




B.E (CIVIL)



 1380153		PARTICULARS TO BE FILLED IN BY THE CANDIDATE	
		Name of the Candidate	
Paper Code	XBEC/138	Roll Number	
		Application Number	
Question Booklet Number	1380153	Name of the Centre	
		Centre Code	
Question Paper Series	A	Date of the Test	
		Signature of the Candidate	

Maximum Marks: 100

Test Duration: 02 hours

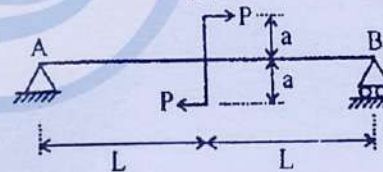
INSTRUCTIONS

- Complete all entries on the cover page and put your signature in the space provided.
- Use only Ball Point Pen (black / blue) for making entries in the Question Booklet and the OMR Answer Sheet.

SEAL

1. The Question Booklet consists of 16 pages and contains 100 multiple choice questions (MCQs). Count the number of pages and questions before attempting the questions. Discrepancy, if any, must immediately be brought to the notice of the Invigilator.
2. The Test duration as specified above shall be reckoned from the moment of distribution of the Question Booklets.
3. Blank space in the Question Booklet may be used for rough work.
4. Each MCQ is followed by four alternative answers. Select only **one** answer, which you consider as the most appropriate. Shade the relevant circle against the corresponding question number on the OMR Answer Sheet. Selecting more than one answer for a question, even if one of the selected answers is correct, would result in its being treated as an incorrect answer.
5. Answers for MCQs should **ONLY** be marked on the OMR Answer Sheet. No answer should be written/marked on the Question Booklet.
6. The candidate is **required** to separate the original OMR Answer Sheet and its carbonless copy at the perforation carefully after the Admission Test. He / She shall hand over the original OMR Answer Sheet and Admit Card to the Invigilator before leaving his/her seat and take with him/her the carbonless copy of the OMR Answer Sheet and the Question Booklet.
7. Failure to handover the original OMR Answer Sheet will lead to cancellation of the candidature.

1. The limit of proportionality is applicable more in case of
 - (a) Concrete
 - (b) Wood
 - (c) Cast iron
 - (d) Mild steel
2. The buckling load of column pinned at both ends is 10kN. If the ends are fixed, the buckling load changes to
 - (a) 40 kN
 - (b) 25 kN
 - (c) 5 kN
 - (d) 20 kN
3. Toughness of a material is its ability to absorb energy in
 - (a) Plastic range of material
 - (b) Elastic range of material
 - (c) Ultimate range of material
 - (d) Strain hardening range of material
4. The point in the stress-strain curve at which the strain increases considerably without any increase in stress is called the
 - (a) The limit of proportionality
 - (b) Elasticity limit
 - (c) Upper yield point
 - (d) Lower yield point
5. The principal stresses at a point in a stressed body are 150 kN/m^2 (tensile) and 50 kN/m^2 (compressive), then maximum shear stress at this point will be
 - (a) 100 kN/m^2
 - (b) 150 kN/m^2
 - (c) 200 kN/m^2
 - (d) 250 kN/m^2
6. For the beam shown below the reaction at A will be



- (a) $\frac{Pa}{L}$
 - (b) $\frac{2Pa}{L}$
 - (c) $\frac{Pa}{2L}$
 - (d) $\frac{4Pa}{L}$
7. The Young's modulus of a material is 210 GN/m^2 and its modulus of rigidity is 84 GN/m^2 , its Poisson's ratio is :
 - (a) 0.20
 - (b) 0.30
 - (c) 0.25
 - (d) 0.15
8. A simply supported 400 mm deep and 200 mm wide timber beam can carry over a span of 4 m. If the maximum permissible bending stress for the timber is 2 MPa, the maximum uniformly distributed load is
 - (a) 6.54 kN/m
 - (b) 7.54 kN/m
 - (c) 5.34 kN/m
 - (d) 8.34 kN/m



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1380153-5

ALIGARH COACHING
CENTRE

9. Which of the following steel section has highest structural efficiency

- (a) Channel section (b) T-section
(c) Angle section (d) I-section

10. If concrete has to be made for casting a beam having dimension 200mm×400mm, clear cover of 25 mm and minimum distance between bars is 75 mm. What is the maximum nominal size of aggregate that can be used in the concrete mix design

- (a) 40 mm (b) 30 mm
(c) 20 mm (d) 10 mm

11. A square column section of 300mm×300mm is reinforced with four steel bars of grade Fe415, each of 25 mm diameter. Using M25 concrete mix, an axial load on the column section with minimum eccentricity as per IS 456:2000 using limit state method can be applied is

- (a) 1445.95 kN (b) 1426.32 kN
(c) 1623.64 kN (d) 1601.55 kN

12. The maximum diameter of reinforcement bar in slabs as per IS:456-2000 should not exceed (where t is the thickness of the slab)

- (a) $t/2$ (b) $t/6$
(c) $t/4$ (d) $t/8$

13. Transverse reinforcement in column is provided for the reasons

- (a) to prevent buckling of longitudinal bars (b) to resist diagonal tension due to transverse shear
(c) to impart ductility (d) all of the above

14. In a spirally reinforced column substantial ductility is achieved prior to the collapse of the column. The collapse ultimately takes place when the spiral reinforcement

- (a) yield in tension (b) fails in shear
(c) fails in bending (d) fails in compression

15. Centre of the Mohr's circle lies at origin if

- (a) the principal stresses are both tensile (b) the shear stress is zero
(c) the principal stresses are both compressive (d) the principal stresses are equal and opposite

16. Match the following :

1. modulus of elasticity
2. net area of section
3. gross area of section
4. modulus of section

- A. Compression members
B. Tension members
C. Bending members
D. Steel

- (a) 1-D, 2-B, 3-A, 4-C
(c) 1-D, 2-C, 3-A, 4-B

- (b) 1-C, 2-D, 3-A, 4-B
(d) 1-A, 2-B, 3-C, 4-D

17. Splitting or shearing out of plates occurs when

- (a) rivets are strongest than plates
(b) rivets may have been placed at a lesser end distance that required as per code
(c) rivets are crushed around half the circumference
(d) plates are stronger than rivets

18. In an I-beam the shear force is primarily resisted by

- (a) whole cross-section (b) top flange
(c) web only (d) bottom flange

19. A truss which undergoes rigid body translation for an arbitrary load is called as a

- (a) determinate structure (b) statically unstable structure
(c) statically stable structure (d) geometrically unstable structure

20. A plate used for marking of holes or joints in structural fabrication is called as a

- (a) template (b) gusset plate
(c) base plate (d) shoe plate

21. Unsoundness in cement is due to

- (a) free lime and magnesia (b) silica
(c) iron oxide (d) alumina

22. An arrangement supporting an existing structure by providing supports underneath is known as

- (a) lifting (b) underpinning
(c) scaffolding (d) jacking

23. As per Indian Standards, the door designated as I0DT20 means

- (a) A single shutter door of 1m×2m (b) A single shutter door of 2m×1m
(c) A double shutter door of 2m×2m (d) A double shutter door of 1m×2m

24. Match List-I with List-II and select the correct answer code :

List-I
Defects in painted surface

- A. Blistering
B. Flaking
C. Flashing
D. Wrinkling

List-II
Due to

1. Poor workmanship
2. Excessively thick paint
3. Poor adhesion
4. Entrapped water vapour

codes :

- (a) A-4 B-3 C-1 D-2
(c) A-4 B-2 C-3 D-1

- (b) A-3 B-2 C-4 D-1
(d) A-1 B-2 C-3 D-4

25. If the brick masonry bond consists of three stretchers and one header in every course, the bond is known as
 (a) English cross bond (b) English garden wall bond
 (c) Flemish double bond (d) Flemish garden wall bond
26. The daily per capita consumption of water apparently increases with
 1. Higher standard of living of the people
 2. Availability of sewerage in the city
 3. Metered water
 4. Wholesome and potable water quality of water
 The correct combination is
 (a) 1, 2 and 3 (b) 2, 3 and 4
 (c) 1, 3 and 4 (d) 1, 2 and 4
27. The controlling design parameter in the design of all settling tank is
 (a) depth (b) overflow rate
 (c) detention time (d) percent removal of suspended solids
28. Which of the following is also known as tree system of water distribution?
 (a) dead end system (b) grid iron system
 (c) ring system (d) radial system
29. The settling velocity of inorganic particles in a sedimentation tank of water treatment plant is governed by
 (a) Dupit's Law (b) Stoke's Law
 (c) Darcy's Law (d) Chezy's Law
30. The most widely used pump for lifting sewage water is
 (a) Centrifugal pump (b) Reciprocating pump
 (c) Pneumatic pump (d) Air Pressure pump
31. An earthquake acceleration of $0.1g$ acting vertically downward causes in a gravity dam
 (a) an increase in the weight of dam by 10%
 (b) a reduction in the unit weight of concrete only by 10%
 (c) a decrease in the unit weights of concrete and water by 10%
 (d) increase in the uplift pressure by 10%
32. In a Sarda type canal fall, the energy dissipation is by
 (a) a free hydraulic jump (b) friction blocks only
 (c) hydraulic jump assisted by baffle blocks (d) a water cushion
33. If the duty for a base period of 120 days is 1500 hectares / cumec, then the delta for the crop will be
 (a) 660 mm (b) 665 mm
 (c) 690 mm (d) 680 mm

34. The discharge through a trapezoidal channel is maximum, when
 (a) half of top width = sloping side (b) top width = half of sloping side
 (c) top width = 1.5 times sloping side (d) top width = 2.5 times the sloping side
35. The difference in pressure head, measured by a mercury water differential manometer for a 20cm difference of mercury level will be
 (a) 2.72 m (b) 2.52 m
 (c) 2.0 m (d) 0.2 m
36. Continuity equation
 (a) express the relation between energy and work
 (b) relate the momentum per unit volume for two points on a streamline
 (c) relates mass rate of flow along a stream tube
 (d) constant discharge through a long straight tapering pipe
37. In a viscous flow through a pipe the Reynolds number is 100. The Darcy-Weisbach friction factor f for this flow is
 (a) 0.64 (b) 0.02
 (c) 0.04 (d) 0.16
38. The ratio of actual discharge to theoretical discharge through an orifice is
 (a) $C_c \times C_v$ (b) $C_c \times C_d$
 (c) $C_v \times C_d$ (d) C_d/C_v
 Where C_c , C_d and C_v are coefficient of contraction, discharge and velocity respectively.
39. A flood wave in a river is an example of
 (a) steady, non-uniform flow (b) unsteady, gradually varied flow
 (c) steady, spatially varied flow (d) unsteady, rapidly varied flow
40. A pivot static tube is used to measure
 (a) velocity head (b) the undisturbed fluid pressure
 (c) the total head (d) datum head
41. The hydraulic grade line is
 (a) always above the energy grade line
 (b) the velocity head below the energy grade line
 (c) always above the closed conduit
 (d) always sloping downward in the direction of flow
42. Sprinkler irrigation has the advantage
 (a) Of providing more uniform distribution of water and avoiding erosion on sloping lands
 (b) the initial cost is high
 (c) Wind velocity cause non-uniform distribution of irrigation water
 (d) Design requires good technical knowledge



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1380153-9

43. A canal crosses drain with following levels

Canal

Drain

C.B.L. (Canal bed level) = 100.00 m

H.F.L. (Highest flood level) = 100.75 m

F.S.L. (Full supply level) = 102.50 m

Bed Level = 98.00 m

Which of the following hydraulic structure should be constructed at the crossing :

- (a) Aqueduct (b) Super-passage
(c) Siphon aqueduct (d) Level crossing
44. The hydraulic structure constructed to lower down the bed level of canal is known as
- (a) Fall (b) Cross regulator
(c) Guide bund (d) Spur

45. If the canal is taken below the drainage and the flow in the canal is open channel flow, then it is called :

- (a) Aqueduct (b) Syphon Aqueduct
(c) Canal Syphon (d) Super-passage

46. The function of expansion joint in a rigid pavement is to

- (a) Relieve shrinkage stresses (b) Relieve working stresses
(c) Resist stresses due to expansion (d) Allow free expansion

47. Penetration resistance test on bitumen is used to determine its

- (a) Grade (b) Viscosity
(c) Ductility (d) Temperature susceptibility

48. The maximum limit of water absorption for aggregate suitable for road construction is

- (a) 0.4% (b) 0.6%
(c) 0.8% (d) 1%

49. The flexible pavement distribute the wheel load

- (a) through a set of layers to the sub-grade (b) directly to the sub-grade
(c) through structural action (d) through structural action of the multiple layers

50. IRC recommends that dowel bar system in rigid pavement may be designed on the basis of Bradbury's analysis for the load transfer capacity of a single dowel bar in

- (a) shear, bending and torsion (b) shear, bending and compression
(c) shear and bending only (d) shear, bending and bearing in concrete

51. Minimum depth 'Db' of ballast section under the sleepers is given by the formula

- (a) $\frac{S - w}{2}$ (b) $\frac{S + w}{2}$
(c) $\frac{S \times w}{2}$ (d) $\frac{S}{w - 2}$

Where 'S' is the sleeper spacing, 'w' is the width of sleeper

52. Which of the rocks cannot be used as ballasts under the sleepers ?

- (a) granite (b) quartzite
(c) basalt (d) shale

53. What will be the expression for sleeper density for a broad gauge track, if 19 sleepers are used under a rail length of the length of rail for broad gauge track is 12.8m

- (a) $n + 7$ (b) $n + 4$
(c) $n + 6$ (d) $n + 5$

where 'n' is the length of rail in meters.

54. Continuous girder bridges have the following advantages over simply supported girder bridges

- (a) depth at mid span will be much smaller
(b) girders do not require unyielding foundations
(c) piers are narrower as at each pier as only one bearing is needed
(d) quality of steel and concrete required is less resulting in reduced cost

Which of the above statement is incorrect ?

55. Pick the incorrect option

- (a) IRC class AA loading consists of either a tracked vehicle of 700 kN or a wheeled vehicle of 400 kN
(b) the tracked vehicle simulates a combat tank used by the army
(c) structure designed for Class AA loading should also be checked for Class A loading
(d) structure designed for Class AA loading need not be checked for Class A loading

56. Choose the incorrect statement

- (a) The fiducial edge is related to alidade
(b) Exact orientation is more important in plane tabling than accurate centering for small-scale maps.
(c) Plane table is most suitable instrument for large scale survey
(d) Plane table survey is best for temperate countries

57. In reciprocal leveling, the error which is not completely eliminated is due to

- (a) earth's curvature (b) non-adjustment of line of collimation
(c) non-adjustment of the bubble tube (d) refraction

58. Which of the following errors can be eliminated by taking the mean of both face observations

- (a) Error due to imperfect graduations
(b) Error due to eccentricity of verniers
(c) Error due to imperfect adjustment of plate levels
(d) Error due to line of collimation not being perpendicular to the horizontal axis



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1380153-11

59. Find the height of a Tee-beam above the floor level. The R.L. of the floor is 100.855 m and the staff reading on the floor is 2.055m. The reading on a staff held upside down against the underside of the beam is 3.565 m

(a) 5.62 m (b) 5.82 m
(c) 6.66 m (d) 5.44 m

60. The pull applied at the time of measurement is more than the pull applied at the time of standardization, the correction will be

(a) Negative (b) Positive
(c) No Correction (d) Negative & Positive both

61. Match List-I with List-II and select the correct answer code :

List-I

- A. GTS benchmark
B. Permanent benchmark
C. Arbitrary Benchmark
D. Temporary Benchmark

List-II

1. Fixed by a survey team at the end of day work
2. Fixed by survey of India
3. Fixed by State P.W.D.
4. Fixed by a survey team in the beginning of a project

Code :

(a) A-3 B-2 C-4 D-1 (b) A-3 B-2 C-1 D-4
(c) A-2 B-3 C-1 D-4 (d) A-2 B-3 C-4 D-1

62. Which of the following pairs is not correctly matched

- (a) Declination : Horizontal angle between Magnetic meridian and true meridian
(b) Bowditch's rule : Employed to adjust closing error of a closed traverse
(c) Deflection angle : Measured in case of open traverse instead of measuring included angle
(d) Reconnaissance Survey : Employed for detailed and precise Survey

63. A circular curve has a 200m radius and 65° deflection angle, what is its degree by arc definition and by chord definition. Assuming a 30 m chord length and $R = 200$ m in both cases

(a) $D = 7.595^\circ$, 8.595° (b) $D = 6.395^\circ$, 6.395°
(c) $D = 8.595^\circ$, 8.595° (d) $D = 8.959^\circ$, 8.959°

64. Which one of the following eliminates the error due to curvature and refraction

(a) Fly leveling (b) Leveling by equalizing the distance of back sight and fore sight
(c) Check levelling (d) Precise levelling

65. The most reliable method of plotting a Theodolite traverse is by

(a) Consecutive coordinates of individual station
(b) independent coordinate of individual station
(c) The tangent method of plotting
(d) Plotting included angles and scaling off the individual traverse leg

66. A normally consolidated clay settled 1 cm when effective a pressure was increased from 0.10 MPa to 0.20 MPa. If the effective pressure is further increased from 0.20 MPa to 0.40 MPa, then settlement of the same clay is

(a) 1 cm (b) 2 cm
(c) 4 cm (d) 8 cm

67. A soil has a bulk density of 22 kN/m^3 and water content 10%. The dry density of the soils is

(a) 16 kN/m^3 (b) 18 kN/m^3
(c) 20 kN/m^3 (d) 22 kN/m^3

68. Which of the following is not a assumption of Terzaghi's one dimensional consolidation theory?

(a) The soil is homogeneous (b) The soil isotropic
(c) Darcy's law is valid (d) The soil fully saturated

69. As per Indian Standard soil classification. A soil with both liquid limit and plasticity index be 30% is classified as

(a) CL (b) MH
(c) OH (d) CH

70. The ratio $\frac{\text{liquid limit} - \text{water content}}{\text{Plasticity index}}$ is

(a) Liquidity index (b) Shrinkage ratio
(c) Consistency index (d) Toughness index

71. Degree of saturation of a natural soil deposit having water content 15%, specific gravity 2.5 and voids ratio 0.05 is

(a) 50% (b) 60%
(c) 75% (d) 80%

72. The hydraulic head that would produce a quick condition in a sand stratum of thickness 1.5m, specific gravity 2.67 and void ratio 0.67 is equal to

(a) 1.0 m (b) 1.5 m
(c) 2.0 m (d) 2.5 m

73. Accurate determination of water content is done by

(a) Calcium Carbide method (b) Sand bath method
(c) Alcohol method (d) Oven-drying method

74. The shear strength of soil

(a) is directly proportional to angle of internal friction
(b) is directly proportional to tangent of angle of internal friction
(c) is inversely proportional to angle of internal friction
(d) is inversely proportional to tangent of angle of internal friction



1380153-12



1380153-13

75. The active earth pressure of a soil can be defined as
 (a) lateral pressure exerted by the soil when the retaining wall has no movement relative to the back fill
 (b) lateral pressure exerted by the soil when the retaining wall tends to move into the soil
 (c) lateral pressure exerted by the soil when the retaining wall tends to move away from the back fill
 (d) pore pressure in the solid
76. Number of covalent bonds present in butane are
 (a) 10
 (b) 11
 (c) 12
 (d) 13
77. PAN, a secondary pollutant is known as
 (a) Peroxy acrylonitrile
 (b) Peracetyl nitrate
 (c) Perhydroxyacyl nitrate
 (d) Peroxyacyl nitrate
78. The corrosion is
 (a) An electrochemical phenomenon
 (b) An electrolytic phenomenon
 (c) A decomposition phenomenon
 (d) A displacement phenomenon
79. Which of the following is not an alloy of copper?
 (a) Brass
 (b) German silver
 (c) Bronze
 (d) Solder
80. 1°Fr is equal to
 (a) 100 ppm
 (b) 0.7°C
 (c) 0.02 meq/L
 (d) 1 mg/L
81. A pH value less than 5 represent
 (a) Acidic condition
 (b) Neutral condition
 (c) Basic condition
 (d) Slightly basic condition
82. The calorific value and hardness is highest in
 (a) Peat
 (b) Lignite
 (c) Bituminous Coal
 (d) Anthracite
83. Dacron is formed by condensation polymerization of
 (a) Terephthalic acid dichloride and 1,3-diamino benzene
 (b) Butadiene and styrene
 (c) Hexamethylenediamine and adipic acid
 (d) Ethylene glycol and Terephthalic acid
84. Rate of corrosion is highest in
 (a) Mg
 (b) Zn
 (c) Ag
 (d) Pt
85. The critical angle of a certain medium is $\sin^{-1}(3/5)$. The polarising angle of the medium is
 (a) $\sin^{-1}(4/5)$
 (b) $\tan^{-1}(5/3)$
 (c) $\tan^{-1}(3/4)$
 (d) $\tan^{-1}(4/3)$
86. Two 1000 W heater when connected in parallel across 220V supply produce heat H_1 in time t . If they are connected in series across the same power supply the heat produced in the same time is H_2 . What is (H_1/H_2) ?
 (a) 0.25
 (b) 4
 (c) 0.5
 (d) 2
87. The half life of a radioactive substance is 140 days. After how much time 15 gm will decay from its 16 gm sample?
 (a) 120 days
 (b) 240 days
 (c) 380 days
 (d) 560 days
88. The displacement y (in cm) produced by a simple harmonic wave is given by

$$y = \left(\frac{10}{\pi}\right) \sin 2000 \left(\pi t - \frac{\pi x}{17}\right)$$

 The periodic time maximum velocity of the particle is the medium will respectively be
 (a) 10^{-3} sec and 330 m/s
 (b) 10^{-3} sec and 20 m/s
 (c) 10^{-3} sec and 200 m/s
 (d) 10^{-3} sec and 2000 cm/s
89. A particle executes S.H.M. of amplitude A . If T_1 and T_2 are the time taken by the particle to traverse from 0 to $\frac{A}{2}$ and from $\frac{A}{2}$ to A respectively, then $\left(\frac{T_1}{T_2}\right)$ will be equal to
 (a) $\frac{1}{2}$
 (b) $\frac{1}{4}$
 (c) $\frac{1}{2}$
 (d) 2
90. The energy of a system is 81 J. The units of force and length are made three times of their initial values. The energy of the system in new units will become
 (a) 9
 (b) 81
 (c) 243
 (d) 729
91. Determine the current I for the given network

 (a) 1.4 mA
 (b) 2.0 mA
 (c) 1.8 mA
 (d) 2.4 mA





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1380153-15

92. If the work done in blowing a soap bubble of volume V is W , then the work done in blowing a soap bubble of volume $2V$ will be
 (a) W (b) $2W$
 (c) $\sqrt{2}W$ (d) $(4)^{1/3}W$
93. The value of $\cos 10^\circ + \cos 110^\circ + \cos 130^\circ$ is
 (a) 0 (b) 1
 (c) 2 (d) 3
94. The polar form of the complex number $\frac{-16}{1+i\sqrt{3}}$ is
 (a) $8\left(\cos \frac{2\pi}{3} - i \sin \frac{2\pi}{3}\right)$ (b) $8\left(\cos \frac{2\pi}{3} + i \sin \frac{2\pi}{3}\right)$
 (c) $8\left(\cos \frac{\pi}{6} - i \sin \frac{\pi}{6}\right)$ (d) $8\left(\cos \frac{\pi}{6} + i \sin \frac{\pi}{6}\right)$
95. If the sum of an infinite geometric series is 15 and the sum of the squares of these terms is 45, then the series :
 (a) $5 + \frac{10}{3} + \frac{20}{9} + \frac{40}{27} + \dots$ (b) $1 + \frac{5}{3} + \frac{10}{9} + \frac{20}{27} + \dots$
 (c) $10 + 5 + \frac{5}{2} + \frac{5}{4} + \dots$ (d) $1 + \frac{1}{3} + \frac{1}{9} + \frac{1}{27} + \dots$
96. If Z_1 and Z_2 are complex numbers such that $\frac{Z_1 - 3Z_2}{3 - Z_1Z_2} = 1$ then $|Z_2| \neq 1$ then $|Z_1|$ is
 (a) 3 (b) -3
 (c) $3i$ (d) $-3i$
97. If \vec{a} is any vector, then the value of $\hat{i} \times (\vec{a} \times \hat{i}) + \hat{j} \times (\vec{a} \times \hat{j}) + \hat{k} \times (\vec{a} \times \hat{k})$ is
 (a) \vec{a} (b) $2\vec{a}$
 (c) $3\vec{a}$ (d) 0
98. If the vectors $\vec{a}, \vec{b}, \vec{c}$ are the coplanar, then the scalar triple product $[\vec{a} + \vec{b}, \vec{b} + \vec{c}, \vec{c} + \vec{a}]$ is equal to
 (a) 0 (b) $\vec{a} + \vec{b} + \vec{c}$
 (c) $2(\vec{a} + \vec{b} + \vec{c})$ (d) None of these
99. If $y = \sqrt{\frac{x}{a}} + \sqrt{\frac{a}{x}}$, then $\frac{dy}{dx}$ at $x = a$, is
 (a) 0 (b) $\frac{1}{2}$
 (c) \sqrt{a} (d) $\sqrt{2a}$

100. The value of $\lim_{x \rightarrow \infty} 2^{x-1} \tan\left(\frac{a}{2^x}\right)$ is equal to

- (a) $\frac{1}{2}$ (b) $\frac{a}{2}$
 (c) a (d) $2a$

Q.No.	Answer
1	D
2	A
3	A
4	D
5	A
6	A
7	C
8	C
9	D
10	C
11	B
12	D
13	D
14	A
15	D
16	A
17	B
18	C
19	B
20	A
21	A
22	B
23	D
24	A
25	D
26	D
27	B
28	A
29	B
30	A
31	C
32	D
33	C
34	A
35	B
36	C
37	A
38	A
39	B
40	A

Q.No.	Answer
41	B
42	A
43	C
44	A
45	D
46	D
47	A
48	B
49	A
50	D
51	A
52	D
53	C
54	B
55	D
56	C
57	D
58	D
59	A
60	B
61	C
62	D
63	C
64	B
65	B
66	A
67	C
68	B
69	A
70	C
71	C
72	B
73	D
74	B
75	C
76	D
77	D
78	A
79	D
80	B

Q.No.	Answer
81	A
82	D
83	D
84	A
85	P
86	B
87	D
88	C
89	B
90	A
91	C
92	D
93	A
94	B
95	A
96	A
97	B
98	A
99	A
100	B

COORDINATOR
DATED: 16.11.2020