

पुस्तिका में पृष्ठों की संख्या /
Number of Pages in Booklet : 16

पुस्तिका में प्रश्नों की संख्या /
Number of Questions in Booklet : 100

12 CIVIL
ENGINEERING
बुकलेट
सीरीज

202029

समय / Time : 2.00 घंटे / Hours

पूर्णांक / Maximum Marks : 200

INSTRUCTIONS

1. Answer all questions.
2. All questions carry equal marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
6. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. (A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.)
7. The candidate should ensure that Series Code of the Question Paper Booklet and Answer Sheet must be same after opening the envelopes. In case they are different, a candidate must obtain another question paper of the same series. Candidate himself shall be responsible for ensuring this.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. 5 marks will be deducted for filling wrong or incomplete Roll Number.
10. If there is any sort of ambiguity/mistake either of printing or factual nature then out of Hindi and English Version of the question, the English Version will be treated as standard.

Warning : If a candidate is found copying or if any unauthorised material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted under Section 3 of the R.P.E. (Prevention of Unfairmeans) Act, 1992. Commission may also debar him/her permanently from all future examinations of the Commission.

निर्देश

1. सभी प्रश्नों के उत्तर दीजिए।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर-पत्रक पर नीले बॉल प्वाइंट पेन से गहरा करना है।
6. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काट जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है। किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
7. प्रश्न-पत्र पुस्तिका एवं उत्तर पत्रक के लिफाफे की सील खोलने पर परीक्षार्थी यह सुनिश्चित कर लें कि उसके प्रश्न-पत्र पुस्तिका पर वही सीरीज अंकित है जो उत्तर पत्रक पर अंकित है। इसमें कोई भिन्नता हो तो वीक्षक से प्रश्न-पत्र की ही सीरीज वाला दूसरा प्रश्न-पत्र का लिफाफा प्राप्त कर लें। ऐसा न करने पर जिम्मेदारी अभ्यर्थी की होगी।
8. मोबाईल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।
9. कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानी पूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर 5 अंक कुल प्राप्तांकों में से अनिवार्य रूप से काटे जाएंगे।
10. यदि किसी प्रश्न में किसी प्रकार की कोई मुद्रण या तथ्यात्मक प्रकार की त्रुटि हो तो प्रश्न के हिन्दी तथा अंग्रेजी रूपान्तरों में से अंग्रेजी रूपान्तर मान्य होगा।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराई जायेगी और आर. पी. ई. (अनुचित साधनों की रोकथाम) अधिनियम, 1992 के नियम 3 के तहत कार्यवाही की जायेगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

SEAL
प्रयोग



- 1 For walls having thickness of wall more than one and a half brick, the following bond is more compact and stronger :
- (1) Double Flemish Bond (2) English Bond
(3) Garden Wall Bond (4) Dutch Bond
- 2 In a wooden door, "Style" is the :
- (1) outside vertical member of the shutter
(2) topmost horizontal member of the shutter
(3) middle horizontal member of the shutter
(4) horizontal projection of head
- 3 From practical considerations and effective working of the ventilation system, the desired value of rate of air changes per hour is :
- (1) one (2) five
(3) twenty (4) thirty
- 4 Quick lime is :
- (1) Calcium carbonate (2) Calcium oxide
(3) Calcium hydroxide (4) Calcium chloride
- 5 The pressure acting on the stones in stone masonry construction should be
- (1) along the direction of bedding planes
(2) at 30° to the direction of bedding planes
(3) at 45° to the direction of bedding planes
(4) perpendicular to the direction of bedding planes
- 6 Efflorescence in the bricks is caused due to
- (1) Lime (2) Organic matter
(3) Iron (4) Alkalies
- 7 Dry Rot and Wet Rot are the
- (1) Defects of timber (2) Diseases of timber
(3) Characteristics of timber (4) Structure of timber
- 8 Which one of the following is responsible for initial set and high heat of hydration ?
- (1) Tri-calcium silicate (2) Di-calcium silicate
(3) Tri-calcium aluminate (4) Tetra-calcium aluminato ferrite

- 9 The vertical distance between the springing line and highest point of the inner curve of an arch is known as :
- (1) spandrel (2) rise
(3) intrados (4) extrados
- 10 Ring and Ball apparatus is used for the following test of bitumen :
- (1) Penetration (2) Viscosity
(3) Ductility (4) Softening point
- 11 Error due to bad ranging is :
- (1) Cumulative positive (2) Cumulative negative
(3) Compensative (4) Never serious
- 12 Imaginary line joining the points of zero declination on the surface of earth is known as :
- (1) Isogonic line (2) Isoclinic line
(3) Magnetic declination line (4) Agonic lines
- 13 The curved surface which at every point is perpendicular to the direction of gravity at that point is known as :
- (1) A level plane (2) A level surface
(3) A horizontal surface (4) A vertical surface
- 14 Spire test is used for the permanent adjustment of a theodolite for :
- (1) Adjustment of horizontal axis
(2) Adjustment of vertical axis
(3) Adjustment of plate levels
(4) Adjustment of line of sight
- 15 If a tripod settles in the interval that elapses between taking a back sight reading and the following foresight reading, then the elevation of turning point will :
- (1) increase (2) decrease
(3) not change (4) may increase or decrease
- 16 Axis method of traverse correction is used when :
- (1) The lengths are measured very accurately
(2) The angle are measured very accurately
(3) The percentage error in angles and lengths is same
(4) Neither angles nor lengths are measured accurately

- 17 If the R.L. of a B.M. is 100.00 m, the back-sight is 1.215 m and the foresight is 1.870 m, the R.L. of the forward station is :
- (1) 99.345 m (2) 101.215 m
 (3) 100.655 m (4) 101.870 m
- 18 A curve of varying radius introduced between two branches of a compound curve is known as :
- (1) Mean curve (2) Base curve
 (3) Common curve (4) Transition curve
- 19 Contour lines of different elevation can unite to form one line only in the case of :
- (1) Plane ground (2) Cave
 (3) Vertical cliff (4) Valley
- 20 The method which gives more accurate results in the measurement of areas is :
- (1) Average ordinate rule (2) Mid ordinate rule
 (3) Trapezoidal rule (4) Simpson's one third rule
- 21 The porosity of a soil sample is 35% and the specific gravity of its particles is 2.7. The dry density of soil sample is :
- (1) 1.755 g/cm³ (2) 0.755 g/cm³
 (3) 1.57 g/cm³ (4) 2.105 g/cm³
- 22 The coefficient of uniformity of a soil is given by :
- (1) D_{10}/D_{60} (2) D_{60}/D_{10}
 (3) D_{60}/D_{30} (4) D_{30}/D_{60}
- 23 If the natural water content of soil mass lies between its liquid limit and plastic limit, the soil mass is said to be in :
- (1) liquid state (2) plastic state
 (3) semi-solid state (4) solid state
- 24 Discharge through the body of an earth dam may be calculated using flow net as
- (1) $q = (k/h) (N_f/N_d)$ (2) $q = (k/h) (N_d/N_f)$
 (3) $q = (k \cdot h) (N_f/N_d)$ (4) $q = (k \cdot h) (N_d/N_f)$
- where, k is coefficient of permeability, h is head, N_f is number of flow fields and N_d is number of potential drops.

- 5 The critical gradient of a soil having specific gravity as 2.67 and voids ratio as 0.67 is :
- (1) 2.0 (2) 1.0
(3) 4.0 (4) 2.5
- 26 Select the correct statement.
- (1) The greater the viscosity, the greater is permeability.
(2) The greater the unit weight, the greater is permeability.
(3) The greater the unit weight, the smaller is permeability.
(4) Unit weight does not affect permeability.
- 27 The phenomenon when soil loses its shear strength due to oscillatory motion is known as :
- (1) Consolidation (2) Shear failure
(3) Liquefaction (4) Sloughing
- 28 Degree of consolidation is :
- (1) directly proportional to time and inversely proportional to drainage path
(2) directly proportional to time and inversely proportional to square of drainage path
(3) directly proportional to drainage path and inversely proportional to time
(4) directly proportional to square of drainage path and inversely proportional to time
- 29 The shear strength of a soil :
- (1) is directly proportional to the angle of internal friction of the soil
(2) is inversely proportional to the angle of internal friction of the soil
(3) decreases with increase in normal stress
(4) decreases with decrease in normal stress
- 30 A vertical retaining wall retains a $C-\phi$ (ϕ) backfill with a surcharge of uniform intensity q per unit area. The depth Z_0 where the active earth pressure is zero, is given by
- (1) q/γ (2) $\frac{2C'}{\gamma} \tan \alpha' - q/\gamma$
(3) $\frac{2C'}{\gamma} \tan \alpha' + q/\gamma$ (4) $\frac{2C'}{\gamma} \tan \alpha'$

- 31 The ratios of pressure between the points X and Y located respectively at depths 0.5 m and 2 m below a constant level of water in a container is :
- (1) 1 : 2 (2) 1 : $\sqrt{2}$
 (3) 1 : 16 (4) 1 : 4
- 32 A vertical rectangular plane surface is submerged in water such that its top and bottom surfaces are 1.5 m and 6.0 m respectively below the free surface. The position of center of pressure below the free surface will be at a distance of :
- (1) 3.75 m (2) 4.0 m
 (3) 4.2 m (4) 4.5 m
- 33 A stone weighs 450 N in air and 250 N in water. The volume of the stone is :
- (1) 0.0204 m³ (2) 0.204 m³
 (3) 1.0204 m³ (4) 1.0402 m³
- 34 The metacentric height of a floating body :
- (1) Is the distance between metacentre and the centre of buoyancy
 (2) Is the same about longitudinal and transverse axis
 (3) Is the distance between the metacentre and the centre of gravity
 (4) Is the height of centre of buoyancy
- 35 A stream function is defined by the expression $\phi = 2X^2 - Y^3$. Calculate the components of velocity at point P (X = 3, Y = 1).
- (1) -3, -12 (2) +3, +12
 (3) +3, +1 (4) + 12, -1
- 36 The hydraulic gradient line represents the variation of :
- (1) Datum head in the direction of flow
 (2) Velocity head in the direction of flow
 (3) Piezometric head in the direction of flow
 (4) Total energy in the direction of flow
- 37 If H is the head, the discharge through a V-notch varies as :
- (1) $H^{1/2}$ (2) $H^{3/2}$
 (3) $H^{5/2}$ (4) $H^{5/8}$

38. In laminar flow, the shear stress distribution for a fluid flowing in between the parallel plates, both at rest, is :
- (1) constant over the cross section
 - (2) parabolic distribution across the section
 - (3) zero at the mid plane and varies linearly with distance from mid plane
 - (4) zero at plates and increases linearly to midpoint
39. With the same cross-sectional area and immersed in same turbulent flow, the largest total drag will be on :
- (1) a circular disc of plate held normal to flow
 - (2) a sphere
 - (3) a cylinder
 - (4) a streamlined body
40. Lysimeter is used for the determination of :
- (1) Transpiration
 - (2) Evapo-transpiration
 - (3) Infiltration
 - (4) Pan Coefficient
41. In the derivation of unit hydrograph the flood hydrograph used should have the duration of rainfall as :
- (1) 10% of basin lag
 - (2) 20% to 30% of basin lag
 - (3) 50% of basin lag
 - (4) 60% of basin lag
42. The rainfall on five successive days were measured as 100 mm, 80 mm, 60 mm, 40 mm and 20 mm respectively. If the infiltration index or the storm loss rate for the catchment area is earlier estimated as 50 mm/day, the total surface run off will be :
- (1) 50 mm
 - (2) 60 mm
 - (3) 90 mm
 - (4) 140 mm
43. The scour depth as per Lacey's theory is given as follows (where q is the discharge intensity and f is the silt factor) :
- (1) $R = 1.35 (q^2/f)^{1/3}$
 - (2) $R = 1.35 (q/f^2)^{1/3}$
 - (3) $R = 1.35 (f/q^2)^{1/3}$
 - (4) $R = 1.35 (f^2/q)^{1/3}$
44. For a flood control reservoir, the effective storage is equal to :
- (1) useful storage – valley storage
 - (2) useful storage + surcharge storage
 - (3) useful storage + surcharge storage + valley storage
 - (4) useful storage + surcharge storage – valley storage

45 The silt factor in Lacey's theory is given as :

- (1) $f = 4.75 \sqrt{m_r}$ (2) $f = 7.45 \sqrt{m_r}$
(3) $f = 1.76 \sqrt{m_r}$ (4) $f = 1.56 \sqrt{m_r}$

where, m_r is the average particle size in mm.

46 Modulus of rigidity is defined as the ratio of :

- (1) longitudinal stress to longitudinal strain
(2) shear stress to shear strain
(3) stress to strain
(4) stress to volumetric strain

47 If M is bending moment, I is moment of inertia, R is radius of curvature, E is modulus of elasticity, σ is bending stress, y is the distance from neutral axis, the flexure formula is :

- (1) $\frac{M}{I} = \frac{y}{\sigma} = \frac{E}{R}$ (2) $\frac{M}{I} = \frac{\sigma}{y} = \frac{R}{E}$
(3) $\frac{I}{M} = \frac{\sigma}{y} = \frac{R}{E}$ (4) $\frac{M}{I} = \frac{\sigma}{y} = \frac{E}{R}$

48 Purlins are supported on the :

- (1) Principal rafter (2) Common rafter
(3) Bottom chord (4) Base plate

49 Effective length of a weld is equal to :

- (1) overall length - weld size
(2) overall length - throat thickness overall
(3) overall length - 2 × weld size
(4) length - 2 × throat thickness

50 In a grillage footing the beams in each tier are spaced such that the minimum spacing between the flanges of the two consecutive beams is not less than :

- (1) 50 mm (2) 75 mm
(3) 100 mm (4) 150 mm

- 51 For a bridge having span more than 150 m, the recommended type of bridge is :
- (1) Riveted Plate Girder Bridge
 - (2) Welded Plate Girder Bridge
 - (3) Suspension Bridge
 - (4) Truss Girder Bridge
- 52 A beam of rectangular cross-section is 100 mm wide and 200 mm deep. If the section is subjected to a shear force of 20 kN, then the maximum shear stress in the section is :
- (1) 1 N/mm²
 - (2) 1.125 N/mm²
 - (3) 1.33 N/mm²
 - (4) 1.5 N/mm²
- 53 The relation between modulus of elasticity E, bulk modulus K, Poisson's ratio $1/m$ is :
- (1) $E = 3K (1 - 2/m)$
 - (2) $E = 2K (1 - 3/m)$
 - (3) $K = 3E (1 - 2/m)$
 - (4) $K = 2E (1 - 3/m)$
- 54 For the portions of a simply supported beam, over which uniformly distributed load is acting, the bending moment diagram will consist of :
- (1) Inclined lines
 - (2) Third degree polynomials
 - (3) Fourth degree polynomials
 - (4) Parabolic lines
- 55 The moment of inertia of a rectangle of width b and depth d, about an axis XX passing through its centre of gravity and parallel to the ends, is given as :
- (1) $I_{xx} = 1/12 db^3$
 - (2) $I_{xx} = 1/12 bd^3$
 - (3) $I_{xx} = 1/64 bd^3$
 - (4) $I_{xx} = 1/32 db^3$
- 56 The carry over factor in a prismatic member whose far end is fixed is :
- (1) 0
 - (2) 1/2
 - (3) 3/4
 - (4) 1
- 57 The heaviest I-section for same depth is :
- (1) ISMB
 - (2) ISLB
 - (3) ISHB
 - (4) ISWB

58 The maximum deflection of a fixed beam with central point load W is given as equal to :

(1) $\frac{WL^4}{192EI}$

(2) $\frac{WL^3}{192EI}$

(3) $\frac{WL^3}{384EI}$

(4) $\frac{WL^4}{384EI}$

59 The number of equations required to obtain axial force in the members of a statically determinate plane frame is :

(1) 2

(2) 3

(3) 4

(4) 6

60 For a standard 45° fillet, the ratio of size of fillet to throat thickness is :

(1) 1 : 1

(2) 1 : 1.414

(3) 1.414 : 1

(4) 2 : 1

61 A cantilever beam of rectangular cross-section is subjected to a concentrated load W at its free end. If the width of the beam is doubled, the deflection at the free end as compared to the earlier case will be :

(1) 16 times

(2) 8 times

(3) 2 times

(4) Half

62 Bearing stiffener in a plate girder is used to :

(1) transfer the load from the top flange to the bottom one

(2) prevent buckling of web

(3) decrease the effective depth of web

(4) prevent excessive deflection

63 In a fixed beam carrying a uniformly distributed load W over the whole span, two points of contraflexure occur. They are equidistant from the centre of the span and this distance is :

(1) $\frac{L}{3}$

(2) $\frac{L}{\sqrt{3}}$

(3) $\frac{L}{2\sqrt{3}}$

(4) $\frac{2L}{\sqrt{3}}$

- 71 The minimum cement content in moderately exposed reinforced concrete with normal weight aggregates of 20 mm nominal maximum size is :
- (1) 220 kg/m³ (2) 240 kg/m³
(3) 280 kg/m³ (4) 300 kg/m³
- 72 For lightly reinforced sections in slabs, beams, columns etc. the slump should be :
- (1) 15-25 mm (2) 25-75 mm
(3) 50-100 mm (4) 75-100 mm
- 73 The minimum diameter of longitudinal bars in a column is :
- (1) 6 mm (2) 8 mm
(3) 12 mm (4) 16 mm
- 74 In a critical section of a beam :
- (1) The full strength of steel in tension is not being utilised
(2) The full strength of concrete in compression is not being utilised
(3) The stresses developed in steel and concrete will simultaneously be the same as assumed in design
(4) The concrete will reach its maximum allowable stress earlier than steel
- 75 In a reinforced concrete beam the distribution of shear stress is :
- (1) Parabolic over and below the neutral axis
(2) Parabolic over neutral axis and rectangular below neutral axis
(3) Rectangular over neutral axis and parabolic below neutral axis
(4) Rectangular over and below neutral axis
- 76 The minimum spacing of stirrups is :
- (1) 6 cm (2) 10 cm
(3) 12 cm (4) 15 cm
- 77 It is usual not to provide thickness of floor slabs in buildings less than :
- (1) 7.5 cm (2) 10 cm
(3) 12.5 cm (4) 15 cm

- 78 A doubly reinforced beam is used when :
- (1) Extra safety is required
 - (2) Large moment is experienced by the beam
 - (3) Beam experiences tension in top as well as bottom fibres
 - (4) Depth and breadth of the beam have to be restricted for reason of appearance etc.
- 79 The neutral axis of a T-beam :
- (1) Always passes through the flange area
 - (2) Always passes through the rib area
 - (3) Is always at the junction of the rib and the flange
 - (4) Can exist anywhere in the section of beam
- 80 In the heel slab of a cantilever retaining wall, main reinforcement is provided at :
- (1) Top of slab
 - (2) Bottom of slab
 - (3) Centre of slab
 - (4) Sides of slab
- 81 For one storeyed buildings in town the minimum residual pressure at ferrule point for direct supply should be :
- (1) 3 m
 - (2) 5 m
 - (3) 7 m
 - (4) 10 m
- 82 The distribution mains are designed for :
- (1) maximum daily demand
 - (2) maximum hourly demand
 - (3) average daily demand
 - (4) maximum hourly demand on maximum day
- 83 For growing towns and cities having vast scope for expansion, the method of forecasting population, mostly applicable, is :
- (1) Incremental increase method
 - (2) Geometrical increase method
 - (3) Graphical method
 - (4) Logistic method
- 84 The standard rate of filtration through a rapid sand filter is usually :
- (1) 50-60 litre per minute per m^2
 - (2) 80-100 litre per minute per m^2
 - (3) 120-150 litre per minute per m^2
 - (4) 150-180 litre per minute per m^2

- 85 The effective size of sand particles used in slow sand filters is :
- (1) 0.25 to 0.35 mm (2) 0.35 to 0.60 mm
(3) 0.60 to 1.00 mm (4) 1.00 to 1.80 mm
- 86 The detention period usually adopted in grit chambers is :
- (1) 30 seconds (2) 60 seconds
(3) 60 minutes (4) 120 minutes
- 87 The hydraulic retention time in extended aeration activated sludge systems is :
- (1) 4 - 5 hours (2) 4 - 6 hours
(3) 8 - 10 hours (4) 12 - 24 hours
- 88 The hydraulic loading rate of a high rate trickling filter, including recirculation, in $m^3/m^2/day$ is :
- (1) 1-4 (2) 10-40
(3) 40-100 (4) 100-200
- 89 The average daily per capita contribution of BOD_5 is :
- (1) 15 grams (2) 30 grams
(3) 45 grams (4) 60 grams
- 90 Laying of sewers is usually done with the help of :
- (1) a theodolite
(2) a compass
(3) sight rails and boning rods
(4) a plane table
- 91 For a pavement design the recommended safe lateral coefficient of friction is :
- (1) 1.5 (2) 0.15
(3) 15 (4) 1/15
- 92 Stopping Sight Distance is always :
- (1) less than overtaking sight distance
(2) equal to overtaking sight distance
(3) more than overtaking sight distance
(4) equal to lag distance

- 93 The value of ruling gradient as per IRC in plains is :
- (1) 1 in 10 (2) 1 in 15
(3) 1 in 25 (4) 1 in 30
- 94 The maximum superelevation on hill roads should not exceed :
- (1) 8 % (2) 9 %
(3) 10 % (4) 11 %
- 95 The distance travelled by the vehicle during the total reaction time is known as :
- (1) Braking distance (2) Lag distance
(3) Stopping distance (4) Sight distance
- 96 Select the correct statement :
- (1) Traffic volume should always be more than traffic capacity
(2) Traffic capacity should always be more than traffic volume
(3) Spot speed is the average speed of a vehicle at a specified section
(4) 85th percentile speed is more than 98th percentile speed
- 97 Bankelman beam deflection method is used for design of :
- (1) Rigid overlay on rigid pavement
(2) Flexible overlay on flexible pavement
(3) Rigid overlay on flexible pavement
(4) Flexible overlay on rigid pavement
- 98 Bituminous surfacing done on already existing impervious pavement, is known as :
- (1) Prime coat (2) Seal coat
(3) Tack coat (4) Wear coat
- 99 Desire Lines are plotted in :
- (1) Traffic volume studies (2) Speed studies
(3) Accident studies (4) Origin and Destination studies
- 100 The best angle in angle parking, considering the road obstruction and the convenience of driver, is :
- (1) 30 degree (2) 45 degree
(3) 60 degree (4) 90 degree

SPACE FOR ROUGH WORK

