

**COMBINED TECHNICAL SERVICES EXAMINATION
(NON-INTERVIEW POST)**

COMPUTER BASED TEST

DATE OF EXAM: 08.08.2025 FN

**PAPER – II – TOWN PLANNING, CIVIL
ENGINEERING AND ARCHITECTURE**

(Code-560)

1. Choose the correct answer

What does ICOMOS stands for?

- (A) International Commissions on Monuments and Sites
- (B) International Council on Museum and Sites
- ☒ (C) International Council on Monuments and Sites
- (D) International Committee on Museum and Open air Sites
- (E) Answer not known

2. According to the 2006 Productivity Commission Inquiry Report of Australia, how does the Community generally view Heritage?

- (A) As an unnecessary expense
- ☒ (B) As a good thing to have
- (C) As a barrier to development
- (D) As a purely Academic Interest
- (E) Answer not known

3. According to the SPAB, what was the major difference between Indian and European Medieval buildings?

- (A) Indian used durable material
- ☒ (B) Indian tradition partly alive
- (C) Indian building more technological
- (D) Indian building poorly documented
- (E) Answer not known

4. Which ancient Indian site was presented due to its conversion into a church by the Portuguese?
- (A) Konark Sun Temple (B) Ajanta Caves
☒ (C) Elephant Caves (D) Fatehpur Sikri
(E) Answer not known
5. What does ICCROM stand for?
- (A) International Council for Conservation of Regional Monuments
(B) International Center for the conservation of Resource Monuments
☒ (C) International Center for the Study of the Preservation and Restoration of Cultural Property
(D) International Committee for the Reconstruction of old Monuments
(E) Answer not known
6. What is the main goal of preservation of historic/heritage monuments/objects?
- (A) Rebuild damaged parts ☒ (B) Keep existing state
(C) Add modern design (D) Enhance visual appeal
(E) Answer not known
7. According to Perry's model for how many people the ideal neighborhood unit was designed to accommodate?
- (A) 3,000 ☒ (B) 6,000
(C) 9,000 (D) 12,000
(E) Answer not known

8. Which foundational planning document formally introduced Perry's Neighborhood unit concept to the broader public and professional discourse?
- (A) CIAM charter of Athens
 - (B) The American Vitruvius
 - ☒ (C) Volume – VII of the 1929 Regional Plan
 - (D) Housing and Town Planning Act -1909
 - (E) Answer not known
9. Which of the following characteristic is most commonly associated with the Bostan Central Peninsula area Studied?
- (A) Grid layout, wide boulevards
 - (B) Flat hand, symmetrical zoning
 - ☒ (C) Crooked, paths, distinct district
 - (D) Uniformed design, same material
 - (E) Answer not known
10. Choose the correct answer :
- What Urban Design element does Kevin Lynch describe as "The Channels along which the observer customarily, occasionally or potentially moves?"
- (A) Districts
 - (B) Edges
 - ☒ (C) Paths
 - (D) Landmarks
 - (E) Answer not known

11. Who is author of the book "The Radburn idea" published in 1957?
- (A) Steen Filler Rasmussen ☒ (B) Clarence S. Stein
(C) Paul Zucker (D) Kevin Lynch
(E) Answer not known
12. Who designed the Urban planning project Industrial City (Cite Industrielle)?
- (A) Ebenezer Howard (B) Paul Zucker
☒ (C) Tony Gainer (D) Steen Eiler
(E) Answer not known
13. What does the "CRUTA" stand for?
- (A) Conservation and Restoration of Urban Technology and Architecture
(B) Cultural Revival of Urban Traditional Architecture
☒ (C) Conservation and Research of Urban Traditional Architecture
(D) Construction and Renovation of Urban Transit Area
(E) Answer not known
14. Choose the correct option :
- Which best describes the spatial planning philosophy behind the Assembly hall and high court in Chandigarh's Capital Complex?
- (A) Aligned for Summer Solar gain
(B) Visually Separated from Secretariat for Aesthetics
☒ (C) Symbolic Opposition showing democratic balance
(D) Close to Governor's Palace for admin cohesion
(E) Answer not known

15. Choose the correct answer :

The Urban land ceiling and Regulation Act was enacted in the year

- (A) 1956
- (B) 1966
- ☒ (C) 1976
- (D) 1986
- (E) Answer not known

16. Choose the correct answer :

How is the Padmaka town plan best characterized?

- (A) Star shaped fort
- (B) Rectangular blocks around river
- ☒ (C) Radial roads from central Temple like Lotus petals
- (D) Bow shaped layout along river
- (E) Answer not known

17. Choose the correct answer :

According to Mansara Shilpa- Shastra, which of the following is not a factor considered in ancient town planning?

- (A) Wind direction
- ☒ (B) Traffic density
- (C) Climatic conditions
- (D) Soil study
- (E) Answer not known

18. Reason and Assertion type.

Assertion [A] : The Swastika – type town plan symbolizes movement and dynamic balance.

Reason [R] : In this plan, city layout consist of four arms radiating from central node, allowing easy division into functional zones.

- ☒ (A) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (B) Both [A] and [R] are true, but [R] is the not correct explanation of [A]
- (C) [A] is true, but [R] is false
- (D) [A] is false, but [R] is true
- (E) Answer not known

19. Choose the correct answer :

Why it is difficult to clearly trace the origin of Ancient Cities?

- (A) Most cities were built after the historical period
- (B) Ancient cities were too small to study
- ☒ (C) Critical changes occurred before historical record begun
- (D) Urban Development begun in isolated forest
- (E) Answer not known

20. Choose the right answer from the statements given below :
- Which of the following statement best explains why the Indus Valley civilization was established near the Indus River?
- (A) Rich in iron ore
 - ☒ (B) Semi-arid soil suited wooden ploughs
 - (C) Heavy Rainfall supported farming
 - (D) Ideal for trade with West Asia
 - (E) Answer not known
21. City Development plans are formulated for accessing funds under JNNURM. The terminology of 'City development plan' is renamed as
- ☒ (A) City Investment Plan
 - (B) Comprehensive Development Plan
 - (C) City Vision Plan
 - (D) Comprehensive Investment Plan
 - (E) Answer not known
22. The town planning scheme that is popularly referred as 'land acquisition without tears' is known as
- ☒ (A) Land pooling scheme
 - (B) Land Acquisition Scheme
 - (C) Land Reservation
 - (D) Guided land development
 - (E) Answer not known

23. In SEZ scheme, goods and services coming from SEZ into DTA are treated as
- ☒ (A) Imports (B) Exports
(C) Inter-State supply (D) Intra state supply
(E) Answer not known
24. TDR shall not apply to cases where a private land is required for
- (A) Road widening
(B) Constructing public bus stops
(C) Construction of metro rail
☒ (D) Legalising illegal constructions
(E) Answer not known
25. The inter tidal zone i.e., the area between low tide line and high tide line shall constitute under the classification of
- (A) CRZ-IA ☒ (B) CRZ-IB
(C) CRZ-II (D) CRZ-III A
(E) Answer not known
26. In urban finance collection of Betterment Levy is under the head of
- ☒ (A) Taxes (B) Surcharges
☒ (C) Charges (D) Fees
(E) Answer not known

27. The private contractor is selected through a building process, who designs and builds a facility for a fixed fee, rate or total cost in this type of contract?
- (A) Supply and management contract
 - ☒ (B) Turnkey
 - (C) Concessions
 - (D) Lease
 - (E) Answer not known
28. In AMRUT Scheme the abbreviation of CWAP is
- ☒ (A) City Water Action Plans
 - (B) Country Water Action Plans
 - (C) City Water Augmentation Plans
 - (D) Computed Water Augmentation Plans
 - (E) Answer not known
29. In an urban e-governance environment _____ facilitates effective decision-making by enhancing communication between government and citizens and within and between communities.
- ☒ (A) ICT
 - (B) Finance
 - (C) Cluster
 - (D) Education
 - (E) Answer not known

30. The committee of HRIDAY that assists in creating the implementation and governance framework under which heritage development shall take place along with advice and guidance on all components of the scheme is
- ☒ (A) National Advisory Committee
 - (B) National Project Management Unit
 - (C) HRIDAY National Empowered Committee
 - (D) National Mission Directorate
 - (E) Answer not known
31. In Aerial photography, if an object is photographed from two different positions, the line between the two perspective centres is called the
- (A) Axis
 - ☒ (B) Base
 - (C) Focus
 - (D) Datum
 - (E) Answer not known
32. An area of land, water and other environmental elements that are visible from a fixed vantage (view point) is termed as
- (A) Hill shade
 - ☒ (C) View shed
 - (B) Surface shed
 - (D) Watershed
 - (E) Answer not known
33. The process of combining images to create one large file by means of spatial extent in digital image processing is known as
- (A) Subsetting
 - ☒ (C) Mosaicking
 - (B) Rubber sheeting
 - (D) Stitching
 - (E) Answer not known

34. Which of the following is correct in the Data editing process of GIS?
- (i) Pseudo nodes do not indicate an error
 - (ii) Pseudo nodes occur where a single line connects itself
 - (iii) Dangling nodes and pseudo nodes are same
- (A) (iii) only (B) (i) and (iii) only
☒ (C) (i) and (ii) only (D) (ii) and (iii) only
(E) Answer not known
35. Which of the following statements are true about aerial photography?
- (i) The cameras used in aerial photography are of short cycling time, fast lenses and efficient shutters
 - (ii) Aerial photographs are always vertical
 - (iii) Aerial cameras are capable of functioning under most extreme weather conditions
- (A) (i) only ☒ (B) (i) and (iii) only
(C) (i) and (ii) only (D) (ii) and (iii) only
(E) Answer not known
36. The grid based GIS spatial data can be stored, manipulated, analysed and referenced basically in any one of three models. One of the below is not a such model.
- (A) GRID (B) IMGRID
(C) MAP ☒ (D) LAGI
(E) Answer not known

37. The method of predicting unknown values using known values from neighboring locations to generate a raster grid is called
- (A) Pixelation (B) Interpolation
(C) Kriging (D) Querying
(E) Answer not known
38. The science and art of determining the size and shape of objects as a consequence of analysing images recorded on film or electronic media is known as
- (A) Digitization (B) Cartography
(C) Photogrammetry (D) Orthorectification
(E) Answer not known
39. The process of adding intelligence to the data file in GIS is called as
- (A) Tagging (B) Digitizing
(C) Buffering (D) Rubber sheeting
(E) Answer not known
40. The use of coordinate reference system to define the location of point, line and area features is known as
- (A) Rasterization (B) Raster geocoding
(C) Vector geocoding (D) Vectorization
(E) Answer not known

41. The minimum length of fillet weld should be _____ times the size of the weld.
- (A) 2 (B) 2.5
(C) 3 ☒ (D) 4
(E) Answer not known
42. The cantilever type retaining wall one used in the case where earth to be retained over a depth of
- (A) Upto 10 m ☒ (B) Upto 5 m
(C) Upto 2 m (D) Upto 3 m
(E) Answer not known
43. A load carrying stiffener prevents _____ of the web due to any concentrated load on the member.
- (A) Bending ☒ (B) Buckling
(C) Shear (D) Twisting effect
(E) Answer not known
44. In pocket bases, the length of the column embedded in concrete should be greater than _____ times the depth of column section.
- ☒ (A) 1.5 (B) 1.3
(C) 1.2 (D) 1.7
(E) Answer not known

45. The spacing between adjacent parallel line of fasteners, transverse to the direction of load/stress is called
- (A) Pitch ☒ Gauge distance
(C) Edge distance (D) Staggered pitch
(E) Answer not known
46. Which mode of failure is considered in fillet weld?
- (A) Bending (B) Tension
☒ Shear (D) Buckling
(E) Answer not known
47. The stress on a fillet weld is critical on the throat and is represented by $\sigma =$
- ☒ $f/0.707a$ (B) $6f/0.708a$
(C) $2f/0.606a$ (D) $2f/0.807a$
(E) Answer not known
48. The load factor for dead load + imposed load in ultimate load design is
- ☒ 1.7 (B) 1.5
(C) 1.6 (D) 2.0
(E) Answer not known

49. The slenderness ratio of an element of a section between two battens must be less than _____ times the least slenderness of the column.
- (A) 0.5 (B) 0.2
(C) 0.3 ~~(D) 0.7~~
(E) Answer not known
50. Prestressed concrete beam fails suddenly without warning due to
- (A) Failure of concrete in compression zone
(B) Failure of concrete in tension zone
~~(C) Failure of steel intension~~
(D) Failure of buckling
(E) Answer not known
51. The stress in the steel of pre stressed concrete is the product of
- ~~(A) Modular ratio $\times$ Stress in concrete~~
(B) Modular ratio $\times$ Slenderness ratio
(C) Strain in concrete $\times$ Load applied
(D) Strain in the cable $\times$ Load applied
(E) Answer not known
52. An average value of Poisson's ratio for pre-stressed concrete taken for calculation is
- (A) 0.10 (B) 0.25
~~(C) 0.15~~ (D) 0.29
(E) Answer not known

53. As per Indian code practice minimum grade of concrete used for pre-tensioned pre stressed concrete is
- (A) M 40 (B) M 50
(C) M 45 (D) M 30
(E) Answer not known
54. The external pre stressing of the concrete can be best obtained from
- (A) Flat jacks (B) Mechanical jack
(C) Hydraulic jack (D) Anchor cones
(E) Answer not known
55. The provision of column head, in flat slabs, is to increase
- (A) Punching resistance (B) Torsional resistance
(C) Tensile resistance (D) Bending resistance
(E) Answer not known
56. As per IS 456-2000 the ratio of the volume of helical reinforcement to the volume of the core shall not be less than
- (A) $0.45 ((A_g/A_c) - 1) (f_{ck}/f_y)$ (B) $0.30 ((A_g/A_c) - 1) (f_{ck}/f_y)$
(C) $0.52 ((A_g/A_c) - 1) (f_{ck}/f_y)$ (D) $0.36 ((A_g/A_c) - 1) (f_{ck}/f_y)$
(E) Answer not known
57. The distribution of stress and strain in concrete between the cracks can be found by using _____ theory.
- (A) No shop theory (B) Theory of elasticity
(C) Crack theory (D) Curvature-area theorem
(E) Answer not known

58. The design strength of a material is obtained by dividing characteristic strength of that material by
- (A) ☒ Partial safety factor (B) Serviceability limit
(C) Total safety factor (D) Characteristic load
(E) Answer not known
59. The two principal types of limit state are
- (i) limit state of collapse and limit state of fatigue
(ii) limit state of collapse and limit state of vibration
(iii) limit state of collapse and limit state of serviceability
(iv) limit state of fatigue and limit state of vibration
- (A) (i) (B) (ii)
(C) ☒ (iii) (D) (iv)
(E) Answer not known
60. The total strains due to shrinkage of concrete being generally in between the range
- (A) ☒ 0.0002 – 0.0006 (B) 0.0002 – 0.0003
(C) 0.0001 – 0.0005 (D) 0.0001 – 0.0006
(E) Answer not known
61. Accessibility of bus stops at _____ metres distance from neighbourhood.
- (A) 100 (B) 200
(C) 300 (D) ☒ 400
(E) Answer not known

66. Which e-services of a smart city deals with distant learning opportunities, training material to the students?
- ☒ (A) e-Learning (B) e-Security
(C) e-Business (D) e-Health and Tele-care
(E) Answer not known
67. _____ is a compact and integrated transportation development, which is incorporated in compact cities.
- (A) Compact city
☒ (B) Transit oriented development
(C) Eco city
(D) Smart city
(E) Answer not known
68. The EIA notification 2006 has notified _____ developmental sectors, which require prior EC.
- (A) 30 ☒ (B) 39
(C) 34 (D) 36
(E) Answer not known
69. Statutory Towns means
- ☒ (A) First category of urban units
(B) Second category of towns
(C) First category of medium town
(D) Second category of large city
(E) Answer not known

70. Expansion of URDPFI

- (A) Urban and Regional Planning
- (B) Rural Planning
- ☒ (C) Urban and Regional Development Plans Formulation and Implementation
- (D) Urban and Rural Development Plans Formulation and Implementation
- (E) Answer not known

71. In EIA process, _____ are adequately taken into consideration in the decision making process.

- (A) Scoping
- (B) Screening
- (C) Decision making
- ☒ (D) Public consultation and participation
- (E) Answer not known

72. In EIA process _____ seeks to identify at an early stage from all of a projects possible impacts and from all the alternatives that could be addressed.

- (A) Decision making
- ☒ (B) Scoping
- (C) Public participation
- (D) Screening
- (E) Answer not known

73. _____ is a second type of agglomerative economy which occurs if the production cost of an individual firm decreases as the total output of the urban area increases.
- (A) Urbanization economies (B) Localization economies
(C) Agglomerative economy (D) Economic base study
(E) Answer not known
74. The limitation of area and height of buildings shall be specified in terms of
- (A) Development Control Regulations
(B) Floor Area Ratio
(C) Open Space Ratio
(D) Set backs
(E) Answer not known
75. Economic base study means
- (A) For projecting employment growth
(B) For economic growth
(C) For multiplier effect
(D) For labour demand
(E) Answer not known
76. The _____ labour sells its products to consumers outside the city.
- (A) Local (B) Inside
(C) Export (D) Import
(E) Answer not known

77. There are two types of Agglomerative economies. They are
- ☒ (A) Localization economies and urbanization economies
 - (B) Import and export economies
 - (C) Scale economies
 - (D) Trade
 - (E) Answer not known
78. According to _____ theory, the export industries form the economic base of the urban economy.
- (A) Economic growth
 - ☒ (B) Economic base theory
 - (C) Base study
 - (D) Economics
 - (E) Answer not known
79. Agglomeration economics can be described in _____ categories.
- ☒ (A) Sharing, matching and learning
 - (B) Land economics
 - (C) Sharing and matching
 - (D) Learning
 - (E) Answer not known
80. Under which land use category does the retail shopping zone categorized?
- (A) Industry
 - ☒ (B) Commercial
 - (C) Residential
 - (D) Public and semi-public
 - (E) Answer not known

81. The ear is most sensitive for noise in the frequency range of
- (A) 20 to 50 Hz (B) 200 to 500 Hz
☒ (C) 2,000 to 5,000 Hz (D) 600 Hz to 1,500 Hz
(E) Answer not known
82. _____ is necessary when the waste water contains either excess alkali (or) acid.
- (A) Demonstration (B) Chemical treatment
(C) Biological treatment ☒ (D) Neutralization
(E) Answer not known
83. The industrial installations for the _____ sources of air pollution.
- (A) Square (B) Mobile
(C) Line ☒ (D) Stationary
(E) Answer not known
84. Organic matter in the solid waste is digested and converted into humus and stable mineral compounds by
- (A) Pulverisation ☒ (B) Composting
(C) Incineration (D) Dumping
(E) Answer not known

85. _____ is installed in the house drainage to preserve the water seal of traps.
- (A) Vent pipe (B) Soil pipe
☒ (C) Antisiphonage pipe (D) Waste pipe
(E) Answer not known
86. _____ digestion is a process in which micro organisms obtain energy by endogenous (or) auto oxidation of their cellular protoplasm.
- (A) Anaerobic (B) Sludge
☒ (C) Aerobic (D) Elutriation
(E) Answer not known
87. Demineralisation is a _____ in unit operation in waste water treatment.
- (A) Preliminary process (B) Primary treatment process
(C) Secondary treatment process ☒ (D) Tertiary treatment process
(E) Answer not known
88. _____ is the physical unit operation in waste water treatment.
- ☒ (A) Sedimentation (B) Plug flow
(C) Adsorption (D) Disinfection
(E) Answer not known

89. _____ is constructed on a sewer line to provide connection between a high level branch sewer to a low level main sewer.
- (A) Clean outs (B) Lamp hole
(C) Access hole ~~(D)~~ Drop man hole
(E) Answer not known
90. At _____ velocity the solid particles will remain in suspension without settling at the bottom of the sewer.
- (A) Maximum ~~(B)~~ Self cleansing
(C) Peak flow (D) Dry weather flow
(E) Answer not known
91. The approximate optimum velocity for 15 cm diameter pipe is _____ m/sec.
- (A) 1.020 (B) 1.0020
(C) 120 ~~(D)~~ 1.20
(E) Answer not known
92. In _____ system of supply, water is supplied only for the peak periods during morning and evening.
- (A) Continuous supply ~~(B)~~ Intermittent supply
(C) Rotational supply (D) Mod flow
(E) Answer not known

93. Grid iron system is also known as
- ☒ (A) Reticulated system
 - (B) Tree system
 - (C) Line system
 - (D) Radial system
 - (E) Answer not known
94. _____ valves are placed at the low points in the distribution pipe system.
- (A) Sluice valves
 - (B) Air valves
 - ☒ (C) Drain valves
 - (D) Pressure relief valves
 - (E) Answer not known
95. The sea water is the most evident example of salt water. Sea water averages _____ percent of salt.
- (A) 0.0
 - (B) 1.0
 - ☒ (C) 3.5
 - (D) 1.5
 - (E) Answer not known
96. _____ effect is produced when the velocity of water in the pipe is stopped suddenly by sudden closure of valve.
- (A) Stresses of bends
 - (B) Internal pressure
 - ☒ (C) Water hammer
 - (D) Longitudinal stress
 - (E) Answer not known

97. _____ bacteria can survive between the temperature of 20° to 40°C.

- (A) Thermophilic (B) Mesophilic
 (C) Faecal (D) Pshychrophilic
 (E) Answer not known

98. _____ bacteria can survive without the presence of oxygen.

- (A) Aerobic (B) Thermophilic
(C) Mesophilic ~~(D) Anaerobic~~
(E) Answer not known

99. Hehners method to determine _____ hardness by titration with a standard solution of sulphuric acid using methyl orange as indicator.

- (A) Total (B) Calcium
(C) Permanent ~~(D) Temporary~~
(E) Answer not known

100. Odour test can be carried out by _____ instrument.

- (A) Nephelometers
(B) Calorimeter
(C) Osmoscope
(D) Dissolved oxygen meter
(E) Answer not known

101. Lighting condition are usually described in terms of illumination on a given plane most often the horizontal working plane known as

- (A) Scalar illumination
- (B) ☒ Planar illumination
- (C) Vegor illumination
- (D) Spherical illumination
- (E) Answer not known

102. Assertion [A] : The traditional shelter found in most desert regions has heavy walls of earth, brick or stone and roofs of the same material.

Reason [R] : As thick walls provide good thermal capacity as well as security and protection against noise.

- (A) [A] and [R] are false
- (B) [A] and [R] are true, but [R] is not the correct explanation of [A]
- (C) ☒ [A] and [R] are true, but [R] is the correct explanation of [A]
- (D) [A] is true but [R] is false
- (E) Answer not known

103. Sky conditions are normally _____ in warm-humid climatic zones except during storms.

- (A) ☒ Clear
- (B) Dark
- (C) Cloudy
- (D) Dull
- (E) Answer not known

104. Following are site planning strategies to be used for HOT ARID regions.

1. Use moisture conserving plants.
2. Trap cool air for convection.
3. Avoid heat absorbing materials.
4. Promote solar gain in winter season.

- ☒ (A) 1, 2, 3, are correct (B) 1, 3, 4 are correct
(C) 2, 3, 4 are correct (D) All are correct
(E) Answer not known

105. Which of the following is NOT a key strategy for site design in temperated and cold regions?

- (A) Promote solar gain in winter season
☒ (B) Avoid tall solid walls that block winds
(C) Maintain openings for cooling summer breezes
(D) Provide afternoon shade with deciduous trees
(E) Answer not known

106. Following are the advantages of providing a water feature in Urban Landscape?

1. Aesthetics
2. Functional reasons
3. Psychological
4. Utilitarian

- (A) 1, 2, are correct (B) 2, 3, are correct
(C) 3, 4, are correct ☒ (D) All are correct
(E) Answer not known

107. Which of the following is NOT a factor to consider when determining widths for bikeways?

- (A) Spatial dimensions of Bicycle
- (B) Maneuvering space for balancing
- (C) Anticipated volume of traffic
- ☒ (D) Adjacent landscape strip width
- (E) Answer not known

108. Which of the following is NOT a general site design strategy for HOT ARID regions?

- (A) Use moisture conserving plants
- (B) Deflect hot winds
- ☒ (C) Allow for escape of cool air
- (D) Prevent heat build up
- (E) Answer not known

109. The environmental benefits of GREEN ROOFS are

- 1. Improves thermal insulation
 - 2. Reduces urban heat Island
 - 3. Produces oxygen
 - 4. Provided habitat for wildlife
- (A) 1 and 2 only
 - (B) 1, 2, 3 only
 - (C) 1, 4 only
 - ☒ (D) all the above
 - (E) Answer not known

110. Which of the following is NOT a green way?

- (A) Bicycle routes
- (B) Wildlife corridors
- (C) Tree shaded foot paths
- ☒ (D) Parking lots
- (E) Answer not known

111. Provision of horizontal sashes inclined at an angle of _____ in appropriate direction helps to promote the indoor air motion.

- (A) 30°
- (B) 60°
- ☒ (C) 45°
- (D) 120°
- (E) Answer not known

112. SRI is the metric used to measure performance of a cool roof.
Expand SRI

- ☒ (A) Solar Reflective Index
- (B) Solar Radiation Index
- (C) South Radiation Index
- (D) Surface Reflexive Index
- (E) Answer not known

113. _____ facing spaces will receive daylight throughout the day and most of year.

- (A) North
- ☒ (B) South
- (C) East
- (D) West
- (E) Answer not known

114. In tall spaces, warm air tends to _____ and accumulate near the ceiling due to the principle of buoyancy.

- (A) Move (B) Fall
☒ (C) Rise (D) Stay
(E) Answer not known

115. Assertion [A] : Choosing the optimum orientation to maximise daylight and to minimize summer heat gain and winter heat loss can have a significant impact in energy efficiency.

Reason [R] : North facing windows suffer very little solar gain and benefits are often gained by having building axis pointing east/west.

- (A) [A] is true but [R] is false
(B) [A] is false, [R] is true
☒ (C) Both [A] and [R] are true but [R] is the correct explanation of [A]
(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]
(E) Answer not known

116. Parking bays reserved for the handicapped should be _____ in width.

- (A) 2.5 m (B) 3 m
(C) 3.5 m ☒ (D) 4 m
(E) Answer not known

117. _____ is the art of arranging structures, on the land and shaping the spaces between them, an art linked to architecture, engineering, landscape architecture and city planning.
- (A) Site analysis ☒ (B) Site planning
(C) Site inventory (D) Site surveying
(E) Answer not known
118. Which of the following is an aspect of neighbourhood context in site analysis?
- (A) Location of the city
☒ (B) Existing and projected building use in the neighbourhood
(C) Dimensions of the site
(D) Drainage pattern of the site
(E) Answer not known
119. Which of the following is NOT a HARD DATA for site analysis?
- (A) Location (B) Dimentions
(C) Climate ☒ (D) Noise
(E) Answer not known
120. Based on the object of survey, which of the following is NOT a method of object of survey?
- ☒ (A) Engineering survey (B) Military survey
(C) Geological survey ☒ (D) Triangulation survey
(E) Answer not known

121. Identify the correct attributes which contributes to the transport model from the following?

(i) Destination

(ii) Population

(iii) Route

(iv) Transport mode

(v) Mobility

(vi) Location

☒ (A) (i) (iii) (iv) (v) and (vi)

(B) (i) (ii) (iii) (iv) and (v)

(C) (ii) (iii) (iv) (v) and (vi)

(D) (i) (ii) (iii) (v) and (vi)

(E) Answer not known

122. Which of the following statement is correct?

(1) Advanced mapping and statistical techniques are used for calculating land suitability.

(2) Suitability analysis in the process to assign weightage and overlay the factors

(3) All factors are assign with same weightage.

(A) Only (1) is correct

☒ (B) (1) and (2) are correct

(C) (2) and (3) are correct

(D) (1) and (3) are correct

(E) Answer not known

123. Assertion [A] : Land suitability refers to the ability of a particular type of land to support a specific use.

Reasons [R] : Land suitability can be used in planning process the finalize most appropriate land for particular land use.

- ☒ (A) Both [A] and [R] are correct
- (B) [A] is true [R] is false
- (C) [A] is false [R] is true
- (D) Both [A] and [R] are false
- (E) Answer not known

124. In transportation planning, while developing the trip distribution models. Identify the models which employs a more rational synthetic methods from the following?

- (i) Gravity Model
 - (ii) Tanner Model
 - (iii) Fratar Method
 - (iv) Furness Method
- ☒ (A) (i) and (ii)
 - (B) (i), (ii) and (iv)
 - (C) (iii) and (iv)
 - (D) (ii), (iv)
 - (E) Answer not known

125. _____ developed an urban land use model that was built around two gravity model structures, one for residential and another for retail service feedbacks.

- ☒ (A) Lowry
- (B) Zipf
- (C) Homer Hoyt
- (D) Mumford
- (E) Answer not known

126. Which of the following statement is correct?

- (1) Focused Group Discussion (FGD) is a qualitative data collection and research technique.
- (2) FGD costs high compared to survey.
- (3) FGD is used to explore meaning of survey.
- (A) Only (1) is correct
- (B) (1) and (2) are correct
- (C) (2) and (3) are correct
- ☒ (D) (1) and (3) are correct
- (E) Answer not known

127. In transportation planning, _____ model takes the trips produced at one zone and distributes to other zones based on both the size of the other zones (as measured by their trip attraction) and composite cost (travel time, distance or cost for all modes available) to other zones.

- ☒ (A) Gravity
- (B) Lowry
- (C) Sector
- (D) Simulation
- (E) Answer not known

128. Which of the following statement are correct as per the Variable Index Method?

- (1) Fixed weights are assigned
- (2) Variable weights are assigned
- (3) Weight is given to each activities
- (A) Only (2) is correct
- (B) Only (3) is correct
- ☒ (C) (2) and (3) are correct
- (D) (1) and (2) are correct
- (E) Answer not known

129. Match the following Region.

- | | | |
|--|---|-----------------|
| (1) The Great Mountain Wall | – | Kutch Peninsula |
| (2) The Great Plain | – | Aravalli Hills |
| (3) The Great Plateau | – | Punjab |
| (4) Coastal Plains | – | Darjeeling |
| ☒ (A) 4, 3, 2, 1 | | (B) 1, 2, 3, 4 |
| (C) 2, 3, 4, 1 | | (D) 3, 2, 1, 4 |
| (E) Answer not known | | |

130. Match the following :

- | | | |
|--|---|---------------------|
| (1) Macro Region | – | Division of a State |
| (2) Meso Region | – | Zonal Councils |
| (3) Micro Region | – | Grass-root planning |
| (4) Micro-Minor Planning | – | Metropolitan area |
| ☒ (A) 2, 1, 4, 3 | | (B) 1, 2, 3, 4 |
| (C) 2, 3, 4, 1 | | (D) 3, 4, 1, 2 |
| (E) Answer not known | | |

131. Assertion [A] : Nodal region is heterogeneous region.

Reason [R] : Interdependence is a rule in heterogeneous region.

- ☒ (A) Both [A] is true and [R] is true
(B) [A] is false and [R] is true
(C) [A] is true and [R] is false
(D) Both [A] and [R] are false
(E) Answer not known

132. Match the following :

- | | | | |
|-----|-------------------|---|-------------------------------------|
| (1) | World level | – | Ecological development |
| (2) | National level | – | Social development |
| (3) | Subnational level | – | Regional disparities in development |
| (4) | Local level | – | Economic development |
| (A) | 4, 2, 3, 1 | | (B) 3, 4, 2, 1 |
| (C) | 2, 1, 3, 4 | | (D) 1, 2, 4, 3 |
| (E) | Answer not known | | |

133. Match the plans and projects which are correct?

- | | | | |
|-----|-------------------------|---|--|
| (1) | Metro Rail | – | NMV facility plan |
| (2) | Freight terminals | – | Intermodal facility |
| (3) | Parking | – | Regulatory measures |
| (4) | Railway crossing | – | Public transport improvement plan |
| (A) | (1) and (2) are correct | | (B) (2) and (3) are correct |
| (C) | (3) and (4) are correct | | (D) (1) and (4) are correct |
| (E) | Answer not known | | |

134. Match the following plan with approving authority.

- | | | | |
|--------------------------------------|-----------------------|---|-----------------------|
| (1) | Perspective plan | – | Jn NURM |
| (2) | Development plan | – | Municipal Council |
| (3) | Annual plan | – | Municipal Corporation |
| (4) | City Development plan | – | State Government |
| ☒ (A) | 4, 3, 2, 1 | | (B) 3, 2, 1, 4 |
| (C) | 2, 1, 4, 3 | | (D) 1, 4, 3, 2 |
| (E) | Answer not known | | |

135. Match the following plan with their scope and purpose.

- (1) Perspective plan – Comprehensive plan of rural areas
(2) Regional plan – Spatio-economic development policies
(3) Master plan – Theme based development
(4) Special purpose plan – Development plan
- (A) 3, 4, 2, 1 (B) 2, 3, 4, 1
(C) 1, 2, 3, 4 (D) ~~2, 1, 4, 3~~
(E) Answer not known

136. Assertion [A]: As per 2011 census the number of census town increased by 1851. Whereas the number of statutory towns has increased by 6.3%.

Reason [R] : This is because that a number of rural settlements have attained urban characteristics.

- (A) [A] is true and [R] is true (B) [A] is false and [R] is true
 (C) [A] is true and [R] is false (D) [A] is false and [R] is false
 (E) Answer not known

137. Match the following Author to Criteria used for classification of Region.

- | | |
|--------------------------|------------------------|
| (1) V. Nath | – Energy of power |
| (2) Bhat and Rao | – Population density |
| (3) Sen Gupta | – Natural resources |
| (4) K.L. Vij and Chandra | – Topography, Land use |
- (A) 3, 2, 1, 4 (B) 2, 3, 4, 1
(C) 1, 2, 3, 4 ~~(D)~~ 4, 3, 2, 1
(E) Answer not known

138. Assertion [A] : There is a need of a comprehensive master plan to eradicate the evils of the ill-planned cities.

Reason [R] : After the 'Industrial Revolution' the over-grown cities become a mess and muddle with all the evils.

- ~~(A)~~ [A] is true and [R] is true (B) [A] is false and [R] is true
(C) [A] is true and [R] is false (D) [A] is false and [R] is false
(E) Answer not known

139. Assertion [A] : The aim of town design is to see that the urban elements not only function properly but also in a pleasing way.

Reason [R] : Man has natural love for 'Beauty' and so utility and beauty must be considered in the civic design.

- ~~(A)~~ [A] is true [R] is true (B) [A] is false [R] is true
(C) [A] is true [R] is false (D) [A] is false [R] is false
(E) Answer not known

140. Match the following :

- | | |
|-------------------------------|--|
| (1) Mohenjo-Daro | – Harappa |
| (2) Indus-valley civilisation | – Hill of the Dead |
| (3) Viswakarmaprakash | – Swastika, Padmaka |
| (4) Mansara Silpashastra | – First layout the towns and then plan of the town |
- (A) 2, 1, 4, 3 (B) 1, 2, 3, 4
(C) 4, 3, 2, 1 (D) 3, 4, 1, 2
(E) Answer not known

141. _____ are wide stone walls built along edge or out into sea, where strips can be tied up to upload goods.

- | | |
|----------------------|--------------|
| (A) Pontoon | (B) Wharves |
| (C) Shoreline | (D) Hexapods |
| (E) Answer not known | |

142. The long excavated chamber having side walls, a semi circular end wall and floor known as

- | | |
|----------------------|-------------------|
| (A) Graving dock | (B) Wet dock |
| (C) Jettie | (D) Channel buoys |
| (E) Answer not known | |

143. _____ refers to sheltered sheet of water where vessels are anchored.
- (A) Waves (B) Tides
(C) Sea ~~(D) Harbour~~
(E) Answer not known
144. _____ consists of the strip of pavement joining the runway to Apron.
- (A) Air mail
(B) Heli port lighting
(C) Bearing capacity of soil
~~(D) Taxi ways~~
(E) Answer not known
145. The airport site selected should be such that it provides natural protection to the
- (A) Roads ~~(B) Area from air raids~~
(C) Fuel spillage (D) Drop holes on airport
(E) Answer not known
146. _____ indicates the configuration locations and size of all physical facilities.
- (A) Airport Access plan (B) Terminal Area Plan
(C) Land use Plan ~~(D) Airport layout plan~~
(E) Answer not known

147. The drainage system in a railway track is a _____ element.

- (A) Vertical
- ~~(B) Critical~~
- (C) Long layer
- (D) Easy
- (E) Answer not known

148. The specialty of "Rack railway" is

- (A) It has special locomotive
- (B) It has special engine
- ~~(C) It's has three rails instead of two rails~~
- (D) All of the above
- (E) Answer not known

149. Choose the correct statement regarding creep

- (i) Creep is greater on curves than on rails tangents
 - (ii) Creep in new rails is more than that in old rail
 - (iii) Creep is more on steep gradient than on level track
- (A) Only (i)
 - ~~(C) Only (iii)~~
 - (B) Only (ii)
 - (D) All of above
 - (E) Answer not known

150. What is the maximum speed of train in standard III Interlocking?

- (A) 120 kmph
- ~~(C) 130 kmph~~
- (B) 125 kmph
- (D) 140 kmph
- (E) Answer not known

151. Which one is not special types of signals?

- (A) Repeater Signals
- ☒ (B) Detonating Signals
- (C) Point Indicators
- (D) Routing Signals
- (E) Answer not known

152. Traffic Index can be calculated by

- ☒ (A) $1.35 (EWL)^{0.11}$
- (B) $1.25 (EWL)^{0.11}$
- (C) $1.35 (EWL)^{0.21}$
- (D) $1.25 (EWL)^{0.21}$
- (E) Answer not known

153. Alligator cracking causes due to

- (A) Repeated application of loads
- (B) Allow surface water to seep through in it
- ☒ (C) Relative movement of pavement layer material
- (D) Inherent weakness of the pavement mixtures
- (E) Answer not known

154. Benkelman beam is a device used to measure the
- (A) Consistency of the pavement
 - (B) Mix ratio of the pavement
 - ☒ (C) Rebound deflection of the pavement
 - (D) Flukiness of the pavement
 - (E) Answer not known
155. As per IRC specification, the maximum spacing of contraction joint in unreinforced CC slab is
- ☒ (A) 4.5 m
 - (B) 3.5 m
 - (C) 4.0 m
 - (D) 2.5 m
 - (E) Answer not known
156. Recommended value of camber for water bound macadam roads of heavy rainfall.
- (A) 1 in 30
 - ☒ (B) 1 in 36
 - (C) 1 in 48
 - (D) 1 in 60
 - (E) Answer not known

157. The length of the transition curve depends on

- (A) SSD and design speed
- (B) Camber and design speed
- ☒ (C) Radius and design speed
- (D) Kerb and design speed
- (E) Answer not known

158. Intellection time is

- (A) Time required for final action
- (B) Time required for emotional sensation
- (C) Time required for perceive an object
- ☒ (D) Time required for understanding situation
- (E) Answer not known

159. Kerb indicates the boundary between

- (A) Pavement and camber
- ☒ (B) Pavement and shoulder
- (C) Pavement and crown
- (D) Pavement and Frontage
- (E) Answer not known

160. PCU stand's for

- ☒ (A) Passenger Car Unit
- (B) Practical Car Unit
- (C) Passenger Cart Unit
- (D) Practical Cart Unit
- (E) Answer not known

161. SVAMITVA stands for

- (A) Systematic Validation and Mapping of Indian Territories via Aerial Vehicles
- (B) Smart Village Asset Mapping and Information Technology for Value Administration
- ☒ (C) Survey of Villages and Mapping with Improvised Technology in Village Areas
- (D) Satellite and Visual Assessment for Mapping and Integration of Territorial Village Assets
- (E) Answer not known

162. Identify the following that is NOT included in the calculation of Carpet Area?

- (A) Balcony area
- (B) Service area
- ☒ (C) Area of Walls
- (D) Toilet area
- (E) Answer not known

163. According to Tamil Nadu combined Development and Building Rules 2019, "High Rise Building" means a building exceeding _____ height.
- (A) 10.5 m (B) 11.5 m
(C) 15.3 m ~~(D) 18.3 m~~
(E) Answer not known
164. Identify the following that is NOT a tier of Panchayati Raj?
- (A) Gram Panchayat
(B) Panchayat Samiti
(C) Zilla Parishad
~~(D) Municipal Corporation~~
(E) Answer not known
165. The 74th Constitutional Amendment Act provides Constitutional status to
- (A) Panchayats ~~(B) Municipalities~~
(C) District Courts (D) Gram Sabhas
(E) Answer not known

166. Which of the following is 'NOT' a multilateral organization that provide aid/funds to other countries?
- (A) World Bank
 - (B) Organization for Economic Cooperation and Development (OECD)
 - (C) Asian Development Bank
 - ☒ (D) US Agency for International Development (USAID)
 - (E) Answer not known
167. According to URDPFI, the purpose of _____ plan is to develop vision and provide a policy framework for urban and regional development and further detailing.
- (A) Regional
 - (B) Development
 - ☒ (C) Perspective
 - (D) Local area
 - (E) Answer not known
168. The Chairperson of CUMTA (Chennai Unified Metropolitan Transport Authority) is
- (A) Minister of Transport
 - (B) Mayor of Chennai
 - (C) Chief Secretary of Tamil Nadu
 - ☒ (D) Chief Minister of Tamil Nadu
 - (E) Answer not known

169. Choose the 'Correct' statements from the following list.

- (a) For a residence with floor area above 75 sq.m, 1 car space have to be provided
- (b) For a shopping centre with a floor area upto 50 sqm. no car space need to be provided
- (c) For an auditorium/Kalyana Mandapam, 1 car space and 1 two wheeler space have to be provided for every 10 sq.m
- (d) For a hospital with floor area above 3000 sq.m, 1 car space and 1 two wheeler space have to be provided for every 50 sq.m.
- ☒ (A) (a) and (b)
- (B) (a), (b) and (c)
- (C) (b), (c) and (d)
- (D) (c) and (d)
- (E) Answer not known

170. Explain the full form of CUMTA

- (A) Chennai Unified Metro Transport Authority
- (B) Chennai Urban Mobility and Transit Authority
- ☒ (C) Chennai Unified Metropolitan Transport Authority
- (D) Chennai Urban Multi-Modal Transport Association
- (E) Answer not known

171. In transportation planning Delphi method is used for

- ☒ (A) Judgemental Forecast
- (B) Time-Series forecast
- (C) Associative model
- (D) Time-space method
- (E) Answer not known

172. Principles of Transit Oriented Development (TOD) is

- (A) To encourage urban sprawl
- ☒ (B) To promote development around public transit hubs
- (C) To reduce public transportation usage
- (D) To create isolated residential areas
- (E) Answer not known

173. Choose the following which is not used for route assignment technique?

- ☒ (A) Intervening opportunity model
- (B) All or nothing method
- (C) Diversion curve technique
- (D) Multiple route assignment technique
- (E) Answer not known

174. This type of survey does not give information about the trip purpose or origin and destination of trip
- (A) Post card survey
 - (B) Road side interview method
 - (C) Household survey
 - ☒ (D) License plate survey
 - (E) Answer not known
175. Choose the right answer which is not the method for trip generation analysis?
- (A) Multiple linear regression analysis
 - (B) Aggregated and disaggregated analysis
 - ☒ (C) Diversion curve method
 - (D) Category analysis
 - (E) Answer not known
176. Parking index is expressed as
- (A) Turnover curve
 - (B) Accumulation curve
 - (C) Vehicle hours
 - ☒ (D) No. of bays occupied/ theoretical number of $\times 100$ bays available
 - (E) Answer not known

177. Bus Rapid Transit System is preferable when _____ buses per hour per direction (bphpd) use the bus way.
- (A) ☒ More than 100 (B) Less than 100
(C) In between 50 to 100 (D) More than 50
(E) Answer not known
178. Choose any one of the following which is NOT an objective of origin – Destination survey?
- (A) To determine the amount of by passable traffic
(B) To develop trip generation and trip distribution models
(C) To assess the adequacy of parking facilities
(D) ☒ To assess the pedestrian pattern
(E) Answer not known
179. Recommended sample size for Home Interview survey of an area having population over 10,00,000
- (A) 1 in 10 households (B) 1 in 15 households
(C) 1 in 20 households (D) ☒ 1 in 25 households
(E) Answer not known
180. In large study of transportation projects, the study area has to be divided in form of
- (A) Zones (B) Sub-zones
(C) ☒ Sectors (D) Land parcels
(E) Answer not known

181. According to NBC, India, the chimneys parapet walls and architectural features not exceeding _____ in height shall not be included in the height of the building.
- (A) 1 m (B) 1.2 m
(C) 1.5 m (D) 1.8 m
(E) Answer not known
182. If a podium is permitted in a plot of area 1500 m² or more, the height shall not exceed
- (A) 10 m (B) 15 m
(C) 20 m (D) 30 m
(E) Answer not known
183. The angular distance of any point of celestial sphere, measured from the horizon, on the great circle passing through the body and the zenith
- (A) Azimuth (B) Altitude
(C) Latitude (D) Longitude
(E) Answer not known
184. According to TNCD & BR 2019, the minimum width of staircase for a Educational Institution is
- (A) 0.75 m (B) 0.90 m
(C) 1.5 m (D) 2.00 m
(E) Answer not known

185. According to TNCD & BR 2019, the front set back for cottage Industries when the abutting road width is less than 9 m is
- (A) 6.0 m (B) 4.5 m
(C) 3.0 m ~~(D) 1.5 m~~
(E) Answer not known
186. For the application for planning permit or Building permit, the site plan draw should be to the scale of not less than _____ for a site upto one hectare.
- (A) 1 : 200 ~~(B) 1 : 500~~
(C) 1 : 1000 (D) 1 : 2000
(E) Answer not known
187. Connaught place, New Delhi was designed by
- (A) Mehrotra ~~(B) W.H. Nicholas~~
(C) Edwin Lutyens (D) Sir Hebert Baker
(E) Answer not known
188. The first Architecture school in India
- (A) Architectural Academy, Bombay
(B) The Nagpur School of Architecture
~~(C) Sir J.J. School of Architecture~~
(D) Delhi Polytechnic
(E) Answer not known

189. Arrange the post modern Architects in the chronological order

(i) Gehry

(ii) Walker

(iii) Aalto

(iv) Venturi

(A) (iii), (iv), (i), (ii)

(B) (iv), (iii), (ii), (i)

☒ (C) (iii), (iv), (ii), (i)

(D) (iv), (iii), (i), (ii)

(E) Answer not known

190. IIT Boiler House was designed by

☒ (A) Mies Vander Ruhe

(B) F.L. Wright

(C) Le Corbusier

(D) C.F. Morphay

(E) Answer not known

191. In the Universal Design and Barrier Free Environment when the viewing Distance is upto 7 metres the size of signage should be

☒ (A) 60 mm × 60 mm

(B) 100 mm × 100 mm

(C) 200 mm × 200 mm

(D) 450 mm × 450 mm

(E) Answer not known

192. Match the following – Size of Letters in signages.

Viewing Distance	Height of letters
(a) 6 meters	1. 130 mm
(b) 12 meters	2. 80 mm
(c) 15 meters	3. 50 mm
(d) 25 meters	4. 40 mm
	5. 25 mm
	6. 20 mm

	(a)	(b)	(c)	(d)
(A)	5	2	4	3
☒ (B)	6	4	3	2
(C)	6	3	4	5
(D)	5	4	3	2
(E)	Answer not known			

193. If the sign Background is Red Brick the colour contrast of Sign Boards should be

- ☒ (A) White (B) Black
(C) Yellow (D) Green
(E) Answer not known

194. The minimum wheelchair Manoeuvring space on the pull side of the door handle should be

- ☒ (A) 650 mm (B) 700 mm
(C) 750 mm (D) 800 mm
(E) Answer not known

195. Under the category of Assembly Halls the number of spaces designated for wheelchair users in a seating area when the no. of seats in the seating area is upto 1000
- (A) 6 (B) ~~8~~
(C) 10 (D) 12
(E) Answer not known
196. An area used for a stroll or walk, especially in a public place, as for pleasure or play.
- (A) Pylon (B) ~~Promenade~~
(C) Portico (D) Propylon
(E) Answer not known
197. The articulation of the importance or significance of a form or space by its size, shape or placement relative to the other forms and spaces of the organization
- (A) Rhythm (B) Axis
(C) Symmetry (D) ~~Hierarchy~~
(E) Answer not known
198. "Architecture is the masterly, correct and magnificent play of masses brought together in light. Our eyes are made to see forms in light; light and shade reveals the form is a saying by
- (A) ~~Le Corbusier~~ (B) Frank Lyoid Wright
(C) Mies Van-rohe (D) Alvar Alto
(E) Answer not known

199. The forms which the Habitat Montreal designed by Moshe Safdie depicts is

- (A) Radial Form
- (B) ☒ Clustered form
- (C) Linear form
- (D) Grid form
- (E) Answer not known

200. This element can articulate the penetrable boundaries of spatial zones which mesh easily with adjacent spaces?

- (A) Architrave
 - (B) Beams
 - (C) ☒ Columns
 - (D) Archs
 - (E) Answer not known
-