

Seat No.

CE-7th Sem 58

QP-9597

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Transportation Engineering - I****Sub. Code: 83735/84015****Day and Date: Monday ,08-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

Instructions: 1. Draw neat labelled diagrams wherever necessary
2. Drawings must be drawn to the given scale

Special Inst.: Q.4 AND Q.8 are compulsory
Attempt any two questions from Q.1,2,3 AND any two from Q 5,6,7.

- Q1)** Attempt any two questions. [10]
- Write a brief note on N.H.A.I. [5]
 - Explain Third road development plan in detail. [5]
 - Explain the requirements of an ideal highway alignment. [5]
- Q2)** Attempt any two questions. [10]
- Explain the necessity of Superelevation on the horizontal curves. [5]
 - Calculate the super elevation required on a road curve of radius 280 m for Permissible speed of 75 kmph. The coefficient of friction is 0.12. Define 'Gradient'. [5]
 - Write a note on Vertical highway alignment. [5]
- Q3)** Attempt any two questions. [10]
- Explain various desirable properties of stone aggregate used in Road construction [5]
 - Explain with neat sketch joints in rigid pavements. [5]
 - Explain rigid and flexible pavement failures in detail. [5]
- Q4)** Attempt all the questions. [15]
- Explain the considerations while aligning roads on hilly areas. [5]
 - Explain 'Overtaking Sight Distance'. How O.S.D. is calculated for One-way traffic road and Two-way traffic road? [5]

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- c. Differentiate between Flexible Pavements and Rigid Pavements with sketches [5]
- Q5) Q.5) Attempt any two questions. [10]**
- a. Explain the construction steps for BBM in detail. [5]
- b. What do you mean of evaluation of pavements explain structural and functional evaluation of pavement. [5]
- c. Explain the construction steps for SDBC. [5]
- Q6) Q.6) Attempt any two questions. [10]**
- a. Enlist various traffic studies. Explain any ONE in detail. [5]
- b. Explain 'Roundabout/ Rotary' with a neat sketch. [5]
- c. Write a note on highway Drainage. [5]
- Q7) Attempt any two questions [10]**
- a. Explain various shapes of tunnels. [5]
- b. Explain the shield method of tunneling. [5]
- c. Explain the Ventilation of tunneling. [5]
- Q8) Attempt all the questions. [15]**
- a. Explain different traffic Control devices. [5]
- b. Write note on use of geo - textiles and geo - girds in road construction. [5]
- c. Explain strengthening of existing pavements in details. [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (101) Bachelor of Engineering (84015) Transportation Engineering - I Part 4 SEM 7

2] (1154) B.Tech. CBCS (83735) Transportation Engineering - I Part 4 SEM 7

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QP-9835

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Solid Waste Management****Sub. Code: 67569/83739/84019****Day and Date: Wednesday, 10-12-2025****Time: 02:30 PM To 05:00 PM****Total Marks: 70**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks

Special Inst.: Q. No. 4 and Q. No. 8 are compulsory and attempt any two questions from Q.No. 1, 2, 3 and any two questions from Q. No. 5, 6, 7.

- Q1)** Answer the following questions [10]
- a. Draw a flow diagram representing the MSW management process and explain each functional element. [5]
 - b. Elaborate the goals and objective of solid waste management [5]
- Q2)** Answer the following questions [10]
- a. What is waste generation rate and explain the factors affecting MSW generation rate? [5]
 - b. What is onsite segregation of solid waste ? state its necessity. [5]
- Q3)** Answer the following questions [10]
- a. What is a transfer station? List & explain its types. [5]
 - b. Compare stationary and hauled container systems of solid waste collection [5]
- Q4)** Answer the following questions [15]
- a. Write the environmental and health impacts of improper solid waste management. [5]
 - b. Discuss the physical and chemical characteristics of municipal solid waste. [5]
 - c. What are the major unit operations used for processing of solid waste? [5]
- Q5)** Answer the following questions [10]
- a. What is sanitary landfilling? How is it different from open dumping? [5]

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- b. List the methods of sanitary landfilling and explain any one with a simple sketch [5]

Q6) Answer the following questions [10]

- a. What is composting? Explain the phases of composting. [5]
- b. Explain the working of a mechanical composting plant. [5]

Q7) Answer the following questions [10]

- a. Describe the incineration process [5]
- b. Explain the different factors affecting incineration [5]

Q8) Answer the following questions [15]

- a. What is leachate? How is it managed and treated in sanitary landfills? [5]
- b. List and explain the different fundamental factors governing Composting process. [5]
- c. What are the site selection criteria for an incineration plant? [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (1154) B.Tech. CBCS (83739) Solid Waste Management Part 4 SEM 7
- 2] (101) Bachelor of Engineering (84019) Solid Waste Management Part 4 SEM 7
- 3] (101) Bachelor of Engineering (67569) Solid Waste Management Part 4 SEM 7

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Design of Concrete Structures-I****Sub. Code: 67558/83732/84012****Day and Date: Saturday, 13-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks
 5. Use of Scientific calculator is allowed

Special Inst.: Use of IS 456:2000 is allowed

- Q1)** Explain the following. [12]
- a. Modes of Failure in RC Beams. [6]
 - b. Compare Working Stress Method with Limit State Method [6]
- Q2)** A beam section 300mm wide and 500mm deep is reinforced with a tension reinforcement of 3000mm² at an effective cover of 30mm. Determine ultimate moment of resistance of beam section. Use M15 Concrete and Mild Steel Grade-I. [12]
- OR**
- A concrete beam having $b = 350\text{mm}$, $d = 700\text{mm}$. Design the beam if it is subjected to superimposed load bending moment of 400kN-m. Use M15 concrete & Fe250 steel. Take $d_c = 50\text{mm}$.
- Q3)** A RC beam 230mm wide 450mm deep is reinforced with 3-16mm Φ of grade Fe415 on tension side with an effective cover of 50mm. Design the vertical shear reinforcement when full tension steel is available for ultimate SF of 80kN. [11]
- Q4)** Design a simply supported one way slab provided over a clear span of 3.37m. It carries a live load of 4kN/m² and floor finish of 1.5kN/m². Width of supporting wall is 230mm, Steel grade used is Fe415. Assume moderate environment. Take cover - 30mm. Use M25 grade of concrete. [12]
- OR**
- The overall dimensions of dog-legged stair are 4750mm $\times$ 2400mm with landing of 1125mm. The landing slab spans in the same direction as the stair and are supported by the walls at the ends. Design the stair slab. Provide M20 grade of concrete and HYSD-Steel bars of grade Fe415. The stair is used inside a residential building.
- Q5)** Design a circular column for the following particulars, [12]

Axial Load- 1000kN

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Unsupported Length- 2.75m

Effective length corresponding to principal axes are 2.50m and 2.35m.

Use M15 concrete and Fe 415 grade steel.

- Q6)** Design an isolated rectangular sloped footing for the column of size [11] 230mm×650mm, reinforced with 6-20mm Φ and carrying an axial load of 1200kN. The bearing capacity of the soil is 300kN/m². Use concrete grade M20 and steel grade Fe415. Effective cover for bottom steel is 60mm. take offset from the face of the column equal to 50mm.

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (84012) Design of Concrete Structures-I Part 4 SEM 7
- 2] (1154) B.Tech. CBCS (83732) Design of Concrete Structures-I Part 4 SEM 7
- 3] (101) Bachelor of Engineering (67558) Design of Concrete Structures-I Part 4 SEM 7

Seat No. CE-7th-Sem

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QP-10262

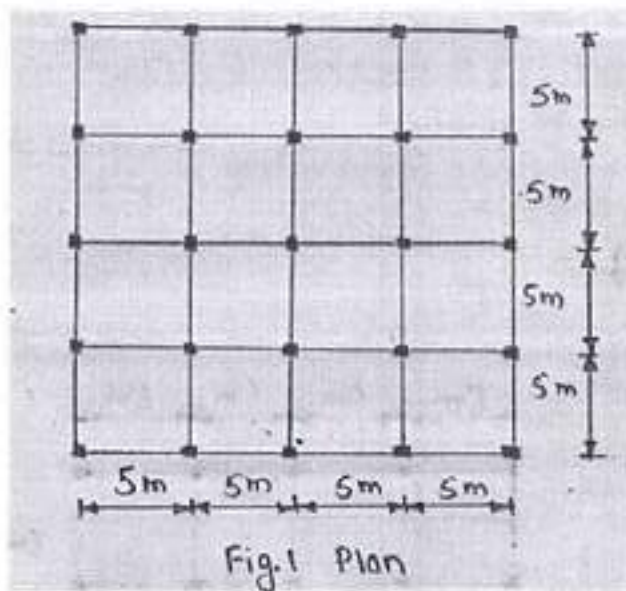
Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Earthquake Engineering****Sub. Code: 67559/83733/84013****Day and Date: Thursday, 18-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks
 5. Use of Scientific calculator is allowed

Special Inst.: Use of IS 1893_2016 (Part I) is permitted.

- Q1) Attempt any one question [7]**
- a. Differentiate between seismograph and seismogram with neat sketch. [7]
 - b. Differentiate between magnitude and intensity of earthquake. [7]
- Q2) Attempt any two questions. [14]**
- a. Derive the equation of motion for a Single Degree of Freedom (SDOF) system subjected to damped critical free vibration. [7]
 - b. Explain logarithmic decrement with help of response graph. [7]
 - c. A machine foundation weighs 90 KN. The spring constant is 12550 KN/m and Dashpot constant (C) is 220 KN.s/m. Determine Natural frequency, Critical damping ratio and logarithmic decrement. [7]
- Q3) A Four storied RC radio station building with Ordinary Moment Resisting Frame (OMRF) as shown in Fig. 1 with live load 4 KN/m^2 is to be constructed in Delhi on Hard soil. Calculate seismic forces on the structure by seismic coefficient method using IS 1893 part (I). All beams and columns are 450 mm x 450 mm in size. Thickness of roof and floor slab 150 mm thick. The wall is of 230 mm thick all around. Floor to floor height is 3 m. Density of concrete 25 KN/m^3 and Density of Masonry is 20 KN/m^3 . Assume 5% damping. [14]**



Q4) Attempt any two questions. [12]

- Explain Philosophy of Earthquake Resistant Design. [6]
- What are the planning aspects required for earthquake resistance design of structure. [6]
- Explain various vertical geometric irregularities in building with neat sketch. [6]

Q5) Attempt all questions. [12]

- Explain behavior of unreinforced masonry building subjected to seismic load. [6]
- Explain with neat sketch Jacketing of beam. [6]

Q6) Attempt all questions. [11]

- Explain with neat sketch Visco elastic dampers. [5]
- Explain the working principle of base isolation with the help of a neat sketch. [6]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (84013) Earthquake Engineering Part 4 SEM 7
- 2] (101) Bachelor of Engineering (67559) Earthquake Engineering Part 4 SEM 7
- 3] (1154) B.Tech. CBCS (83733) Earthquake Engineering Part 4 SEM 7

Seat No.

CE-7th Sem 66

Total No. of Pages : 3

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Quantity Survey and Valuation****Sub. Code: 67560/83734/84014****Day and Date: Friday, 05-12-2025****Total Marks: 70****Time: 02:30 PM To 05:30 PM**

Instructions:

1. Assume suitable data wherever necessary and mention it boldly
2. Figures to the right indicate full marks
3. Use of Scientific calculator is allowed

Special Inst.: Questions No. 3 is compulsory. Attempt any 2 questions from remaining in Section I and any 3 questions from Section II.

Q1) Attempt all questions [10]

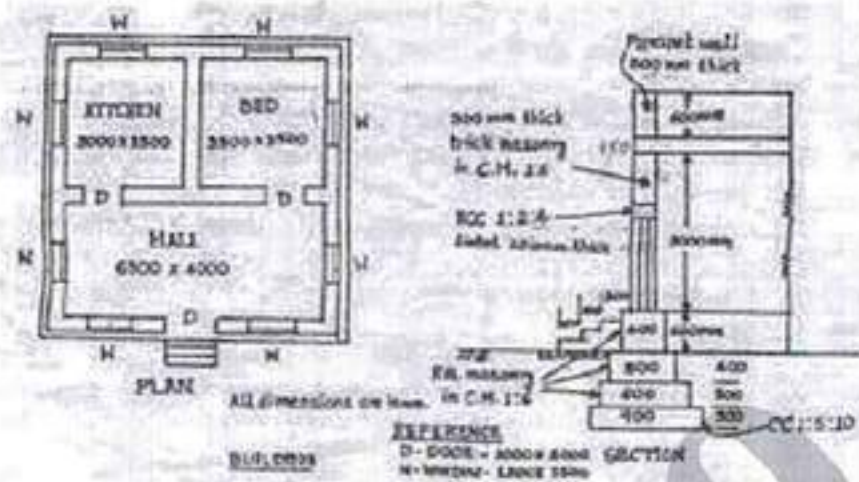
- a. Write the different types of estimate and state various items to be included in detailed Estimate. [5]
- b. What is IS 1200? Write rules for deduction for plastering work as per code [5]

Q2) Attempt all questions [10]

- a. What is meant by Task work? Explain its importance in rate analysis with suitable examples. [5]
- b. Write a detailed note on factors affecting cost of construction. [5]

Q3) Attempt all questions [15]

- a. The plan and section of building is shown below. [12]
Find out quantity of item for the following work by using centre line method.
1. Earth work in Excavation, 2. Earth work in plinth filling ,
3. First class Brick work in cement mortar (1:6) for foundation and plinth, 4. 2.5 cm thick D.P.C.



- b. Write a short note on P.W.D. method. [3]

Q4) Write Short Note on (Any TWO) [10]

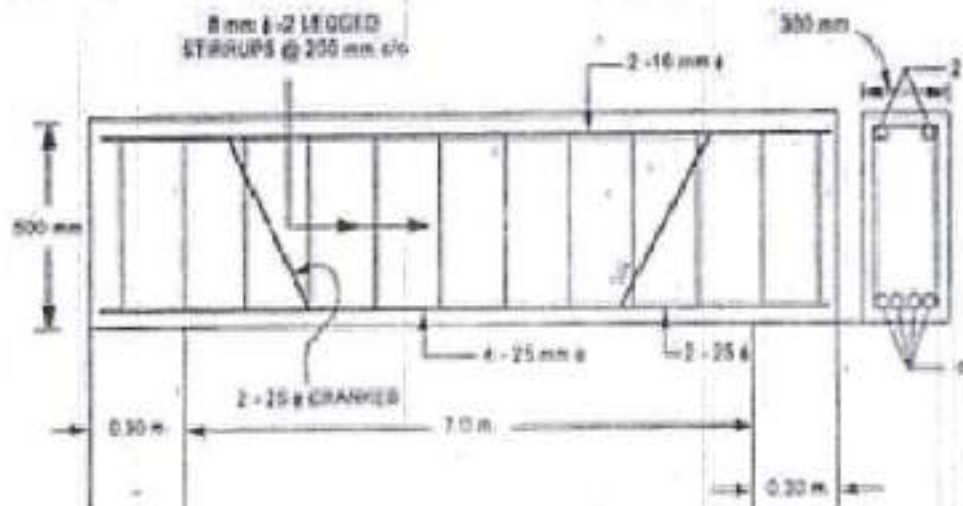
- a. Provisional sum and Prime cost. [5]
 b. Measurement sheet and abstract sheet. [5]
 c. District Schedule of Rates. [5]

Q5) Attempt all questions. [11]

- a. Explain a note on bar bending schedule. [5]
 b. What is Valuation? What are the factors affecting on valuation of real properties? [6]

Q6) Attempt the following [11]

- a. Prepare Bar Bending Schedule for the following type 2 Beams [11]



[2]

P.T.O.

Q7) Attempt the following

[12]

- a. Work out the value of a premises consisting of land and a house in poor condition, to let for Rs. 6000.00 per month inclusive of all taxes. The house is in such a condition that the effective life cannot be more than 20 years and after that house shall have to be rebuilt at an estimated cost of Rs .25000/- The rent by comparison with other premises is fair and likely to be maintained for a very long period provided yearly repairs are regularly executed . Assume the following data: Cost of Annual repair = 8% of the gross rent ; Rebuilding time = one Year ; Interest on capital @ 7% and for redemption of estimated cost to rebuilt the house @ 4% ; Other outgoings – 18% [9]
- b. Explain Belting Method of valuation of land [3]

Q8) Write short note (Any TWO)

[12]

- a. Price , Cost and Value [6]
- b. Capitalized value and year purchase. [6]
- c. Types of Leases. [6]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (67560) Quantity Surveying and Valuation Part 4 SEM 7
- 2] (101) Bachelor of Engineering (84014) Quantity Survey and Valuation Part 4 SEM 7
- 3] (1154) B.Tech. CBCS (83734) Quantity Survey and Valuation Part 4 SEM 7

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Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Advanced Design of Concrete Structures****Sub. Code: 67751/84753/84938****Day and Date: Thursday ,04-12-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks
 5. Use of Scientific calculator is allowed

Special Inst.: Use of IS 456:2000 , IS 4998-:2015 , IS 3370 is allowed.

- Q1) Explain and Solve the following. [12]**
- a. Components of Flat Slab with neat sketch. [6]
 - b. Calculate design moments in an interior panel of a flat slab with panel size 6m x 6m supported by columns of size 500mm x 500mm. Provide suitable drop. Take live load as 3kN/m², Take floor finish load as 1kN/m². Use M20 concrete and Fe415 steel [6]
- Q2) Design a simply supported 300mm thick RCC vertical deep beam of height 4.0m, [12]**
which is supported over 500mm wide piers having a clear spacing of 5.0m. The beam carries a service superimposed load of 200kN/m. Assume M20 concrete and Fe415 steel.
- Q3) Design a chimney of height 70m, Given [11]**
External Diameter –(i) at top -4m
(ii) at base - 4.8m
Shell thickness –(i) at top -200mm
(ii) at base - 400mm
Wind intensity 1.8kN/m², through.
Thickness of fire brick lining 100mm.
Air gap -100mm
Temperature difference -700C.
Coefficient of thermal expansion -11×10⁻⁶/C0
Es - 210×10³ N/mm²
Unit weight of brick lined -20kN/m³
Use M25 concrete and Fe 415 grade steel.
- Q4) Design a flat bottom circular elevated water tank of diameter 10m and total height [12]**
3.2m which is to be supported by ring beam of 9m diameter. The ring beam is to be supported by eight columns equally placed. Use M25 concrete and Fe415 steel.

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Design the following components,

- a) Top dome
- b) Top ring beam
- c) Cylindrical Wall

- Q5) Design **ONLY** Stem of cantilever retaining wall to retain an earth embankment with [12]
horizontal top 3m above ground level. Density of earth = 18 kN/m^3 . Angle of internal
friction $\Phi = 30^\circ$ SBC of soil is 200 kN/m^2 . Take coefficient of friction between soil and
concrete = 0.5. Adopt M20 grade concrete and Fe-415 steel. Show reinforcement
details.
- Q6) Design a simply supported square slab of side 3.6m to carry a service load of [11]
 4 kN/m^2 . Use M20 grade concrete and Fe415 grade steel.

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (84938) Advanced Design of Concrete Structures Part 4 SEM 8
- 2] (101) Bachelor of Engineering (67751) Advanced Concrete Design Part 4 SEM 8
- 3] (1154) B.Tech. CBCS (84753) Advanced Design of Concrete Structures Part 4 SEM 8

Seat No. _____

CE-8th-Sem 71

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Advanced Construction Techniques****Sub. Code: 67764/84759/84944****Day and Date: Friday ,05-12-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Figures to the right indicate full marks

Special Inst.: Answer shall be supported by adequate sketches

- Q1)** Attempt all questions. [12]
 a) Explain the different factors influence the cost of formwork.
 b) What are the requirements of Good formwork?
- Q2)** Attempt any Two. [11]
 a) Explain fibre reinforced concrete & their advantages
 b) What is FRP? Write their applications?
 c) Write a note on thermosetting Adhesive.
- Q3)** Attempt any Two. [12]
 a) What is Soilcrete? Explain in detail
 b) What is Soil fracturing?
 c) What are the advantages & disadvantages of Vacuum Consolidation?
- Q4)** Attempt all questions [12]
 a) What are the types of Cofferdam ? Explain in detail with sketch.
 b) Explain different types of Caissons with neat sketch.
- Q5)** Attempt any Two. [11]
 a) Explain Methods of Bridge rehabilitation with sketch.
 b) State the benefits of Vacuum Dewatered Flooring to contractors, Architects, & Owner.
 c) Short Note on Bridge Rehabilitation.
- Q6)** Attempt any Two. [12]
 a) Explain with neat Sketch the Vacuum Dewatering Process.
 b) State the benefits of Revibration of Concrete.
 c) State the steps for Strengthening of Isolated Footing with neat sketch.

Seat No. CE-8th Sem 72

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Design of Concrete Structures-II****Sub. Code: 67748/84745/84930****Day and Date: Monday ,08-12-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks
 5. Use of Scientific calculator is allowed

Special Inst.: Use of IS 456:2000, IS 3370, IS 1343:2012 is allowed.

- Q1)** Determine the reinforcement required for rectangular beam section with following [12]
data,
Width of section - 300mm
Depth of section - 500mm
Factored BM - 65kN-m
Factored Torsional Moment -40kN-m
Factored SF -70kN-m
Use M15 concrete and Fe415 grade steel.
- Q2)** A continuous RCC beam with simple support has two spans each of 6m, the beam [12]
supports dead load from brick wall equal to 10kN/m and live load 15kN/m. Design
the critical section using Limit State Method and Sketch reinforcement details.
Adopt M20 grade concrete and Fe415 grade steel.
- Q3)** Design a Circular water tank to hold 5,50,000 liters of water. Depth of water is 4.5m. [11]
The joint between floor and wall of tank is not monolithic. Use M20 grade concrete
and Fe250 grade steel.

OR

Design a circular water tank with rigid base 5,00,000 liter capacity. The height of
tank is 4m. The wall of tanks are free at top. Use M20 concrete and Fe415 grade
steel.

- Q4)** A) Why high strength concrete and high strength steel is used prestressed concrete. [12]
B) Explain the basic principal of prestressing.

OR

A prestressed concrete I beam supports a live load of 4000N/m over a simply
supported span of 8m. The beam has an overall depth of 400mm. The thickness of
each flange and web are 60mm and 80mm respectively. The width of each flange =
200mm. The beam is to be prestressed by an effective prestressing force of 235kN.
Applied at a suitable eccentricity such that resultant stress at the bottom of the

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beam at the centre of the span is zero.

- i. Find the eccentricity required for the prestressing force.
- ii. If the tendon is concentric, what should be the magnitude of prestressing force for the resultant stress to be zero at the bottom fibre of the central section.

- Q5)** A prestressed concrete pile is 300mm x 300mm in section and is provided with 40 [12]
wires of 3mm diameter distributed uniformly over the section. Initially the wires are
tensioned in the prestressing beds with a total pull of 450kN. Determine the final
stress in concrete and the percentage loss of stress in the wires.

Take $E_s = 2.08 \times 10^5 \text{ N/mm}^2$, $E_c = 3.20 \times 10^4 \text{ N/mm}^2$

Creep shortening = $32 \times 10^{-6} \text{ mm/mm per N/mm}^2$ of stress

Total Shrinkage strain = 200×10^{-6}

Relaxation loss of stress in steel = 4.50% of the initial stress.

- Q6)** Design a prestressed concrete beam to the following requirement, [11]

- i. Span - 15m
- ii. Superimposed load - 34kN/m
- iii. Cube strength of concrete at 28 days - 35N/mm²
- iv. Safe stress in concrete at transfer of prestress - $f_r = 0.5f_{ck}$
- v. Safe stress in concrete due to final prestress - $f_c = 0.4f_{ck}$
- vi. Total loss of prestress - 20%
- vii. Allowable tensile stress in concrete - $0.219\sqrt{f_{ck}}$
- viii. Ultimate stress in steel - 1500N/mm²
- ix. Safe stress in steel - 60% of ultimate stress

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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सदरची प्रश्नपत्रिका खालील विषयकारिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (67748) Design of Concrete Structure II Part 4 SEM 8
- 2] (1154) B.Tech. CBCS (84745) Design of Concrete Structures-II Part 4 SEM 8
- 3] (101) Bachelor of Engineering (84930) Design of Concrete Structures-II Part 4 SEM 8

Seat No. _____

CE-4th Sem 74

QP-9803

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION**1154 B.Tech. CBCS****Sub. Name: Water Resources Engineering - II****Sub. Code: 67749/84746/84931****Day and Date: Tuesday ,09-12-2025****Total Marks: 70****Time: 10:30 AM To 01:00 PM**

- Instructions:**
1. Assume suitable data wherever necessary and mention it boldly
 2. Draw neat labelled diagrams wherever necessary
 3. Figures to the right indicate full marks

- Special Inst.:**
- 1) Que. No. 4 from Section - I & Que. No. 8 from Section - II are compulsory.
 - 2) Attempt any two questions from Que. No. 1,2,3
 - 3) Attempt any two questions from Que. No. 5,6,7

- Q1) Answer the following [10]**
- a. Explain different factors affecting selection of a site for dam? [5]
 - b. Describe area capacity curve and area elevation curve in detail with its importance in reservoir planning? [5]
- Q2) Answer the following [10]**
- a. Enlist different forces acting on a dam? Explain in detail any four forces acting on it along with supporting sketch? [5]
 - b. Enlist the types of dams with neat sketches. Explain their suitability. [5]
- Q3) Answer the following [10]**
- a. What is Energy dissipation? Explain types of energy dissipation work. [5]
 - b. Classify the spillways. Describe any one in detail. [5]
- Q4) Answer the following (Any three) [15]**
- a. Describe selection criteria of spillways. [5]
 - b. Write note on - Galleries in dam with its types. [5]
 - c. Explain Storage zones & control levels in reservoir. [5]
 - d. What is High dam & Low dam? Explain. [5]
- Q5) Answer the following [10]**

- a. Compare between Bligh's creep theory and Khosla's theory ? [5]
- b. Along with neat sketch explain any four components of Diversion Head Work in detail ? [5]
- Q6) Answer the following [10]**
- a. Discuss in detail selection criteria for canal lining. [5]
- b. Write a note on : C.D. Works [5]
- Q7) Answer the following [10]**
- a. Write in detail about Meandering- causes, factors controlling process and features. [5]
- b. Write a note on River training works with its objectives & methods (any one with sketch) [5]
- Q8) Answer the following (Any three) [15]**
- a. Write a note on types of Hydro power plant [5]
- b. Describe in brief types of Weir with neat sketch. [5]
- c. Write a note on : Types of canals [5]
- d. Write a note on: Surge tanks with its types. [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (101) Bachelor of Engineering (67749) Water Resources Engineering II Part 4 SEM 8
- 2] (1154) B.Tech. CBCS (84746) Water Resources Engineering - II Part 4 SEM 8
- 3] (101) Bachelor of Engineering (84931) Water Resources Engineering - II Part 4 SEM 8

Seat No.

CE-8th Sem 76

QP-9841

Total No. of Pages : 2

OCT-NOV 2025 WINTER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Transportation Engineering-II

Sub. Code: 67750/84747/84932



Day and Date: Wednesday, 10-12-2025

Total Marks: 70

Time: 10:30 AM To 01:00 PM

Instructions: 1. Draw neat labelled diagrams wherever necessary
2. Figures to the right indicate full marks

Special Inst.: Q.4 AND Q.8 are compulsory.
Attempt any two questions from Q.1,2,3 And from Q 5,6,7

- Q1) Attempt all the questions [10]
- Draw a neat sketch and describe component parts of an aircraft. [5]
 - Write a detailed note on various Airport Surveys. [5]
- Q2) Attempt all the questions [10]
- Write a short note on: Transit Shade [5]
 - Explain classification of airports [5]
- Q3) Attempt all the questions [10]
- Explain 'Dry Docks' with a neat sketch [5]
 - Explain the concept of 'Littoral Drift' [5]
- Q4) Attempt all the questions [15]
- Write a short note on: ICAO [5]
 - Write a short note on: Jet Blast [5]
 - Write a short note on: Cross Wind Components [5]
- Q5) Attempt all the questions [10]
- State the requirement of a railway station. [5]
 - State merits and demerits of railways. [5]
- Q6) Attempt all the questions [10]

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- a. Explain site selection of stations and yard [5]
- b. Explain points and crossings. [5]
- Q7) Attempt all the questions [10]
- a. What are the factors considered for selecting a site of a bridge? [5]
- b. State the types of bridge bearing and explain the suitability of each. [5]
- Q8) Attempt all the questions [15]
- a. Define and enlist different types of station yards. [5]
- b. What is permanent way? Give requirement of an ideal permanent way. [5]
- c. Short note - Classification of Bridges. [5]

End Of Question Paper

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