



Booklet No. :

VSS1

Civil Engineering

Duration of Test : 2 Hours

Max. Marks : 100

Hall Ticket No.

--	--	--	--	--	--	--	--	--	--

Name of the Candidate : _____

INSTRUCTIONS

1. This Question Booklet consists of **100** multiple choice objective type questions to be answered in **2** hours.
2. Every question in this booklet has 4 choices marked (A), (B), (C) and (D) for its answer.
3. Each question carries **one** mark. There are no negative marks for wrong answers.
4. This Booklet consists of **16** pages. Any discrepancy or any defect is found, the same may be informed to the Invigilator for replacement of Booklet.
5. Answer all the questions on the OMR Answer Sheet using **Blue/Black ball point pen only**.
6. Before answering the questions on the OMR Answer Sheet, please read the instructions printed on the OMR sheet carefully.
7. OMR Answer Sheet should be handed over to the Invigilator before leaving the Examination Hall.
8. Calculators, Pagers, Mobile Phones, etc., are not allowed into the Examination Hall.
9. No part of the Booklet should be detached under any circumstances.
10. The seal of the Booklet should be opened only after signal/bell is given.

VSS1-A



CIVIL ENGINEERING (CE)

PART – A

1. A tapered circular section is of diameter 10 mm gradually increasing to 40 mm over an axial length of 200 mm. It is subjected to a pull P . Let the elongation be Δ_1 . Another circular section made up of the same material of uniform diameter 20 mm is subjected to same pull P . If its elongation Δ_2 . Which is of the following statement true ?
(A) $\Delta_1 > \Delta_2$ (B) $\Delta_1 < \Delta_2$ (C) $\Delta_1 = \Delta_2$ (D) $\Delta_1 = 0.5\Delta_2$
2. A load of 100 kN suddenly acts on a bar of 100 mm² area of cross section and of length 300 mm. Maximum stress developed in the bar is
(A) 10 MPa (B) 20 MPa (C) 30 MPa (D) 40 MPa
3. On two perpendicular planes passing through a point there are complimentary shear stresses ± 100 N/mm². The normal stress on these planes are Zero's, then maximum principal stress at the point is
(A) 200 N/mm² (B) Zero (C) 100 N/mm² (D) 50 N/mm²
4. The value of E in terms of G and K is
(A) $9KG/(K+G)$ (B) $9KG/(K+3G)$
(C) $9KG/(G+3K)$ (D) $9KG/(6K+6G)$
5. In a thin cylindrical shell (D/t) ratio is 50. It is subjected to an internal fluid pressure of 2.5 MPa. What is the maximum hoop tension developed in the cylinder ?
(A) 62.5 (B) 50 (C) 75 (D) 25
6. A beam of 10 m long is simply supported at the ends. It carries a UDL of 10 kN/m upto a distance of 3 m from either end. The shear force at the centre of the beam is
(A) 0.0 (B) 30 kN (C) 10.0 kN (D) 50.0 kN
7. A beam of uniform strength means the quantity _____ is constant throughout its length.
(A) P/A (B) $\frac{Fay}{Ib}$ (C) M/Z (D) TR/J
8. A simply supported beam carries a central concentrated load W. Area of cross section is 300 mm². The shear stress at the neutral axis layer is 5 N/mm². What is the magnitude of W in kN ?
(A) 1000 (B) 2000 (C) 100 (D) 3000
9. A cantilever beam of length 4 metres carries a UDL of 6 kN/m throughout its length. It is propped at the end such that the levels of the free end is the same as that of the fixed end. What is the magnitude of the propped reaction ?
(A) 3 kN (B) 6 kN (C) 9 kN (D) 12 kN

10. A strut of length 5 m is fixed at one end and the other end is free. The Euler's buckling load is 50 kN. If both the ends of the strut are fixed, what will be the Euler's buckling load in kN ?
 (A) 500 kN (B) 250 kN (C) 800 kN (D) 1000 kN
11. Elastic strain energy due to direct force is given by
 (A) $P^2L/2AE$ (B) $P^2L/2G$ (C) $P^2L/2EI$ (D) P^2L/G
12. A fixed beam settles at one end by δ , if EI is the flexural rigidity of the beam, the fixed end moments at the ends be
 (A) $EI \delta/L^2$ (B) $3EI \delta/L^2$ (C) $4EI \delta/L^2$ (D) $6EI \delta/L^2$
13. A continuous beam PQRS is supported over three equal spans $PQ=QR=RS$. Each span carries a concentrated load W at the centre. If the support moment at Q is -100 kNm, what is the support moment at R
 (A) -100 kNm (B) $+100$ kNm (C) -50 kNm (D) $+50$ kNm
14. For the T section the shear centre is located at
 (A) Centre of the horizontal flange (B) Centre of the vertical web
 (C) At the centroid of the section (D) Outside the T section
15. A concentrated load W moves over the span l . The equivalent uniformly distributed load is
 (A) $2W/l$ (B) W/l (C) $W/2l$ (D) $W/4l$
16. A propped cantilever beam is subjected to uniformly distributed load W/m . What is the indeterminate moment at the support is ?
 (A) $Wl^2/2$ (B) $Wl^2/8$ (C) $Wl^2/12$ (D) $Wl^2/10$
17. What is the degree of indeterminacy of a two span continuous beam, if the end support is fixed and the other two supports are simply supported ?
 (A) 1 (B) 2 (C) 3 (D) 4
18. The shape factor is maximum for the following cross-section :
 (A) Rectangular section (B) Circular section
 (C) I section (D) Triangular section
19. The mode of failure in the fillet weld is
 (A) Shear (B) Bearing (C) Tension (D) Compression
20. Load on connection is concentric for
 (A) Single cover butt joint (B) Double cover butt joint
 (C) Stiffened seated connection (D) Framed connection

21. The depth of plate girder is given by
 (A) $(Mk^2/Fy)^{0.33}$ (B) $(M/Fyk^2)^{0.33}$ (C) $(Mk^2/Fy)^{0.5}$ (D) (Mk^2/Fy)
 Where M, k, Fy have their usual meanings.
22. The surge loads in gantry girder are
 (A) Longitudinal loads (B) Traverse loads
 (C) Lateral loads (D) Wind loads
23. The principal rafter of a roof truss with purlins placed at intermediate parts on panel length can be analysed by
 (A) method of joints (B) method of sections
 (C) graphical method (D) moment distribution method
24. The deflections under working loads are computed using
 (A) elastic theory (B) plastic theory
 (C) ultimate strength theory (D) fracture mechanics
25. The connections subject to reversal of stresses due to passage of live load in case of bridges are designed for the
 (A) sum of minimum forces and reversal of forces
 (B) sum of maximum forces and reversal of forces
 (C) difference of maximum force and reversal of forces
 (D) impact factor times the difference of maximum forces and reversal of forces
26. The best double angle section in case of compression member is
 (A) equal angles on the same side of the gusset plane
 (B) equal angles on opposite side of the gusset
 (C) unequal angles with short legs back to back
 (D) unequal angles with long legs back to back
27. Which one is not a possible mode of failure in case of tension members ?
 (A) Yielding of gross section (B) Rupture at the net section
 (C) Instability of the element (D) Block shear
28. The lacing bars in the built up columns are designed to resist a transverse shear equal to of the column axial load.
 (A) 1/40 (B) 1/60 (C) 1/30 (D) 1/10
29. The thickness of the column base plate is determined from
 (A) Shear strength of the plate (B) Flexural strength of the plate
 (C) Punching shear strength (D) Bearing strength of the plate

30. The stability of the beam depends on
 (A) Torsional stiffness (B) Flexural stiffness
 (C) Axial stiffness (D) Serviceability
31. The effective depth in a singly reinforced concrete beam is defined as the distance between the compression edge.
 (A) To the centre of compression steel (B) To the centre of tension steel
 (C) To the bottom edge of the beam (D) To the neutral axis of the beam
32. In case of reinforced concrete isolated footing the critical for bending moment is at
 (A) Zero distance from the face of the column
 (B) $(d/2)$ from the face of the column
 (C) d from the face of the column
 (D) $2d$ from the face of the column
33. In an RC slab, the maximum spacing main steel is specified to
 (A) Control the deflection
 (B) Control the cracking
 (C) Increase the ultimate strength
 (D) Increase the durability
34. In case of cantilever retaining wall, the maximum bending moment is found out using the earth pressure coefficient k_a where
 (A) $k_a=1/(1+\sin\phi)$ (B) $k_a=1/(1-\sin\phi)$
 (C) $k_a=(1+\sin\phi)/(1-\sin\phi)$ (D) $k_a=(1-\sin\phi)/(1+\sin\phi)$
35. The most efficient cross section in a roof truss is
 (A) Angle section (B) Circular section
 (C) Rectangular section (D) Tubular section
36. Match the following and pick the correct series :
 (i) Slope deflection method (1) Rotation factor
 (ii) Moment distribution method (2) Flexibility coefficient
 (iii) Kani's method (3) Kinematic redundant
 (iv) Matrix method (4) Carryover factor
 (i) (ii) (iii) (iv)
 (A) (1) (2) (3) (4)
 (B) (3) (4) (2) (1)
 (C) (2) (3) (4) (1)
 (D) (3) (4) (1) (2)

37. In a single bay, single storey frame with fixed ends and columns have the same values of moment of inertia, the displacement factor for the column is
 (A) -0.75 (B) -0.50 (C) -1.0 (D) $+1.0$
38. The following theorem is used in plastic analysis to compute the collapse load :
 (A) Upper bound theorem (B) Castigliano's theorem
 (C) Maxwell-Betti's theorem (D) Clapeyron's theorem
39. The short term deflection of a two way reinforced concrete slab depends on
 (A) the long span (B) the short span
 (C) the aspect ratio (D) coefficient of orthotropy
40. Match the following and pick the correct series :
 (i) End block (1) No tensile stress developed
 (ii) Type I (2) Pre-tensioned beam
 (iii) Transmission length (3) Elastic shortening
 (iv) Loss of pre-stress (4) Bursting tension
 (i) (ii) (iii) (iv)
 (A) (1) (2) (3) (4)
 (B) (2) (3) (4) (1)
 (C) (4) (1) (2) (3)
 (D) (1) (3) (2) (4)
41. At the time of transfer of pre-stress _____ losses occur.
 (A) no (B) instantaneous (C) time dependent (D) minor
42. The ultimate moment capacity of a simply supported PSC beam is determined using
 (A) Force and moment equilibrium conditions
 (B) Stress and strain relationship of concrete and steel
 (C) Moment equilibrium and compatibility condition
 (D) Force equilibrium alone
43. Creep is _____ dependent deformation due to _____ load.
 (A) Stress, dead (B) Strain, live
 (C) Time, sustained (D) Time, dead
44. The eccentric force induces an internal _____ which is opposite that caused by the external load.
 (A) Force (B) Shear force (C) Resilience (D) Moment

45. The laboratory test results of a soil sample are given below :
 Percentage of soil finer than 4.75 mm = 60
 Percentage of soil finer than 0.075 mm = 30
 Liquid Limit = 35%
 Plastic Limit = 27%
 The soil classification is
 (A) GM (B) SM (C) GC (D) SC
46. Terminal velocity of a falling body in the fluid medium is equal to
 (A) a maximum velocity with which body will fall
 (B) the maximum constant velocity with which body will fall
 (C) half of the maximum velocity with which body will fall
 (D) 2/3 times the maximum velocity with which body will fall
47. A saturated undisturbed sample from a clay strata has moisture content of 22.22% and specific weight of 2.7. Assuming $\gamma_w = 10 \text{ kN/m}^3$, the void ratio and the saturated unit weight of the clay, respectively are
 (A) 0.6 and 16.875 kN/m³ (B) 0.3 and 20.625 kN/m³
 (C) 0.6 and 20.625 kN/m³ (D) 0.3 and 16.975 kN/m³
48. According to Rankine's analysis, minimum depth of foundation is equal to
 (A) $\frac{q}{\gamma} \left(\frac{1 - \sin \phi}{1 + \sin \phi} \right)^2$ (B) $\frac{q}{\gamma} \left(\frac{1 + \sin \phi}{1 - \sin \phi} \right)^2$ (C) $\frac{q}{\gamma} \left(\frac{1 + \sin \phi}{1 - \sin \phi} \right)$ (D) $\frac{q}{\gamma} \left(\frac{1 - \sin \phi}{1 + \sin \phi} \right)$
49. The settlement of a footing resting on a sandy soil is
 (A) $D_f = \frac{D_p}{\left(\frac{B_p}{B_f} \right)}$ (B) $D_f = \frac{D_p}{\left(\frac{B_p}{B_f} \right)^2}$
 (C) $D_f = \frac{D_p}{\left(\frac{B_p [B_f + 30.48]}{B_f [B_p + 30.48]} \right)}$ (D) $D_f = \frac{D_p}{\left(\frac{B_p [B_f + 30.48]}{B_f [B_p + 30.48]} \right)^2}$
- where D_f and D_p are the depth of foundation and depth of the plate respectively. B_f and B_p are the width of the foundation and width of the plate respectively in cm.
50. A cyclic pile load test performed to determine the pile
 (A) Ultimate load capacity under repetition
 (B) Skin frictional resistance and base resistance separately
 (C) Skin frictional resistance
 (D) Tip resistance

51. The critical vertical depth H_c of free standing soil can be upto passive earth pressure, is given by

$$(A) \quad H_c = \frac{\gamma h}{2} \tan^2 \left(45 - \frac{\phi}{2} \right) \qquad (B) \quad H_c = \frac{\gamma h^2}{2} \tan^2 (45 - \phi)$$

$$(C) \quad H_c = \frac{4c}{\gamma \tan \left(45 - \frac{\phi}{2} \right)} \qquad (D) \quad H_c = \frac{4c}{\gamma \tan \left(45 + \frac{\phi}{2} \right)}$$

where 'c' is cohesion, 'γ' is the density of the soil, 'h' is the depth of filling and 'φ' is the angle of internal friction.

52. If the coefficient of active earth pressure, k_a is 1/3 then the coefficient of passive earth pressure is

(A) 1/3 (B) 3 (C) 3/2 (D) 1

53. The factor of safety with respect to friction for a soil for stability :

$$(A) \quad F_s = \frac{C + \sigma \tan \phi}{C_m + \sigma \tan \phi_m} \qquad (B) \quad F_s = \frac{C}{C_m}$$

$$(C) \quad F_s = \frac{\tan \phi}{\tan \phi_m} \qquad (D) \quad F_s = \frac{C + \tan \phi}{C_m + \tan \phi_m}$$

where F_s is the factor of safety, C_m and ϕ_m are mobilized cohesion and mobilized angle of internal friction and c and ϕ are the cohesion and angle of internal friction. σ is normal stress.

54. Compaction by vibratory roller is the best method of compaction in case of

(A) moist silty sand (B) well graded dry sand
(C) clay of medium compressibility (D) silt of high compressibility

55. An infinite fill is to be placed with a granular soil (bulk unit weight = 20 kN/m³) on a saturated clayey silt deposit (undrained shear strength = 25 kPa). Assuming undrained general shear failure and bearing capacity factor of 5.7. The maximum height (in m) of the fill at the point of failure is

(A) 7.125 (B) 5.0 (C) 0.7125 (D) 14.250

56. The velocity distribution across a section of a circular pipe having viscous flow is given by

$$(A) \quad u = U_{max} \left[1 - \left(\frac{r}{R} \right)^2 \right] \qquad (B) \quad u = U_{max} [R^2 - r^2]$$

$$(C) \quad u = U_{max} \left(1 - \frac{r}{R} \right)^2 \qquad (D) \quad u = U_{max} \left(1 - \frac{r}{R} \right)^{1/2}$$

57. The condition of static equilibrium for a floating body is

- (A) the metacentre M coincides with the center of gravity, G.
- (B) the metacentre M is below the center of gravity, G
- (C) the metacentre M is above the center of gravity, G
- (D) the center of buoyancy, B is above the center of gravity

58. The velocity components in x and y directions in terms of velocity Potential, ϕ are

- (A) $u = -\frac{\partial\phi}{\partial x}; v = \frac{\partial\phi}{\partial y}$
- (B) $u = \frac{\partial\phi}{\partial y}; v = \frac{\partial\phi}{\partial x}$
- (C) $u = \frac{\partial\phi}{\partial x}; v = \frac{\partial\phi}{\partial y}$
- (D) $u = -\frac{\partial\phi}{\partial x}; v = -\frac{\partial\phi}{\partial y}$

59. The Bernoulli's equation can take the form

- (A) $\frac{p_1}{\rho_1} + \frac{v_1^2}{2g} + z_1 = \frac{p_2}{\rho_2} + \frac{v_2^2}{2g} + z_2$
- (B) $\frac{p_1}{\rho_1 g} + \frac{v_1^2}{2} + z_1 = \frac{p_2}{\rho_2 g} + \frac{v_2^2}{2} + z_2$
- (C) $\frac{p_1}{\rho_1 g} + \frac{v_1^2}{2g} + g z_1 = \frac{p_2}{\rho_2 g} + \frac{v_2^2}{2g} + g z_2$
- (D) $\frac{p_1}{\rho_1 g} + \frac{v_1^2}{2g} + z_1 = \frac{p_2}{\rho_2 g} + \frac{v_2^2}{2g} + z_2$

60. The coefficient of velocity for an orifice is

- (A) $C_v = \sqrt{\frac{4x^2}{yH}}$
- (B) $C_v = \frac{2x}{\sqrt{4yH}}$
- (C) $C_v = \sqrt{\frac{x^2}{4y}}$
- (D) $C_v = \frac{\sqrt{4yH}}{3x}$

61. The loss of head due to sudden contraction of a pipe is equal to _____. Where C_c is coefficient of contraction and V_2 is the velocity of flow after contraction of pipe.

- (A) $\left(\frac{1}{C_c} - 1\right)^2 \frac{V_2^2}{2g}$
- (B) $\left(1 - \frac{1}{C_c}\right)^2 \frac{V_2^2}{2g}$
- (C) $\frac{1}{C_c} \left(1 - \frac{V_2^2}{2g}\right)$
- (D) $\left(\frac{1}{C_c} - 1\right)^2 \frac{V_2^2}{2g}$

62. Which one of the following is not valid for CPM ?

- (A) Activities are represented by arrows.
- (B) Emphasis is given to activities.
- (C) The beginning and end of an activity is denoted by nodes.
- (D) Uncertainties are allowed to exist.

63. The process in which differences between the plan and actual performance are reviewed after the project has started is known as
 (A) scheduling (B) controlling (C) levelling (D) smoothing
64. The three phases involved in the management of large projects are
 (A) scheduling, designing, operating (B) scheduling, operating, evaluating
 (C) planning, scheduling, evaluating (D) planning, scheduling, controlling
65. A dummy activity is required when
 (A) two or more activities having different ending events
 (B) two or more activities having the same starting events
 (C) the network contains two or more activities that have identical starting and ending events
 (D) two or more activities having the same ending events
66. The PERT is _____ approach.
 (A) deterministic (B) optimistic (C) probabilistic (D) pessimistic
67. The plan of a survey plotted to a scale of 10 m to 1cm is reduced in such a way that a line originally 10 cm long now measures 9 cm. The area of the reduced plan is measured as 81 cm². The actual area (m²) of the survey is
 (A) 10000 (B) 6561 (C) 1000 (D) 656
68. Removal of parallax may be achieved by
 (A) refocusing the Objective
 (B) refocusing the Eyepiece
 (C) refocusing the Eyepiece and objective
 (D) moving the shifting center
69. In case of angular measurements being more precise than the linear measurements, the transverse can be balanced by
 (A) graphical method (B) theodolite correction
 (C) Bowditch rule (D) Transit Rule
70. A decline of 3° east means
 (A) magnetic north is 3° east of true north
 (B) magnetic north is 3° west of true north
 (C) true north is 3° east of magnetic north
 (D) true south is 3° east of magnetic south

PART – B

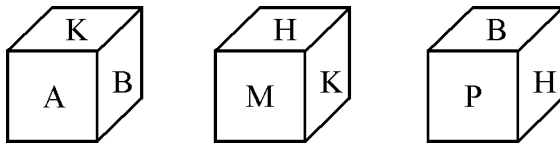
71. A sum of ₹ 700 has to be used to give seven cash prizes to the students of a school for their overall academic performance. If each prize is ₹ 20 less than its preceding prize, then what is the least value of the prize?

- (A) ₹ 30 (B) ₹ 40 (C) ₹ 60 (D) ₹ 80

72. In a class of 45 students, a boy is ranked 20th. When two boys joined, his rank was dropped by one. What is his new rank from the end ?

- (A) 25th (B) 26th (C) 27th (D) 28th

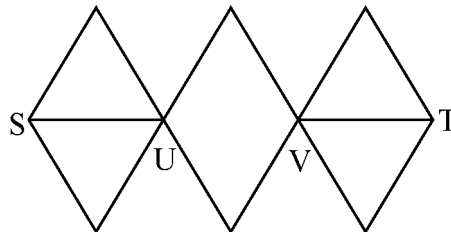
73. Three views of the cube are given below:



What is letter opposite to A?

- (A) H (B) P (C) B (D) M

74. With reference to the figure given below, the number of different routes from S to T without retracing from U and/or V, is



- (A) 3 (B) 6 (C) 9 (D) 18

75. Two sets of 4 consecutive positive integers have exactly one integer in common. The sum of the integers in the set with greater numbers is how much greater than the sum of the integers in the other set ?

- (A) 4 (B) 7 (C) 8 (D) 12

76. X can do a work in 10 days and Y in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is

- (A) $1/5$ (B) $2/5$ (C) $3/5$ (D) $4/5$

77. You're giving someone verbal feedback about some work they have completed which isn't up to standard. What should you do ?

- (A) Point out everything that they did wrong
 (B) Base your feedback on what you have heard from others
 (C) Criticize them for their poor work
 (D) Suggest where improvements can be made and agree on a plan

78. Which of the following will NOT help you to be more persuasive ?

- (A) Mirror body language and tone
 (B) Use words that the other person agrees with
 (C) Talk about your own interests and goals
 (D) Make your aims appear to put the other person at an advantage

79. 5, 12, 17, 29, 46, 75, 121, ?

- (A) 185 (B) 196
 (C) 192 (D) 188

80. 

- (A)  (B) 
 (C)  (D) 

81. Verve: Enthusiasm

- (A) Loyalty : Duplicity (B) Devotion : Reverence
 (C) Intensity : Colour (D) Eminence : Anonymity

82. Out of the natural numbers upto 127, how many are even numbers ?
(A) 62 (B) 63
(C) 64 (D) 65
83. Nurse Kemp has worked more night shifts in a row than Nurse Rogers, who has worked five. Nurse Miller has worked fifteen night shifts in a row, more than Nurses Kemp and Rogers combined. Nurse Calvin has worked eight night shifts in a row, less than Nurse Kemp. How many night shifts in a row has Nurse Kemp worked?
(A) Eight (B) Nine (C) Ten (D) Eleven
84. Find the odd number among the following :
(A) 7 (B) 11 (C) 27 (D) 29
85. The school principal has received complaints from parents about bullying in the school yard during recess. He wants to investigate and end this situation as soon as possible, so he has asked the recess aides to watch closely. Which situation should the recess aides report to the principal ?
(A) A girl is sitting glumly on a bench reading a book and not interacting with her peers.
(B) Four girls are surrounding another girl and seem to have possession of her backpack.
(C) Two boys are playing a one-on-one game of basketball and are arguing over the last basket scored.
(D) Three boys are huddled over a handheld video game, which isn't supposed to be on school grounds.
86. 'n' is a natural number. If n^5 is odd, which of the following is true ?
(I) n is odd. (II) n^3 is odd. (III) n^4 is even.
(A) I only (B) II only (C) III only (D) I and II
87. What will be the next number in the sequence 6, 11, 21, 36, 56, ___ ?
(A) 76 (B) 72 (C) 81 (D) 91

88. Here are some words translated from an artificial language.
 dionot means oak tree
 blyonot means oak leaf
 blycrin means maple leaf
 Which word could mean "maple syrup"?
- (A) blymuth (B) hupponot (C) patricrin (D) crinweel
89. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D ?
- (A) Grandfather (B) Grandmother (C) Daughter (D) Granddaughter
90. Two bus tickets from city A to B and three tickets from city A to C cost ₹ 77 but three tickets from city A to B and two tickets from city A to C cost ₹ 73. What are the fares for cities B and C from A?
- (A) ₹ 4, ₹ 23 (B) ₹ 13, ₹ 17 (C) ₹ 15, ₹ 14 (D) ₹ 17, ₹ 13
91. There are six persons A, B, C, D, E and F. C is the brother of F. B is the brother of E's husband. D is the father of A and grandfather of F. There are two fathers, three brothers and a mother in the group. Who is the mother?
- (A) A (B) B (C) C (D) E
92. If $Z = 52$ and $ACT = 48$, then BAT will be equal to
- (A) 39 (B) 41 (C) 44 (D) 46
93. A tailor had a number of shirt pieces to cut from a roll of fabric. He cuts each roll of equal length into 10 pieces. He cuts at the rate of 45 per minute. How many rolls would be cut in 24 minutes ?
- (A) 32 rolls (B) 54 rolls (C) 108 rolls (D) 120 rolls
94. 4 men & 6 women can complete a work in 8 days, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it ?
- (A) 35 days (B) 40 days (C) 30 days (D) 25 days

95. In a class of 100 students, 50 students passed in Mathematics and 70 passed in English, 5 students failed in both Mathematics and English. How many students passed in both the subjects ?
- (A) 50 (B) 40 (C) 35 (D) 25
96. A man on tour travels first 160 km at 64 km/hr and the next 160 km at 80 km/hr. The average speed for the first 320 km of the tour is
- (A) 71.11 km/hr (B) 36 km/hr (C) 71 km/hr (D) 36.33 km/hr
97. The length of a rectangular field is thrice its breadth. If the cost of cultivating the field at ₹ 367.20 per square metre is ₹ 27,540, then what is the perimeter of the rectangle ?
- (A) 47 m (B) 39 m (C) 52 m (D) 40 m
98. In an examination, a student was asked to find $\frac{3}{14}$ of a certain number. By mistake, he found $\frac{3}{4}$ of it. His answer was 150 more than the correct answer. Find the given number.
- (A) 190 (B) 250 (C) 280 (D) 350
99. A cube with all the sides painted was divided into small cubes of equal measurement. The side of a small cube is exactly one fourth as that of the big cube. Therefore, the number of small cubes with only one side painted is
- (A) 64 (B) 36 (C) 24 (D) 12
100. Shyam walks 5 km towards East and then turns left and walks 6 km. Again he turns right and walks 9 km. Finally he turns to his right and walks 6 km. How far is he from the starting point ?
- (A) 26 km (B) 21 km (C) 14 km (D) 9 km

SPACE FOR ROUGH WORK