

162/2023

Maximum : 100 marks

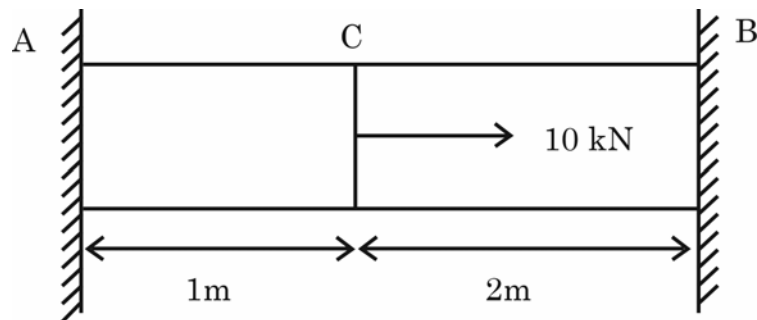
Time : 1 hour and 30 minutes

1. For a given shear force across a symmetrical I-section, the intensity of shear is maximum at :
  - (A) extreme fibres
  - (B) centroid of the section
  - (C) at the junction of flange and web on the web
  - (D) at the junction of flange and the web but on the flange
  
2. The maximum stress to which any member is designed is much less than the ultimate stress is :
  - (A) proof stress
  - (B) design stress
  - (C) working stress
  - (D) yield stress
  
3. The percentage error in calculating the extension of a bar uniformly tapering from a diameter  $(d+x)$  to  $(d-x)$  in a length ' $l$ ' is calculated by treating it as a bar of uniform cross section of average diameter  $d$  is :
  - (A)  $100 d^2 / x^2$
  - (B)  $100 x^2 / d^2$
  - (C)  $100 (d^2 - x^2) / d^2$
  - (D)  $100 d^2 / (d^2 - x^2)$
  
4. Which of the following is true with respect to point of contraflexure?
  - (A) Point of contraflexure occurs for a simply supported beam carrying point loads
  - (B) Point of contraflexure occurs when shear force changes its sign within the span length
  - (C) Point of contraflexure occurs for overhanging beam subjected to uniformly distributed load
  - (D) Point of contraflexure occurs at the maximum bending moment
  
5. The maximum shear stress in a beam of square section 10 cm side, bending about its diagonal subjected to shear force of 100 N is :
  - (A) 1.125 N/cm<sup>2</sup>
  - (B) 1.25 N/cm<sup>2</sup>
  - (C) 1.33 N/cm<sup>2</sup>
  - (D) 1.50 N/cm<sup>2</sup>

6. The differential equation for load acting on a beam, with modulus of elasticity  $E$  and moment of inertia  $I$  is :

- (A)  $EI \frac{dy}{dx}$  (B)  $EI \frac{d^2y}{dx^2}$   
 (C)  $EI \frac{d^3y}{dx^3}$  (D)  $EI \frac{d^4y}{dx^4}$

7. The reactions at the rigid supports at A and B of the bar loaded as shown in figure are respectively :



- (A) 10/3 kN, 20/3 kN (B) 20/3 kN, 10/3 kN  
 (C) 5 kN, 5 kN (D) None of these

8. If a body neither expands nor contracts in volume when subjected to stresses, then the poisson's ratio must be :

- (A) Zero (B) 0.25  
 (C) 0.50 (D) None of these

9. The radius of Mohr's circle of stresses gives the value of :

- (A) minimum normal stress (B) maximum normal stress  
 (C) minimum shear stress (D) maximum shear stress

10. For a rectangular section beam, the depth of beam is doubled whereas the width, length and loading are kept same. This would result into decrease in bending stress by the factor :

- (A) 2 (B) 4  
 (C) 6 (D) 8

11. A and B are two points on either side of an obstacle. If AC and BD are equal perpendiculars set out from A and B then AB =

- (A) CD (B) AC  
 (C) BC (D) AD

12. If the reduced bearing of a line is N85°W, its whole circle bearing is :  
(A) 85° (B) 275°  
(C) 95° (D) 5°
13. A line PQ of length 100 m is having bearing of 30°, the departure of the line is :  
(A) 50 m (B) 86.6 m  
(C) 57.7 m (D) 200 m
14. The reduced level of a floor is 100 m, the staff reading on the floor is 1.505 m and the inverted staff reading against the roof is 1.795 m. The reduced level of roof slab is \_\_\_\_\_ m.  
(A) 103.3 (B) 101.505  
(C) 101.785 (D) 100.290
15. Planimeter is used for measuring :  
(A) Volume (B) Area  
(C) Gradient (D) None of the above
16. A series of closed contours of decreasing values towards their centre, represents :  
(A) hill (B) a depression  
(C) a saddle or pass (D) a river bed
17. For indirect ranging, number of ranging rods required is :  
(A) 1 (B) 2  
(C) 3 (D) 4
18. GTS is :  
(A) Great Theodolite System (B) Great Trigonometrical Survey  
(C) Great Traverse Survey (D) Great Trigonometrical System
19. Which of the following does not come under classification of circular curves?  
(A) Simple curve (B) Transition curve  
(C) Reverse curve (D) Compound curve
20. The minimum number of satellites needed for a GPS to determine its position precisely is :  
(A) 24 (B) 2  
(C) 3 (D) 4

21. As per IS 2386 : Part IV, after applying 15 blows in the impact testing machine, the crushed aggregate is sieved through \_\_\_\_\_ sieve in the aggregate impact test.
- (A) 12.5 mm (B) 10 mm  
(C) 4.75 mm (D) 2.36 mm
22. Average 28 days compressive strength of concrete cubes prepared with water proposed to be used shall not be less than \_\_\_\_\_% of the average strength similar concrete cubes prepared with distilled water.
- (A) 45 (B) 67  
(C) 85 (D) 90
23. The liquid substance which holds the ingredients of a paint in suspension is called :
- (A) Base (B) Vehicle  
(C) Thinner (D) Varnish
24. Which compound in cement hydration is mainly responsible for the initial set and early strength of concrete?
- (A) Tricalcium silicate (B) Tricalcium aluminate  
(C) Dicalcium silicate (D) Tetra calcium alumino silicate
25. According to IS 456:2000, the slump value for mass concreting should be between :
- (A) 0-25 mm (B) 25 mm-75 mm  
(C) 50 mm-75 mm (D) 75 mm-100 mm
26. Vee-Bee Consistometer test is used to determine the :
- (A) Soundness of concrete (B) Permeability of concrete  
(C) Consistency of concrete (D) Workability of concrete
27. In the classification of coastal regulatory zones, area between high tide and low tide lines are categorized under :
- (A) CRZ-I (B) CRZ-II  
(C) CRZ-III (D) CRZ-IV
28. The total covered area of a building measured at the floor level of any given floor, which includes the thickness of the outer walls, projections, balconies etc., is :
- (A) Carpet area (B) Floor Area  
(C) Plinth Area (D) Usable Area

29. The following test is not used to determine the bearing capacity of soil :
- (A) Plate load test (B) Cone penetration test  
(C) Standard penetration test (D) Proctor compaction test
30. As per Indian standards, the maximum permitted percentage of water absorption for Class 12.5 brick is :
- (A) 10 (B) 12.5  
(C) 15 (D) 20
31. The phenomenon which causes non-uniform bending stress distribution in flange elements of a built up I-section is known as :
- (A) Block shear (B) Shear lag  
(C) Buckling (D) None
32. Euler's formula for buckling is applicable for :
- (A) Imperfect columns (B) Slender columns  
(C) Eccentric columns (D) All the above
33. The ultimate strain for concrete under combined axial compression and flexure is :
- (A) 0.002 (B) 0.003  
(C) 0.0035 (D) All the above
34. The fundamental natural frequency of a steel framed building without brick infill panels is given by :
- (A)  $0.085 h^{0.75}$  (B)  $0.075 h^{0.75}$   
(C)  $0.065 h^{0.85}$  (D)  $0.085 h^{0.65}$
35. For joints subjected to stress reversals, the most preferred connector is :
- (A) Black bolts (B) Tacking bolts  
(C) HSFG bolts (D) All the above
36. In tension members, the design strength for gross section yielding can be computed as :
- (A)  $T_{dg} = A_n f_y / \gamma_{m1}$  (B)  $T_{dg} = A_n f_u / \gamma_{m0}$   
(C)  $T_{dg} = A_g f_y / \gamma_{m1}$  (D)  $T_{dg} = A_g f_y / \gamma_{m0}$

37. The ultimate tensile stress taken by concrete due to bending in terms of characteristic compressive strength of concrete,  $f_{ck}$  in MPa as per IS 456:2000 is :

- (A)  $5700\sqrt{f_{ck}}$  (B)  $5700 f_{ck}$   
 (C)  $0.7\sqrt{f_{ck}}$  (D)  $0.7 f_{ck}$

38. Reduction coefficient of a reinforced concrete column with an effective length of 4.8 m and size  $500 \times 350$  mm is :

- (A) 1 (B) 0.85  
 (C) 1.05 (D) 0.96

39. As per IS 456:2000, the bearing strength of concrete (in  $\text{N/mm}^2$ ) to be considered for a steel column of Fe250 with a base plate resting on a concrete pedestal of M30 grade in limit state method is :

- (A) 9 (B) 13.5  
 (C) 8 (D) None

40. For an under-reinforced beam in flexure, the depth of neutral axis at ultimate failure is given by :

- (A)  $\frac{0.87f_y A_{st}}{bf_{ck}}$  (B)  $\frac{0.87f_y A_{st}}{0.36f_{ck}}$   
 (C)  $\frac{1.93f_y A_{st}}{bf_{ck}}$  (D) None

41. Determine the various hardness of the following water sample :

Constituent	Concentration, mg/l
$\text{Ca}_{2+}$	60
Mg	29.3
$\text{HCO}_3^-$	200

The total hardness (TH) and carbonate hardness (CH) of sample in mg/L as  $\text{CaCO}_3$  is \_\_\_\_\_ respectively.

- (A) 300 and 270 (B) 270 and 164  
 (C) 300 and 164 (D) 270 and 300

42. If bacterial cells are represented by the chemical formula  $C_5H_7O_2N$ , the potential carbonaceous COD in a bacterial cell concentration of 1000 mg/l will be :
- (A) 1310 mg/l (B) 1420 mg/l  
(C) 1000 mg/l (D) 800 mg/l
43. Which of the following statements is incorrect for aeration process?
- (A) Removes excess  $H_2S$  gas (B) Removes excess  $CO_2$   
(C) Increases  $O_2$  content (D) Increases settling characteristics
44. Denitrification in wastewater treatment occurs under \_\_\_\_\_ environment.
- (A) Aerobic (B) Anaerobic  
(C) Anoxic (D) None of these
45. Which among these is a suitable method for sludge conditioning?
- (A) Iron salt addition (B) Lime addition  
(C) Wet air oxidation (D) All of these
46. A \_\_\_\_\_ is a semiautomatic device that permits water flow in only one direction.
- (A) Shutoff valve (B) Check valve  
(C) Gate valve (D) None of these
47. Which of the following is incorrect for a unit hydrograph?
- (A) It reflects all physical characteristics of the basin  
(B) The net rainfall is of uniform intensity within its duration  
(C) The net rainfall uniformly occurs over the entire area of the drainage basin  
(D) None of these
48. A point where two or more pipes meet is called a :
- (A) Link (B) Node  
(C) Network (D) Loop
49. In a water distribution network, factors influencing selection of pipe material are :
- (A) Hydraulic performance (B) Strength  
(C) Weight of pipe (D) All of these

50. A plot of the average intensity of rainfall against time interval is a :

- (A) Hyetograph (B) Mass curve  
(C) Hydrograph (D) None of these

51. For G20 summit, India has set several priorities for its presidency.

The key priorities include :

- (i) Green Development, Climate Finance & Life  
(ii) Accelerated, Specific & Resilient Growth  
(iii) Curbing Sustainable Growth  
(iv) Technological Transformation & Digital Public Infrastructure  
(v) Multilateral Institutions for the 21<sup>st</sup> century  
(vi) Women-led development

Which of the priority area is/are correct as per above?

- (A) Only (i, ii, iii and iv) (B) Only (i, ii, iv and v)  
(C) Only (i, iv, v and vi) (D) All are correct

52. Given are the list of contributing factors of Urban Heat Island :

- (i) Urban Geometry  
(ii) High Vegetation  
(iii) Anthropogenic heat  
(iv) Urban Canyon

Which of the contributing factors is/are incorrect as per above?

- (A) Only (i) (B) Only (ii)  
(C) Only (i, ii and iv) (D) Only (i, iii and iv)

53. Which of the following statement is/are the correct about vision of Indian Green Building Council (IGBC)?

- (i) To enable a sustainable built environment for all.  
(ii) Facilitate India to be one of the global leaders in sustainable built environment by 2025.

Select the right answer :

- (A) Only (i) (B) Only (ii)  
(C) Both are correct (D) Both are incorrect



54. The Energy Conservation Building Code (ECBC-2017) of India is applicable to buildings or building complexes that have a connected load of 100 kW or greater or a contract demand of 120 kVA or greater and are intended to be used for commercial purposes. The provisions of this code apply to :

- (i) Building envelope and Mechanical systems and equipment including heating, ventilating and air conditioning, service hot water heating
- (ii) Interior and exterior lighting
- (iii) Electrical power and motors and renewable energy systems

Which of the above statement is/are correct?

- (A) Only (ii and iii)
- (B) Only (i and ii)
- (C) Only (i and iii)
- (D) All are correct

55. Affordable Rental Housing Complexes (ARHCs), a sub-scheme under Pradhan Mantri AWAS Yojana-Urban (PMAY-U), Ministry of Housing & Urban Affairs is being implemented in India through which model.

- (i) Utilizing existing private funded vacant houses to convert into ARHCs through Public Private Partnership or by Public Agencies.
- (ii) Construction, Operation and Maintenance of ARHCs by Public/ Private Entities on their own available vacant land.

Which of the above statement is/are correct?

- (A) Only (i and ii)
- (B) Only (i)
- (C) Only (ii)
- (D) None of the above

56. Being a party to the Paris Agreement, which is a binding legal treaty on climate change adopted by 196 nations at the COP21, the objectives is to :

- (i) Limit Global warming to well below 2 Deg. Celsius, preferably to 1.5 Deg. Celsius, compared to pre-industrial levels.
- (ii) Limit Global warming to well below 1.5 Deg. Celsius, preferably to 2 Deg. Celsius, compared to pre-industrial levels.
- (iii) Provide financial assistance to vulnerable countries.
- (iv) Transfer of technology for improving resilience to climate change and reducing GHG emissions.

Identify the correct statements :

- (A) Only (i and ii)
- (B) Only (i, ii and iii)
- (C) Only (i, iii and iv)
- (D) Only (ii, iii and iv)

57. Earned Value Management (EVM) is considered as an effective cost control techniques in the construction project management with the following benefits :

- (i) Early and accurate identification of trends and identification of problems.
- (ii) Accurate display of project status and basis for course corrections.

Indicate the correct statements :

- (A) Only (i)
- (B) Only (ii)
- (C) Both are correct
- (D) Both are incorrect

58. The National Building Code (NBC) (Part-4), Fire & Life Safety; divided in the broad clauses as (a) Fire prevention; (b) Life safety; (c) Fire protection.

Indicate statement related to above mentioned clauses :

- (i) Guiding selection of equipment and installation meant for fire protection
- (ii) Passive fire protection measures through design and construction
- (iii) Minimize danger of life from fire, smoke, fumes and panic

Match the statement with above mentioned clauses :

- (A) a-(i); b-(ii); c-(iii)
- (B) a-(ii); b-(iii); c-(i)
- (C) a-(iii); b-(ii); c-(i)
- (D) a-(i); b-(iii); c-(ii)

59. What are the Seven Principles of Universal Design to support universal accessibility in the built environment?

- (i) Equitable Use; Flexibility in Use; Simple and Intuitive Use; Perceptible Information; Tolerance for Error; Low Physical Effort; Size and Space for Approach and Use.
- (ii) High-tech; Circular; Simple and Intuitive Use; Perceptible Information; Approachable; Low Physical Effort; Clean Use.

- (A) Only (i)
- (B) Only (ii)
- (C) Both are correct
- (D) Both are incorrect

60. Match the Architecture work with the Architects, (a) Laurie Baker, (b) Charles Correa, (c) B.V Doshi, (d) Raj Rewal

- (i) Centre for Development Studies, Trivandrum
- (ii) Aranya Low-Cost Housing, Indore
- (iii) Jawahar Kala Kendra, Jaipur
- (iv) State Trading Corporation, New Delhi

Match the Architecture works with above mentioned Architects :

- (A) a-(i); b-(ii); c-(iii); d-(iv)
- (B) a-(ii); b-(iii); c-(iv); d-(i)
- (C) a-(iii); b-(iv); c-(i); d-(ii)
- (D) a-(i); b-(iii); c-(ii); d-(iv)

61. Which of the following statement is not correct in the context of Vernacular Architecture?
- (A) Architects can play a crucial part in conservation by acquiring knowledge of traditional construction.
  - (B) Vernacular technology, like windmills and watermills, can teach us a lot about imaginative applications of technology.
  - (C) Humans are the most adaptive mammal species and because of their intelligence, they have managed to thrive both in areas with abundant resources and those with scarcity.
  - (D) Meanings and symbolic role of shelters such as social, ritual and spiritual did not have any significance in vernacular architecture.
62. Match the vernacular architecture styles in India with the place of their origin State/Union Territories :
- | Vernacular Architecture Styles | Origin State          |
|--------------------------------|-----------------------|
| (a) Doonga                     | (i) Gujarat           |
| (b) Bitoda                     | (ii) Orissa           |
| (c) Bhunga                     | (iii) Kerala          |
| (d) Chhendi Dien               | (iv) Uttar Pradesh    |
| (e) Chettiar                   | (v) Jammu and Kashmir |
| (f) Nalukettu                  | (vi) Tamil Nadu       |
- (A) a – (i), b – (iv), c – (v), d – (iii), e – (ii), f – (vi)
  - (B) a – (v), b – (iv), c – (i), d – (ii), e – (vi), f – (iii)
  - (C) a – (iv), b – (v), c – (ii), d – (i), e – (iii), f – (vi)
  - (D) a – (v), b – (ii), c – (i), d – (vi), e – (iv), f – (iii)
63. What is the appropriate approach to ensure vernacular architecture's survival into the future for creating a sustainable built environment?
- (A) Conservation
  - (B) Rehabilitation
  - (C) Reuse and reconstruction (using traditional methodologies)
  - (D) All the above
64. From the factors mentioned below highlight the important factors that had influenced the Kerala's Vernacular Architecture :
- (i) The climatic factors
  - (ii) Influences of maritime societies like Romans, Chinese, Arabs and European traders
  - (iii) Culture of bordering States
- (A) Only (ii) and (iii)
  - (B) Only (ii)
  - (C) Only (i) and (ii)
  - (D) All of the above (i, ii and iii)

- 65.** What are the crucial aspects of planning in Kerala's Vernacular Architecture?
- (i) The direction of the prevailing winds
  - (ii) Courtyard Spaces
  - (iii) An internal and external verandah
  - (iv) High Plinth and sloping roof
- (A) Only (ii and iii) (B) Only (ii)  
 (C) Only (i and ii) (D) All of the above (i, ii, iii and iv)
- 66.** Integrating climate-responsive architecture in upcoming built-up areas is important to make our settlements resilient and sustainable. Which of the following factors is/are important for designing a climate-responsive building?
- (i) The geographical location of the site
  - (ii) Maximising natural ventilation and day lighting
  - (iii) Reducing building energy footprint
  - (iv) Road network
- (A) Only (ii and iii) (B) Only (ii)  
 (C) All (i, ii, iii and iv) (D) Only (i, ii and iii)
- 67.** India has five climatic zones. Match the cities with the respective climatic zones:
- | Cities             | Climatic Zones                   |
|--------------------|----------------------------------|
| (a) Bangalore      | (i) Hot and Dry Climate          |
| (b) Kanpur         | (ii) Warm and Humid Climate      |
| (c) Nainital       | (iii) Composite Climate          |
| (d) Vishakhapatnam | (iv) Temperate/ Moderate Climate |
| (e) Nagpur         | (v) Cold Climate                 |
- (A) a – (iv), b – (iii), c – (v), d – (ii), e – (i)  
 (B) a – (i), b – (iv), c – (v), d – (iii), e – (ii)  
 (C) a – (iv), b – (iii), c – (v), d – (i), e – (ii)  
 (D) a – (iii), b – (iv), c – (v), d – (ii), e – (i)
- 68.** Which of the following statement describes 'Climate Change' as defined by United Nations Framework Convention on Climate Change (UNFCCC)?
- (A) Climate change is usually described in terms of the mean and variability of temperature, precipitation and wind over a long period.
  - (B) Climate Change is statistically significant variation in the mean state of the climate.
  - (C) Change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
  - (D) Climate is generally defined as average weather and as such, climate change and weather are intertwined.

69. “A well-planned and designed city from a climatic perspective would be efficient in its use of resources and designed to protect people and infrastructure from extreme weather events”. Which of the following statements do not align with this concept of sustainable resilient cities?
- (A) Compact, high-density cities composed of mixed land-uses and walkable communities are inherently more efficient.
  - (B) Increased population density reduces per-capita energy use associated with travel.
  - (C) Allowing cities to expand into the nonurban sites (agricultural/forest land) that require new services such as roads, water supply sewer lines etc.
  - (D) The urban form and functions of cities is central to limiting magnitude of their ecological footprints.
70. Which of the following statement is false?
- (A) The presence of ozone layer in the upper atmosphere is boon to us
  - (B) The actual amount of insolation received at a place on the Earth varies according to the conditions of the atmosphere as well as the Seasons
  - (C) On maps, isotherms are commonly used to show the horizontal distribution of temperature
  - (D) Greenhouse gases (GHGs) are trace gases in the atmosphere both natural and anthropogenic that allows the long wave terrestrial radiation to escape
71. Which act defines a prohibited area as an area of 100 meters around a protected monument or area?
- (A) The Religious Endowments Act, 1863
  - (B) Ancient Monuments and Archaeological Sites and Remains Act, 1958
  - (C) The Land Acquisition Act, 1885
  - (D) The Ancient Monuments Preservation Act, 1904
72. To be included on the World Heritage List, sites must be of outstanding universal value and meet at least \_\_\_\_\_ out of ten selection criteria.
- (A) Three
  - (B) Two
  - (C) One
  - (D) Four
73. What is Pietra dura?
- (A) A form of mural painting
  - (B) A technique of sculpting with wood
  - (C) A type of pottery
  - (D) A mosaic art form using cut-to-shape pieces of hard stone
74. Who founded the Society for the Protection of Ancient Buildings in 1877, further promoting Ruskin’s key points on conservation?
- (A) William Morris
  - (B) John Ruskin
  - (C) Sidney Colvin
  - (D) Augustus Pugin

75. Among the options provided, which one has been designated as a cultural landscape inscribed on the World Heritage list :
- (A) Khajuraho Group of Monuments
  - (B) Qutub Minar and its Monuments, Delhi
  - (C) Elephanta Caves, Maharashtra
  - (D) Rock Shelters of Bhimbetka
76. Which one of the following models is organized in a series of concentric zones, peripheral wedges, and cultural enclaves?
- (A) Bazaar City Model
  - (B) Colonial-based City Model
  - (C) Sector Model
  - (D) Multiple Nuclei Model
77. Match the following cities based on the urban growth pattern:
- | Group I          | Group II                 |
|------------------|--------------------------|
| (P) Ghazipur     | (i) Rectangular pattern  |
| (Q) Hathras      | (ii) Circular pattern    |
| (R) Jahangirabad | (iii) Triangular pattern |
| (S) Rampur       | (iv) Elongated pattern   |
- (A) P – (i), Q – (iii), R – (iv), S – (ii)
  - (B) P – (ii), Q – (i), R – (iv), S – (iii)
  - (C) P – (i), Q – (iv), R – (iii), S – (ii)
  - (D) P – (iv), Q – (iii), R – (ii), S – (i)
78. New Delhi was designed by :
- (A) Edwin Lutyens and Herbert Baker
  - (B) Edwin Lutyen and George V
  - (C) Edwin Lutyen and B V Doshi
  - (D) Edwin Lutyen and Irwin
79. Copenhagen, Denmark, a city that is renowned for its :
- (A) Smart City Development
  - (B) Innovative Urban Design
  - (C) Sustainable Urban Design
  - (D) Modern Urban Design principles
80. The instrument that provides standards for land development by indicating lot sizes and layouts is:
- (A) Zoning regulations
  - (B) Land use control
  - (C) Building Byelaws
  - (D) Subdivision regulations
81. The type of absorbers used for sound absorption in low frequency range for acoustic treatments of enclosed space are :
- (A) Porous absorbers
  - (B) Panel or membrane absorbers
  - (C) Helmholtz resonators
  - (D) All the above

82. The optimum Reverberation Time range ( $RT_{60}$ ) required for good acoustics in a class room or a lecture hall is:  
(A) 0.0 to 0.5 seconds (B) 0.0 to 1.0 seconds  
(C) 0.5 to 1.0 seconds (D) 0.5 to 1.5 seconds
83. Noise Reduction Coefficient (NRC value) of an open window is:  
(A) 0.25 (B) 0.75  
(C) 1 (D) 0
84. The Loudness inside a room is measured by means of \_\_\_\_\_ and this unit is arrived at on the basis of \_\_\_\_\_ :  
(A) Decibel, Noise Criteria Curves (B) Decibel, Equal Loudness Contours  
(C) Phons, Noise Criteria Curves (D) Phons, Equal Loudness Contours
85. The maximum distance between the source and reflecting surfaces beyond which acoustic defect of echo creates an issue within the enclosure is:  
(A) 17 metres (B) 23 metres  
(C) 28 metres (D) 34 metres
86. As per census of India Population size of any settlement less than 5000 is called :  
(A) Village (B) City  
(C) Town (D) None of these
87. As per census of India Population size of any settlement equal to one lakh is called :  
(A) Town (B) City  
(C) Metropolitan City (D) None of these
88. Parks in the urban recreation category is called :  
(A) Both Passive and Active type of recreation  
(B) Active type of recreation  
(C) Passive type of recreation  
(D) None of these
89. The satellite town has the features :  
(A) Located beyond the green belt of the parent city  
(B) It depends on the parent city for employment  
(C) It should be connected with easy transport to the parent city  
(D) All of these
90. Aspects of zoning related to :  
(A) Density zoning (B) Height zoning  
(C) Use zoning (D) All of these

91. Arterial road, sub-arterial road, collector and local streets are classification of :
- (A) Urban roads (B) Neighbourhood roads  
(C) Regional roads (D) None of these
92. Lewis Mumford has called the classification of the town at worst stage of town development as :
- (A) Necropolis (B) Tyrannopolis  
(C) Eopolis (D) None of the above
93. Classification of town as primary, secondary and tertiary is done by :
- (A) Sir Patrick Geddes (B) Lewis Mumford  
(C) Griffith Taylor (D) None of the above
94. The first modern zoning ordinance done in the year 1916 by :
- (A) India (B) Chandigarh  
(C) Mumbai (D) New York city
95. An acropolis means under the perspectives of Urban planning :
- (A) City on a Hill (B) City below the ground  
(C) City on the water (D) None of the above
96. The GARDEN CITY concept was introduced by :
- (A) Sir Patrick Geddes (B) Lewis Mumford  
(C) Griffith Taylor (D) Thomas Adams
97. An ADAPTIVE REUSE as reuse of a building under historic preservation movement can be refers to :
- (A) Urban regeneration (B) Conservation planning  
(C) Both (A) and (B) (D) None of the above
98. A place of assembly where all the citizens except for women and slaves could convene and make democratic decisions :
- (A) An Agora (B) An acropolis  
(C) A Polis (D) None of the above
99. A process of absorbing neighbouring territory when a municipality extends its boundaries outwards is called :
- (A) Annexation (B) Encroachment  
(C) Conversion (D) None of the above
100. An area designation assigned to declining urban areas that are regarded as threats to local health, safety, public welfare and morals is called :
- (A) Slum (B) Blight  
(C) Rural pocket (D) None of the above



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