Explain the various types of batching of concrete.
f)	What do you understand by launching girders? Also explain its utility in detail.

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Discuss the difference in between load bearing & framed structure.
b)	Write down the process of site cleaning in detail.
c)	Discuss a Case studies Energy efficient building.
d)	Elaborate the various types of sheet pile in detail.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Explain the types of Hollow concrete block or concrete masonry with their uses in detail.
b)	Discuss the various types of sustainable green building construction material in detail.
c)	Explain the various methods of tunneling construction in detail.
d)	Discuss the various types of new & innovative building construction techniques in detail.

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Write down the classification of flooring in detail.
b)	Discuss the various types of bonds in masonry with neat sketch in detail.
c)	Explain the various equipment for compaction in detail

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Explain the different types of earthmoving equipment used in construction in detail.
b)	Discuss the various types of material handling equipments in detail.
c)	Explain the High rise Building Technology in detail.

ENROLLMENT NO.

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B.TECH. (CE)

**3RD YEAR, 6TH SEMESTER EXAMINATION
RAILWAY ENGINEERING**

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS, 100MS CALCULATOR IS ALLOWED

QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.

(4*3=12)

a)	What is equilibrium cant on a 2 degree curve on a broad gauge if 15 trains, 10 trains and 2 trains are running at a speed of 50 Km.p.h, 60 Km.p.h, 70 Km.p.h, and 80 Km.p.h respectively?
b)	Enumerate the role of Indian railways in National development
c)	What are the factors affecting the selection of gauges?
d)	Define interlocking and explain the principle of interlocking.
e)	Emphasis the importance of land transportation system, giving the merits and demerits of railway and highways.
f)	Write short note on fish plate, bull-headed rails, and spike.

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Find out the expression sleeper density for B.G track if 19 sleepers are used under a rail length.
b)	What is creep? What are the various causes of creep? List the various remedial measures
c)	Explain the functions and requirements of rails.
d)	What are the objectives of signaling? Describe the engineering principles of signaling.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Describe the functions and requirements of sleepers.
b)	Write short notes on a) Wet Docks b) Navigational aids
c)	What do you understand by the term basic runway length? Explain the correction applied on runway length.
d)	What is the ballast in a permanent way? Mention the function of ballast and state the requirements of a good ballast.

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Using a sleeper density of M+5, find out the number of sleepers required for constructing a railway track 640 meters long. (B.G Track)
b)	How are railway stations classified? Explain each with neat sketches
c)	Write short note on single runway, parallel runway and intersecting runway

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	What is meant by Super elevation? What are the objects of providing SE on curves?
b)	Draw a typical cross section of a permanent way. Discuss in brief the basic function of various components of a railway track.
c)	How do you classify harbors? Explain in detail.

10/05/23

ENROLLMENT NO.

B.TECH. (CE)
3RD YEAR, 6TH SEMESTER EXAMINATION
CONSTRUCTION ENGINEERING & MANAGEMENT

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS. MS-100 CALCULATOR IS ALLOWED.

QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.

(4*3=12)

a)	Discuss the Fulkerson rule for network.
b)	Name the various forms of scheduling.
c)	What is the necessity of safety in construction?
d)	What is the direct cost and indirect cost of project.
e)	Briefly discuss about project management.
f)	What do you mean by project planning?

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Define the following term: a) Dummy activity b) optimistic time estimate c) Pessimistic time estimate
b)	Discuss the term: (a) Slack (b) Float (c) Total Float (d) Interfering Float
c)	Discuss the work breakdown structure.
d)	What is project monitoring? Why it is necessary for projects?

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	What is earliest expected time and latest allowable occurrence time. Discuss it with network diagram.											
b)	Discuss the procedure for finding probability factor (Z).											
c)	Construct a network for a project whose activities and their predecessor relationship are given in Table											
	Activity	A	B	C	D	E	F	G	H	I	J	K
	Predecessor	-	-	-	A	B	B	C	D	E	H,I	F,G
d)	What are the various types of hauling equipment vehicles? Also write in detail their relative advantages and disadvantages.											

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Explain in detail about various types of earthwork equipment's with special purpose usage for each equipment's.
b)	Discuss the various common errors while drawing the network.
c)	What do you mean by CPM and PERT? Illustrate with examples the difference between CPM and PERT.

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Calculate the variance and expected time for each activity.
b)	For the given network calculate the : a) T_E and T_L b) Float C) Critical Path
c)	What do you mean by cash flow diagram? How it is classified?

ENROLLMENT NO.

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B.TECH. (CE)
3RD YEAR, 6TH SEMESTER EXAMINATION
ENGINEERING ECONOMICS, ESTIMATION & COSTING

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS, 100MS CALCULATOR IS ALLOWED

QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.

(4*3=12)

a)	Discuss the importance of Estimation & Costing in civil engg. in detail.
b)	Discuss the sinking fund in detail.
c)	Explain the procedure of 1st class brick work in detail.
d)	Explain the earth work in excavation in foundation in detail.
e)	What is security money?
f)	Explain the muster roll system in detail.

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Explain the lime concrete foundation in detail.
b)	Explain the procedure of whitewashing in detail.
c)	Discuss the types of contract system in detail.
d)	Explain the DPC in detail.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Explain the work charged establishment with their Performa slip in detail.
b)	What is cash book? Also draw its Performa slip.
c)	Explain the various methods of valuation in detail.
d)	Differentiate in between scrap value & salvage value in detail.

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Write down the following units of measurements, (1) Earth work (2) Brick work (3) DPC (4) Railing (5) Glazing (6) Plastering (7) Rain water/ Sanitary
b)	Discuss the classification of specifications in detail
c)	Discuss the classification of works according to their nature in detail.

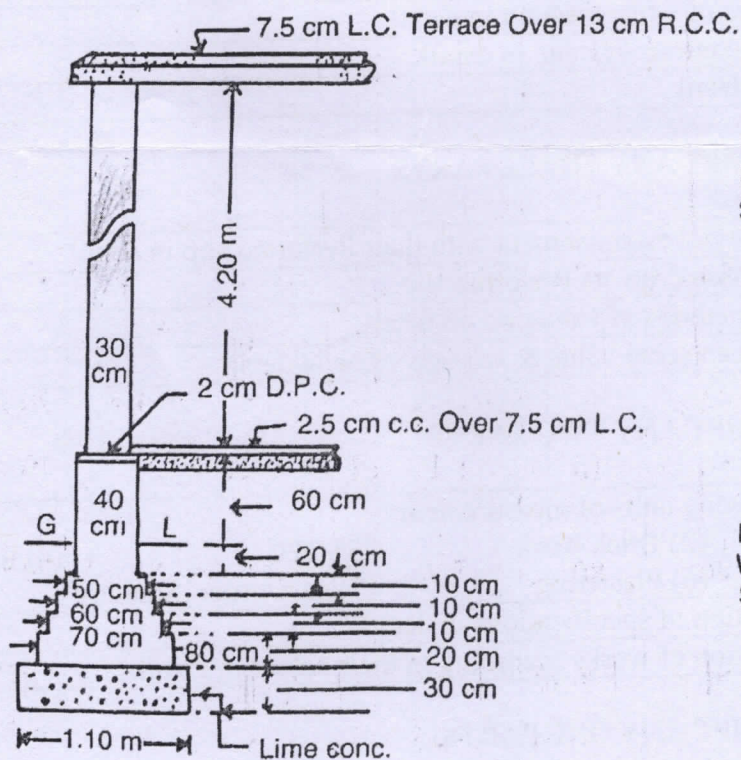
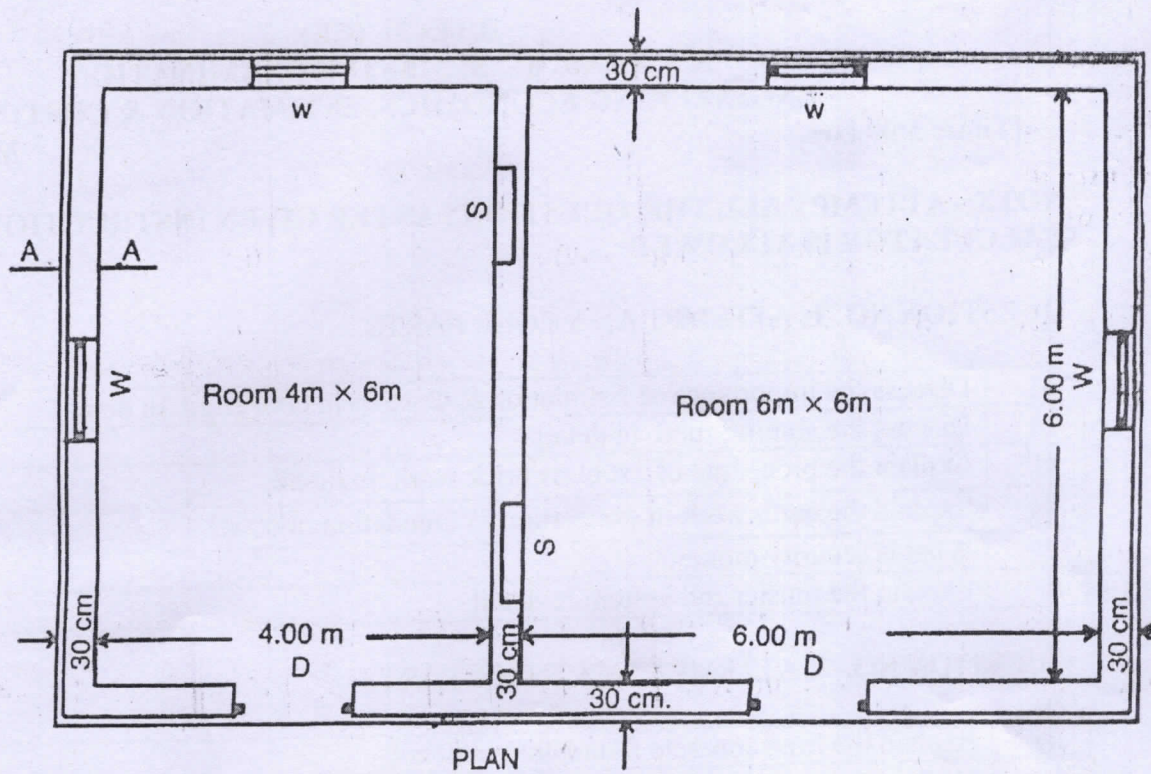
QUESTION NO.-5: ATTEMPT ANY ONE PARTS.

(1*14=14)

a)	Discuss the following : (1) Discuss the methods of estimation in detail (2) What is mortgage lease? Also discuss their types.
b)	Estimate the quantities of the following items of a two roomed building from the given figure of plan & section: (1) Earth work in excavation in foundation (2) Lime concrete in foundation (3) 1st class brick work in cement mortar 1:6 in foundation & plinth (4) 2.5cm C.C. DPC (5) 1st class brick work in super structure

[P.T.O.]

TWO ROOMED BUILDING



All Walls are of same section
Lintels over Doors. Windows and
Shelves are 15 cm thick R.B.

Doors D-1.20 m × 2.10 m
Windows W-1.00 × 1.50 m
Shelves S-1.00 m × 1.50 m

ENROLLMENT NO.

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B.TECH. (CE)
3RD YEAR, 6TH SEMESTER EXAMINATION
SOLID AND HAZARDOUS WASTE MANAGEMENT

[Time: 3:00 Hrs.]

Max. Marks:70]

NOTE:- ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.**QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.**

(4*3=12)

a)	What are the components of landfill?
b)	Write short note on radioactive waste?
c)	What is biodegradation of toxic waste?
d)	Write is pyrolysis?
e)	Define oxidative and reductive process.
f)	Explain the factors influencing solid waste generation

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	Explain the chemical treatment of hazardous waste management.
b)	Write short note on e-waste and biomedical waste?
c)	Write short note on the stages of bacterial decomposition in landfill.
d)	Describe briefly the municipal solid waste (management & handling) rules.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Write short note on non-specific source of hazardous waste.
b)	Explain biological treatment of solid waste?
c)	Explain landfill gas with its percentage in landfill.
d)	What is solid waste? What are the types of solid waste and generation of solid waste?

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	What is physiochemical treatment process of hazardous waste?
b)	What is landfill? What are the site selection criteria for landfill?
c)	What is municipal solid waste? What are the generation sources of MSW?

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Explain the physical and chemical properties of solid waste with its significance?
b)	What is nuclear waste? Briefly Explain the classification and disposal management of nuclear waste?
c)	What is leachate? Explain the generation and control of leachate

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(B) (SVSU:2022-2023/R)

ENROLLMENT NO.

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B.TECH. (CE)

3RD YEAR, 6TH SEMESTER EXAMINATION

DESIGN OF HYDRAULIC STRUCTURES/IRRIGATION ENGINEERING

Max. Marks:70]

Time: 3:00 Hrs.

NOTE:- CALCULATOR MS 100 IS ALLOWED ATTEMPT ALL THE QUESTIONS AS PER GIVEN INSTRUCTIONS.

QUESTION NO.-1: ATTEMPT ANY FOUR PARTS.

(4*3=12)

a)	What is load factor, utilization factor and capacity factor?
b)	What is the difference between rigid and non-rigid dam.
c)	Explain Bligh's theory and limitations of Bligh's theory.
d)	Write short note on run-off river plant, storage plant and pumped storage plant
e)	Explain the different types of canal falls
f)	Write short note on ogee spillway.

QUESTION NO.-2: ATTEMPT ANY THREE PARTS.

(3*4=12)

a)	What are the different types of hydro power plants? Describe each one briefly.
b)	Write short note on galleries in dams.
c)	Write short note on fish ladder, divide wall and marginal bunds.
d)	Write short note on Silt extractor and silt ejector.

QUESTION NO.-3: ATTEMPT ANY THREE PARTS.

(3*6=18)

a)	Discuss, with illustration the physical factors that govern the selection of type of dam.
b)	Define the following – a) Dead storage b) Valley storage c) Useful life of a reservoir d) Bank storage
c)	What are the different types of hydro power plants? Describe each one briefly.
d)	What are the causes of piping failure?

QUESTION NO.-4: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	Write note on the selection of suitable type of turbine for a hydroelectric scheme.
b)	Classify various types of Dams. Discuss in brief merits and demerits of various types of dam.
c)	Explain with the help of diagram the various component of a diversion headwork?

QUESTION NO.-5: ATTEMPT ANY TWO PARTS.

(2*7=14)

a)	The three turbo generators each of capacity 10000 kW have been installed at a hydel power station. During a certain period of land, the load on the plant varies from 12000 kW to 26000 kW. Calculate total installed capacity, load factor and utilization factor.
b)	What is spillway? What are its functions? Enumerate various type of spillways.
c)	What do you understand by a fall in a canal? Why it is necessary? How do you select its location?
