

1. The Grand City idea was propounded by Ebenezer Howard
- (A) 1889 (B) 1989
(C) 1898 (D) 1988
(E) Answer not known
2. Identify the following statements which are correct towards the concept of Urban Renewal
- (i) Urban Renewal may have more than one renewal zone.
(ii) Urban Renewal is also needed in areas of low density development.
(iii) It refers to the rejuvenation of inner city or core areas.
(iv) It is only applicable for mono-centered cities
- (A) (i), (ii) (iii) (B) (i), (ii) and (iv)
(C) (ii), (iii) and (iv) (D) (ii) and (iv)
(E) Answer not known
3. _____ is the aspect of planning in which control is exercised over the use of private and public land.
- (A) Building (B) Neighbourhood
(C) Zoning (D) Squatter
(E) Answer not known

4. Match the schemes in Group I with their specific and targets in Group II :

Group I		Group II	
(P) JNNURM		1. Urban Amenities for Rural areas	
(Q) PMAY-G		2. Infrastructure and slum	
(R) PURA		3. Rural Employment Upgradation	
(S) NREGA		4. Land Acquisition	
		5. Housing for poor families	

	(P)	(Q)	(R)	(S)
(A)	2	5	1	3
(B)	5	2	1	3
(C)	5	2	3	4
(D)	2	5	3	4
(E)	Answer not known			

5. Under JNNURM finding pattern, cities/UA's with 4 million plus population as per 2001 census are eligible for Central assistance of

(A) 35%	(B) 50%
(C) 80%	(D) 100%
(E) Answer not known	

6. As per JNNURM report dated 2017 one of the following is inadmissible for this scheme Assistance

(A) Slum rehabilitation and improvement projects
(B) Street lighting
(C) Civic amenities like community halls, child care centres etc.
(D) Creation of fresh employment opportunities
(E) Answer not known

10. In which year the Coastal Regulation Zone (CRZ) notification was made under the provision of EPA (Environmental Protection Act) with the purpose of preserving the coastal areas?
- (A) 1991 (B) 1990
(C) 1989 (D) 1986
(E) Answer not known
11. The primary purpose of the Swiss challenge model is
- (A) To provide a framework for public sector investment in new technology
(B) To encourage private sector participation in public projects
(C) To establish regulations for international agreements
(D) To promote financial sector
(E) Answer not known
12. Chawl is a residential area typically housing poor-workers employed in mills and other places. This term is common in
- (A) Mumbai (B) Thumkur
(C) Kolkata (D) Banaras
(E) Answer not known
13. Which coding scheme involves assigning different colors to various spectral bands in an image to enhance visual interpretation?
- (A) False color coding
(B) Spatial Resolution Coding
(C) Object based image analysis
(D) Radiometric quantization
(E) Answer not known

14. Which of the following is NOT a classification of scattering principle?
- (A) Faraday scattering (B) Rayleigh's scattering
(C) Mie's scattering (D) Raman's scattering
(E) Answer not known
15. The basic factors of image interpretation
- (1) The quality of aerial photograph.
(2) The scale of the aerial photograph.
(3) The primary knowledge of the terrain.
(4) The climatological and meteorological factor.
- (A) 1 and 2 (B) 3 and 4
(C) 1, 2, 3 (D) 1, 2, 3, 4
(E) Answer not known
16. _____ is an instrument that allows us to detect and record simultaneously both reflected and emitted radiation in several spectral bands.
- (A) Ergonometer (B) Enometer
(C) Multispectral scanner (D) Multinodal spectrometer
(E) Answer not known
17. Which among the following is not a vector data structure?
- (A) It provide more compact data
(B) It provide efficient encoding
(C) Overlay operations are easy and effective
(D) Better suited for hand drawn maps
(E) Answer not known

18. Attribute query is associated with
- (A) Data Acquisition
 - (B) Data Processing
 - (C) Data base management
 - (D) Spatial manipulation and analysis
 - (E) Answer not known
19. During Analysis the thematic mapper (tm) which is an optical sensor has ————— multi-spectral bands between visible and infrared radiation.
- (A) 7
 - (B) 9
 - (C) 3
 - (D) 5
 - (E) Answer not known
20. The Data acquisition in Electromagnetic remote sensing process comprises of the following distinct elements
- (i) Energy sources
 - (ii) Propagation of energy through the atmosphere
 - (iii) Energy interaction with earth's surface features.
 - (iv) Generation of sensor data in the form of pictures.
- (A) (i), (ii) and (iii) only
 - (B) (i) and (iii) only
 - (C) (i), (ii) and (iv) only
 - (D) (i), (ii), (iii) and (iv) only
 - (E) Answer not known

23. To prepare land suitability maps the thematic maps in GIS are given
- (A) Geo coding (B) Weightage
 (C) Linear Referencing (D) Network Analysis
 (E) Answer not known
24. Match the land suitability classes
- (1) S1 – Currently not suitable
 (2) S2 – Marginally suitable
 (3) S3 – Permanently not suitable
 (4) N1 – Highly suitable
 (5) N2 – Moderately suitable
- (A) 4, 5, 2, 1, 3 (B) 2, 5, 4, 3, 1
 (C) 4, 5, 2, 3, 1 (D) 5, 2, 4, 1, 3
 (E) Answer not known
25. The following systems falls under para – transit system
- (1) Car – pooling
 (2) Dial–a–bus
 (3) Van – pooling
 (4) Train
- (A) 1, 2, 3 (B) 1, 2, 3, 4
 (C) 1, 3, 4 (D) 1, 2
 (E) Answer not known

26. The term “trip distribution” refer to in transportation planning
- (A) The variety of transportation modes used
 - (B) The frequency of public transport services
 - (C) The spatial allocation of trips between zones
 - (D) The duration of trips made by different modes
 - (E) Answer not known
27. “Congestion Charge Zone” means
- (A) An area where vehicles are restricted from entering at all times
 - (B) A designated area with parking
 - (C) An area where a fee is charged to drive during peak traffic hours
 - (D) An area with increased speed limits
 - (E) Answer not known
28. In urban roads what is the minimum vertical clearance so that the double decker buses can be accommodated?
- (A) 5.5 metres
 - (B) 7.0 metres
 - (C) 7.5 metres
 - (D) 6.0 metres
 - (E) Answer not known

29. Which are the following principles are correct with respect to TOD?
- (i) Provide a mix of housing types, densities, costs.
 - (ii) Do not preserve riparian zones and other sensitive areas.
 - (iii) Do not make public spaces the focus of building orientation and neighbourhood activity.
 - (iv) Encourage infill and redevelopment along transit corridors within existing neighbourhood.
- (A) (i) and (iv) (B) (ii) and (iii)
(C) (i) and (ii) (D) (i), (iii), (iv)
(E) Answer not known
30. Identify the city which is yet to operate BRTS mode of public transport.
- (A) Ahmedabad (B) Delhi
(C) Pune (D) Chennai
(E) Answer not known
31. In transportation planning if one of the intersection legs meets a highway at approximately a right angle but does not cross it is called as
- (A) Diamond Interchange (B) Trumpet Interchange
(C) Half clover leaf interchange (D) Directional Interchange
(E) Answer not known

32. As per URDPFI guidelines the width of the footpaths for High Intensity commercial areas is
- (A) 4 m (B) 3 m
(C) 3.5 m (D) 4.5 m
(E) Answer not known
33. In transportation planning an intersection that is provided for different levels of road is called as
- (A) Grade separated intersections
(B) Rotary intersection
(C) Trumpet Intersection
(D) Intersections at grade
(E) Answer not known
34. The imaginary line representing the boundary of the study area is termed as the _____ line
- (A) Boundary cordon (B) Edge Cordon
(C) Internal Cordon (D) External Cordon
(E) Answer not known
35. In the transportation planning _____ is a process in which the travel resistance of a link is increased according to a relation between the practical capacity of the link and the volumes assigned to the link
- (A) Capacity Restraint Assignment
(B) Multiple Route Assignment
(C) Diversion Assignment
(D) Smock Method Assignment
(E) Answer not known

36. As per IRC-103 guidelines pedestrian guardrails should be _____ high to deter pedestrians from climbing over it and ensure visibility.
- (A) 0.7 – 0.9 m (B) 0.8 – 1 m
(C) 0.6 – 1 m (D) 1 m – 1.5 m
(E) Answer not known
37. Percentage of reservation is provided for women in the Panchayats and Gram Kachahari?
- (A) 25 % (B) 33 %
(C) 50 % (D) 75 %
(E) Answer not known
38. The following types of Urban local bodies is setup for the administration of a Small town
- (A) Town Area Committee (B) Municipality
(C) Municipal Corporation (D) Notified Area Committee
(E) Answer not known
39. Who Monitors the quality implementation of schemes at the ward level?
- (A) Gram Panchayat (B) Panchayat Samiti
(C) Ward Sabha (D) Monitoring Committee
(E) Answer not known

43. Under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013. In the resettlement area _____ Infrastructural amenities have to be provided to minimize the impact of relocation
- (A) 25 (B) 15
 (C) 10 (D) 40
 (E) Answer not known
44. _____ in the spatial planning context, refers to the re-organisation of land use pattern of the area being renewed, removal of non-compatible land uses and the introduction of new activities and transport system.
- (A) Restructuring (B) Restoration
 (C) Retrofitting (D) Revitalisation
 (E) Answer not known
45. As per Rehabilitation and Resettlement Act, 2013 “Marginal Farmers” means a cultivator with an un-irrigated land holding up to _____.
- (A) One hectare (B) Two hectares
 (C) Five hectares (D) Three hectares
 (E) Answer not known
46. Not less than _____ of the total number of seat to be filled by direct elections in every panchayat shall be reserved for women.
- (A) one third (B) one fourth
 (C) half (D) three fourth
 (E) Answer not known

47. Constitution of Ward Committee in all Municipality with a population of _____ or more in a provision under 74th Constitutional Amendment Act.
- (A) 3 lakhs (B) 4 lakhs
 (C) 5 lakhs (D) 2 lakhs
 (E) Answer not known
48. Which Article guaranteed all Citizens, the right to acquire, hold and dispose properties
- (A) Article 19 (1) (f) (B) Article 31
 (C) Article 51 (f) (D) Article 48 A
 (E) Answer not known
49. Debt Equity Ratio
- (A) $\frac{\text{Total Liabilities}}{\text{Shareholders Equity}}$ (B) $\frac{\text{Total Wage and Salaries}}{\text{Shareholders Equity}}$
 (C) $\frac{\text{Total acceptable DSCR}}{\text{Total Liabilities}}$ (D) $\frac{\text{Total Assets}}{\text{Shareholders equity}}$
 (E) Answer not known
50. In project management under the category of commercial appraisal every product follows a life cycle which passes through _____ stages
- (A) 4 (B) 5
 (C) 3 (D) 6
 (E) Answer not known

51. In project management schedule performance Index is
- (A) BCWP / BCWS (B) BCPW / BCWS
 (C) BCPW / BCSW (D) BWCP / BWCS
 (E) Answer not known
52. In project appraisal under Social Cost Benefit analysis, the L-M (The Little-Mirrless) approach uses _____ as the numeraire
- (A) Uncommitted Social Income
 (B) Domestic Currency
 (C) Free on Board Price
 (D) Standard Wage Rate
 (E) Answer not known
53. Identify the Incorrect or Wrong statements / statement with respect to Government subsidy / Assistance which is used to improve the housing conditions of EWS / CIG households
- (i) Subsidy is usually cheque payment
 (ii) Subsidy is used as tax reduction
 (iii) It is both for public and private group / individual
 (iv) Subsidy is usually cash payment
- (A) (i) and (iii) (B) (ii) and (iv)
 (C) (iv) (D) (ii)
 (E) Answer not known

54. Under Urban Renewal Initiatives in India CLSS (Credit-linked Subsidy Scheme) loan can be used for LIG Housing with a carpet area upto
- (A) 60 sq.m (B) 75 sq.m
(C) 90 sq.m (D) 75 – 80 sq.m
(E) Answer not known
55. The owner may terminate the contract.
- (i) If the contractor becomes bankrupt or insolvent
(ii) If he refuses or fails to finish on time
(iii) If he fails to pay the subcontractors employed
- (A) (i) and (ii) (B) (ii) and (iii)
(C) (iii) and (i) (D) (i), (ii) and (iii)
(E) Answer not known
56. The value of Rs.1000/- if received after 20 years, if discount rate of 8% is applied to it is _____
- (A) 212 (B) 214
(C) 216 (D) 218
(E) Answer not known
57. In Social Cost Benefit analysis the deciding factor in shadow pricing is the _____
- (A) Tradeability of goods / services
(B) CIF price
(C) FOB price
(D) Non-traded inputs and outputs
(E) Answer not known

58. The two basic elements used in network are _____ and _____
- (A) Connectivity and Inter Connectivity
 - (B) Logics and Dummy
 - (C) Cost and Indicator
 - (D) Activity and Event
 - (E) Answer not known
59. An indication of “a behind of schedule condition” in network analysis is called:
- (A) Zero slack
 - (B) Negative slack
 - (C) Reverse slack
 - (D) Minimum slack
 - (E) Answer not known
60. The term ‘PDM’ in project management refers to _____
- (A) Project Diagramming Method
 - (B) Precedence Diagramming Method
 - (C) Program Diagramming Method
 - (D) Post Diagnostic Method
 - (E) Answer not known
61. The detention period of grit chamber is usually adopted
- (A) 100 second’s
 - (B) 30 second’s
 - (C) 60 second’s
 - (D) 120 second’s
 - (E) Answer not known

62. How is Chemical Oxygen Demand (COD) calculated?
- (A) Waste water is oxidised chemically using strontium in acid solutions
 - (B) Waste water is oxidised chemically using bromine in acid solutions
 - (C) Waste water is oxidised chemically using dichromate in acid solutions
 - (D) Waste water is oxidised chemically using sodium in acid solutions
 - (E) Answer not known
63. In chemical engineering, the term 'unit operation' is applied to procedures in which changes produced are essentially _____
- (A) Physical
 - (B) Chemical
 - (C) Biological
 - (D) Biochemical
 - (E) Answer not known
64. Compute the Fire Demand for a city having population of 1,00,000 using Buston's formula
- (A) 5663 lit / min
 - (B) 56630 lit / min
 - (C) 566300 lit / min
 - (D) 5,66,3000 lit / min
 - (E) Answer not known
65. The Muskingum Method of Flood routing is the sum of three co-efficient $C_0 + C_1 + C_2$ is equal to
- (A) 0.5
 - (B) 0.75
 - (C) 2.0
 - (D) 1.0
 - (E) Answer not known

66. An area is classified as a drought prone area if the probability P of occurrence of a drought is
- (A) $0.4 < P \leq 1.0$ (B) $0.2 \leq P \leq 0.40$
 (C) $0.1 \leq P < 0.20$ (D) $0.0 < P < 0.20$
 (E) Answer not known
67. The Flow in which depth of Flow Changes abruptly over a small length of the channel is known as
- (A) Laminer Flow (B) Gradually Varied Flow
 (C) Turbulent Flow (D) Rapidly Varied Flow
 (E) Answer not known
68. The expression of Bernoulli's equation is given by
- (A) $P + \frac{1}{2}\rho V^2 = \text{constant}$
 (B) $P + \frac{1}{2}\rho V^2 + \rho gh = \text{constant}$
 (C) $\rho + \frac{1}{2}\rho V^2 + \rho gh = \text{constant}$
 (D) $P + \frac{1}{2}\rho V^3 + \rho gh = \text{constant}$
 (E) Answer not known
69. The subsurface soil area required for soak pit is given by the following equation
- (A) $Q = 130\sqrt{t}$ (B) $Q = \frac{130}{\sqrt{t}}$
 (C) $Q \times \frac{130}{t}$ (D) $Q \times (\sqrt{t})^2 130$
 (E) Answer not known

70. For an Average Indian City, Quantity of Refuse Varies from

- (A) 0.2 to 0.3 kg per capita per day
- (B) 0.3 to 0.4 kg / capita / day
- (C) 0.4 to 0.5 kg / capita / day
- (D) 0.5 to 0.6 kg / capita / day
- (E) Answer not known

71. The dynamic formula for single acting steam hammer's is

- (A) $Q_a = \frac{WH}{6(S+2.5)}$
- (B) $Q_a = \frac{WH}{6(S+0.25)}$
- (C) $Q_a = \frac{R_f + R_p}{2(s)}$
- (D) $Q_a = \frac{R_F + R_P}{6(S+0.25)}$
- (E) Answer not known

72. Match correctly the defect and its treatment

- | | |
|--|------------------------|
| (a) Stripping in carriage way, area <25% of total area | 1. Repair by filling |
| (b) Edge subsidence | 2. Apply local sealing |
| (c) Potholes in paved surface | 3. Regravelling |
| (d) Scouring of drains | 4. Patch road edge |

- | | | | | |
|-----|-----|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| (A) | 2 | 4 | 3 | 1 |
| (B) | 2 | 1 | 4 | 3 |
| (C) | 2 | 4 | 1 | 3 |
| (D) | 4 | 2 | 1 | 3 |
- (E) Answer not known

73. A footing $2\text{ m} \times 2\text{ m}$ in size rests on a granular soil at a depth of 1.5 m. The water table is at a depth of 1.5 m from the ground level (I.E) at the base of the footing in the following equation to calculate ultimate bearing capacity, the value of R_{W1} and R_{W2} are

$$q_u = CN_C + qN_qR_{W1} + 0.5B\gamma N_\gamma R_{W2}$$

- (A) $R_{W1} = 1; R_{W2} = 0.5$ (B) $R_{W1} = R_{W2} = 0.5$
 (C) $R_{W1} = R_{W2} = 1$ (D) $R_{W1} = 0.5; R_{W2} = 1$
 (E) Answer not known
74. The total pressure at the base of the footing due to the self weight and earth fill is known as
- (A) Net ultimate bearing capacity
 (B) Gross pressure intensity
 (C) Ultimate bearing capacity
 (D) Net pressure intensity
 (E) Answer not known
75. Undisturbed samples are obtained by
- (A) Wash boring (B) Thin wall sampler
 (C) Geo physical method (D) Open excavation
 (E) Answer not known
76. A granular soil of unit weight 17 kN/m^3 is used to construct an embankment with a slope angle of 60° . The properties of the soil are $C' = 0; \phi' = 30^\circ$. Determine the factor of safety of this slope.
- (A) 1 (B) 0.33
 (C) 3 (D) 1.5
 (E) Answer not known

80. The wet mechanical analysis is used to determine the fineness of
- (A) Coarse sand
 - (B) River sand
 - (C) Silt
 - (D) Pebble's
 - (E) Answer not known
81. Condition for attaining zero slag is
- (A) $T_L < T_E$
 - (B) $T_L > T_E$
 - (C) T_L not equals to T_E
 - (D) $T_L = T_E$
 - (E) Answer not known
82. 'Sequencing' in steps for development of network relates to any one of the following is
- (A) set down in words
 - (B) the activities and events thus prepared
 - (C) activities by connecting pair of events
 - (D) network diagram in respect of content
 - (E) Answer not known
83. The ratio of yield strength to ultimate strength as per class 4:6 in bolted connection is
- (A) 0.4
 - (B) 0.6
 - (C) 0.8
 - (D) 1
 - (E) Answer not known

84. The expression for small-span beam with straight tardon

(A) $b_w = 0.65 \left(\frac{V_u}{f_t h} \right)$ (B) $b_w = 0.75 \left(\frac{V_u}{f_t h} \right)$

(C) $b_w = 0.85 \left(\frac{V_u}{f_t h} \right)$ (D) $b_w = 0.95 \left(\frac{V_u}{f_t h} \right)$

(E) Answer not known

85. The three essential components of Nalanda are

(A) Stupas, Temples and Hostel for monks

(B) Temples, College and hospital

(C) Shops, Palace and Market

(D) Temples, Park and Market

(E) Answer not known

86. In town survey, the following survey are conducted to collect the information and data necessary to prepare an upto date base map in the scheme of town planning are

(A) Physical survey, Social and Economic survey

(B) City survey, Regional and National survey

(C) Town survey, National and Village survey

(D) Panchayat survey, Social and Economic survey

(E) Answer not known

87. X_u / α less the limiting value $x_{V_{MAX}} / a$ is called
- (A) Under-reinforced section
 - (B) Over-reinforced section
 - (C) Balance section
 - (D) Equilibrium section
 - (E) Answer not known
88. The maximum hoop tension for circular tank is
- (A) $WHD/2$
 - (B) $WHD^2/2$
 - (C) $WD/3$
 - (D) $WHD/4$
 - (E) Answer not known
89. (07) Different types of EDM's are obtained on the basis of
- (A) Wave length
 - (B) Carrier wave
 - (C) Frequency
 - (D) Time period
 - (E) Answer not known
90. In total station, the formula used for automatically correct the horizontal distance is
- (A) $S[\cos \alpha + S \sin \alpha \cos \alpha]$
 - (B) $S[S \sin \alpha \cos \alpha (K - 2) / 2R]$
 - (C) $S[\cos \alpha + S \sin \alpha \cos \alpha (K - 2) / 2R]$
 - (D) $S[S \sin \alpha \cos \alpha (K - 2 / R)]$
 - (E) Answer not known

91. The relation between effective length and actual length of column having one end fixed the other end free
- (A) l (B) $2l$
 (C) $l/2$ (D) $\frac{l}{\sqrt{2}}$
 (E) Answer not known
92. The value of Rankine's constant (a) for cast iron have crushing stress σ_c is 550 N/MM^2
- (A) $\frac{1}{7500}$ (B) $\frac{1}{1600}$
 (C) $\frac{1}{9000}$ (D) $\frac{1}{750}$
 (E) Answer not known
93. A Tacheometer was setup at station 'P' and observations were taken on a staff held at Q the vertical circle reading being zero. The readings were 1.985 m; 1.660 m; and 1.340 m. The distance PQ is
- (A) 64.5 m (B) 65.4 m
 (C) 54.6 m (D) 60.0 m
 (E) Answer not known
94. The type of surveying that takes into account the true shape of the earth
- (A) Plane surveying (B) Geodetic surveying
 (C) Mapping (D) Histograms
 (E) Answer not known

95. Choose the right relation for a circular shaft when subjected to torsion.

(A) $\frac{T}{J} = \frac{\tau}{R} = \frac{C\theta}{L}$

(B) $\frac{T}{R} = \frac{J}{\tau} = \frac{L}{C\theta}$

(C) $\frac{C\theta}{T} = \frac{J}{R} = \frac{T}{\tau}$

(D) $\frac{C\theta}{R} = \frac{T}{J} = \frac{\tau}{L}$

(E) Answer not known

96. A beam of uniform section of span “ l ” is simply supported at its ends, it is carrying a point load of w at a distance of $l/3$ from one end. Find the deflection of the beam under the load.

(A) $0.0165 \frac{wl}{EI}$

(B) $0.0165 \frac{wl^2}{EI}$

(C) $0.0165 \frac{wl^3}{EI}$

(D) $0.0165 \frac{wl}{\alpha EI}$

(E) Answer not known

97. Painting of doors and windows measured in

(A) running meter's

(B) m^2

(C) number of coating

(D) liter's

(E) Answer not known

98. If a property after being discarded at the end of the utility period is sold without being broken into pieces.

(A) Sentimental value

(B) Salvage value

(C) Scrap value

(D) Distress value

(E) Answer not known

99. Young's modulus of elasticity 'E' is given by
- (A) $P^2L / A\Delta$ (B) $PL^2 / A\Delta$
 (C) $\frac{PL}{A\Delta}$ (D) $\frac{PL}{A^2\Delta}$
 (E) Answer not known
100. When a body is subjected to a direct tensile stress (σ) in one plane, then the tangential stress on an oblique section of the body inclined at an angle (θ) to normal of the section is equal to
- (A) $P \sin 2\theta$ (B) $P \cos 2\theta$
 (C) $\frac{P}{2} \sin 2\theta$ (D) $\frac{P}{2} \cos 2\theta$
 (E) Answer not known
101. For slabs supported on two sides, the construction joints should be
- (A) Parallel to the main reinforcements
 (B) Vertical to the main reinforcements
 (C) Vertical and parallel to the main reinforcement
 (D) Near the support
 (E) Answer not known
102. The form works are raised while the concrete is in a plastic state are called _____ construction.
- (A) Panel forms (B) Slip forms
 (C) Scaffolding (D) Centering
 (E) Answer not known

103. Larger the value of standard deviation
- (A) Lower will be the variability
 - (B) Better will be level of control
 - (C) Poorer will be the level of control
 - (D) Not related to quality control
 - (E) Answer not known
104. Mixability of a concrete mix governs
- (A) Power requirement in the mixing plant
 - (B) Reproducibility of concrete batches
 - (C) Time mixing
 - (D) Homogeneity of fresh concrete
 - (E) Answer not known
105. The temporary framework which is useful in construction, demolition and maintenance of repair work is known as
- (A) Under pinning
 - (B) Shoring
 - (C) Scaffolding
 - (D) Grouting
 - (E) Answer not known
106. The amount of heat transferred through one hour when the difference in temperature of the two surfaces is maintained at 1°C is known as _____ of a material.
- (A) Surface resistance
 - (B) Surface co-efficient
 - (C) Thermal conductivity
 - (D) Thermal Transmittance
 - (E) Answer not known

107. The use of cramp in stone masonry as
- (A) Metal connection used in Stone work
 - (B) Connection in Marbles
 - (C) Work formed by the use of Square stones
 - (D) Working of mortar over the stones
 - (E) Answer not known
108. In non-clayey soils Damp proffing course is provided only
- (A) on a plinth beam under the walls
 - (B) on a Basement
 - (C) on a Earth level
 - (D) None of the above
 - (E) Answer not known
109. The draw-back of electric seasoning of timber is
- (A) Checks
 - (B) Splitting
 - (C) Cracks
 - (D) reduced strength
 - (E) Answer not known

110. Match List I with List II

List I

[Property of Mineral]

- (a) Hardness
- (b) Streak
- (c) Cleavage
- (d) Lustre

List II

[Definition/Measurement]

- 1. Splitting of minerals along planes parallel to crystal faces
- 2. Shine on mineral surface
- 3. Mohr's scale
- 4. Mineral colour in powdered room

- | | (a) | (b) | (c) | (d) |
|-----|------------------|-----|-----|-----|
| (A) | 3 | 4 | 2 | 1 |
| (B) | 3 | 4 | 1 | 2 |
| (C) | 1 | 4 | 3 | 2 |
| (D) | 1 | 4 | 2 | 3 |
| (E) | Answer not known | | | |

111. _____ means the disposition of various rooms in related position so that all the rooms are placed in proper correlation of their functions and in proximity with each other.

- (A) Grouping
- (B) Roominess
- (C) Prospect
- (D) Privacy
- (E) Answer not known

112. _____ refers to the effect produced by deriving the maximum benefit from the minimum dimensions of a room.

- (A) Aspect
- (B) Prospect
- (C) Privacy
- (D) Roominess
- (E) Answer not known

113. Laurie Baker is associated with
- (A) Rural Housing
 - (B) Urban Housing
 - (C) Housing in Sub Urban Areas
 - (D) Housing in Metro Areas
 - (E) Answer not known
114. According to Jane Jacobs, which among the following promote diversity in a city?
- (A) Districts with single function
 - (B) Short streets and opportunities to turn corners must be frequent
 - (C) Areas with all new buildings
 - (D) Exclusive outlets with choice produce
 - (E) Answer not known
115. The re-ordering of Rome during the Baroque period started with plan developed by the Pope
- (A) Julio VI
 - (B) Sixtus V
 - (C) Micheal Angelo
 - (D) Bramante IV
 - (E) Answer not known
116. William H Whyte's work on city spaces, is based on his observations in
- (A) Museums
 - (B) Parks
 - (C) Streets
 - (D) Urban Plazas
 - (E) Answer not known

117. _____ are in fact a type of neighbourhood with an uninterrupted accumulation of similarly featured groups (physical, restorable, symbolic, historical)
- (A) Districts
 - (B) Divisions
 - (C) Block
 - (D) Web
 - (E) Answer not known
118. ASI– refers to
- (A) Archaeological Survey of India
 - (B) Archaeological System of India
 - (C) Architectural Survey of India
 - (D) Art Survey of India
 - (E) Answer not known
119. _____ deals with questions of context that underlie a building's existence, including issues of ownership, land division, private and public property, the arrangement of urban space, including change of use, and their conservation by maintenance and adaptation through time
- (A) Urban Conservation
 - (B) Urban Design
 - (C) Urban Planning
 - (D) Urban Renewal
 - (E) Answer not known

120. _____ means and includes returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without introducing new materials.
- (A) Preservation (B) Restoration
(C) Redevelopment (D) Revitalization
(E) Answer not known
121. _____ structures collect storm runoff and store it until it can infiltrate and enter soil–water and ground water reservoirs
- (A) Retention (B) Detention
(C) Channels (D) Catch basins
(E) Answer not known
122. When the width of an open space between buildings is equal to the height of the buildings enclosing it, it is perceived as
- (A) Open partially (B) Semi enclosed
(C) Partially shaded (D) fully enclosed
(E) Answer not known
123. Which among these can be used for large parking lots, highway interchanges and sports fields?
- (A) Street/Roadway lights
(B) High Mast lights
(C) Post top lights of height 10'–12' feet
(D) Bollards
(E) Answer not known

124. Public or Semi public pedestrian spaces within a building partly or fully enclosed from exterior climate, sometimes containing plants and fountains are called as
- (A) Squares (B) Courtyards
(C) Atriums (D) Plazas
(E) Answer not known
125. _____consists essentially of an octagonal brass box with slits cut in each face so that opposite pairs form sight lines.
- (A) The optical square (B) Abney Level
(C) Arrows (D) Cross Staff
(E) Answer not known
126. _____involves the measurement of existing buildings for which no construction drawings are available or where considerable modification has taken place over the years.
- (A) Building Surveys (B) Village Surveys
(C) Road Surveys (D) Water body Surveys
(E) Answer not known
127. What site data is required to know if the project will add undue traffic load to its surroundings?
- (A) Physical data (B) Topography
(C) Site context data (D) Macro climatic data
(E) Answer not known

128. Among these, which is not an advantage of arid patterns?
- (A) Provides Focus
 - (B) Provides uniformly distributed flows
 - (C) Suited to large scales
 - (D) Provides uniform access
 - (E) Answer not known
129. 5–20% of usable energy is transferred as _____ from one trophic level to another
- (A) Waste
 - (B) Particle Matter
 - (C) Biomass
 - (D) Biofuel
 - (E) Answer not known
130. Spectral composition of solar electro–magnetic radiation reaching the earth surface is changed due to
- (A) Light Pollution
 - (B) Water Pollution
 - (C) Ozone layer Depletion
 - (D) Land Pollution
 - (E) Answer not known
131. _____ phenomenon has direct effects on
- (1) The land conversion of non-urban areas
 - (2) Increasing traffic volume
 - (3) Marginalization of the indigenous communities
- In terms of issues or challenges in urban planning.
- (A) Urban sprawl
 - (B) Urban extension
 - (C) Urban connect
 - (D) Urban domains
 - (E) Answer not known

132. The rules of state or community are termed as the
- (A) Laws
 - (B) Bye-law
 - (C) Regulation
 - (D) Norm
 - (E) Answer not known
133. The science of human settlement is known as
- (A) Ecclectic
 - (B) Anapestic
 - (C) Ekistics
 - (D) Aerostics
 - (E) Answer not known
134. ————— take different forms, and represent a mediating zone between the house and the street.
- (A) House extensions
 - (B) Work places
 - (C) Small shops
 - (D) Public structures
 - (E) Answer not known
135. The author of the 'Athens charter' published as a result of the fourth meeting of CIAM held in 1933 is
- (A) Le Corbusier
 - (B) Patris II
 - (C) Patrick Geddes
 - (D) C.A Perry
 - (E) Answer not known
136. Which among these was the first city to be planned based on the principles of Ebenezer Howard?
- (A) New York
 - (B) Greenwich
 - (C) Letchworth
 - (D) Wellwyn
 - (E) Answer not known

137. Chuttillu style houses are built with mud or mud and wattle, the house is raised on a plinth decorated with finger marks in white rice paste or vertical stripes of white and red ochre are vernacular architecture of
- (A) Andhra Pradesh (B) Tamilnadu
(C) Kerala (D) Karnataka
(E) Answer not known
138. The process by which a town was demarcated for various purposes was called as _____ in traditional Indian planning.
- (A) Karmuka (B) Nandyavarta
(C) Kautilya (D) Padavinyasa
(E) Answer not known
139. The civilisation founded on the river of Tigris – Euphrates is
- (A) Mesopotamia (B) Summer
(C) Akkad (D) Assyria
(E) Answer not known
140. Identify the oldest river valley civilisation.
- (A) Indus (B) China
(C) Mesopotamia (D) Egypt
(E) Answer not known

141. _____ solid waste treatment technology provides maximum volume reduction of solid waste
- (A) Composting (B) Refuse derived fuel
(C) Bio methanation (D) Pyrolysis/gasification
(E) Answer not known
142. The dead end method of water supply distribution system is also known as
- (A) Grid-iron method (B) Circular method
(C) Radial method (D) Tree system
(E) Answer not known
143. As per CPHEEO manual _____% of water supply may be expected to reach the rivers.
- (A) 90% (B) 70%
(C) 80% (D) 60%
(E) Answer not known
144. As per URDPFI guidelines the recommended land requirement (Hectares) for 200 MLD identified capacities is
- (A) 3.73 Hectares (B) 4.93 Hectares
(C) 2.78 Hectares (D) 5.18 Hectares
(E) Answer not known

145. As stated in URDPFI guidelines which of the following carrying capacity are profound ones and are more relevant to urban planning
- (A) Infrastructure capacity level, environmental capacity level and sustainable capacity
 - (B) Bio-centric capacity level, institutional capacity level, perceptual capacity level
 - (C) Infrastructure capacity level, institutional capacity level and bio-centric capacity level
 - (D) Environmental capacity level, perceptual capacity level, institutional capacity level
 - (E) Answer not known
146. As per CPHEEO 1999 (Central Public Health and Environmental Engineering Organization) stated in URDPFI guidelines the water requirement for institutional building such as airports and sea ports
- (A) 70 litres per head per day
 - (B) 45 litres per head per day
 - (C) 25 litres per head per day
 - (D) 30 litres per head per day
 - (E) Answer not known
147. Which design principle of sponge infrastructure emphasizes importance of maintaining natural hydrological cycles in urban areas?
- (A) Water centric planning
 - (B) Water sensitive urban design
 - (C) Water minimization
 - (D) Water neutrality
 - (E) Answer not known

148. The following is NOT a components of Green infrastructure.

- (A) Rain Gardens
- (B) Permeable paver parking lots
- (C) Subsurface detention systems
- (D) Sewage treatment plants
- (E) Answer not known

149. Assertion [A] : Namma Toilet has a modular design and it is designed for all socio-economic groups.

Reason [R] : The toilet super structure is made of composite fibre glass sandwiched material to withstand harsh conditions.

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

150. Identify the objectives of PPP

- (1) Value capture finance
 - (2) Improving governance
 - (3) Transit oriented development
 - (4) Superior project delivery
 - (5) Reduce cost to government
 - (6) Land pooling and readjustment
- (A) (2), (4), (5)
 - (B) (1), (3), (6)
 - (C) (1), (2), (3)
 - (D) (4), (5), (6)
 - (E) Answer not known

151. In e-governance infrastructure “SWAN” stands for
- (A) State Wide Area Network
 - (B) State Web Access Network
 - (C) Systematic Web Application Network
 - (D) Social Wide Application Network
 - (E) Answer not known
152. PPP – Stands for
- (A) Project Planning Partnership
 - (B) Public Private Planning
 - (C) Project Prioritizing Planning
 - (D) Public Private Partnership
 - (E) Answer not known
153. The cities situated on the sea-coast and those which are ports are centre of
- (A) Secondary production centres
 - (B) Production centres
 - (C) Primary production centres
 - (D) Trade and Commerce
 - (E) Answer not known

154. “Cities with eco-friendly features and practices that are built from scratch or the existing mature cities that adopt eco friendly features and practices either through expansion or retrofitting of existing projects” is the concept of
- (A) Smart city
 - (B) Eco-city
 - (C) Sponge city
 - (D) Garden city
 - (E) Answer not known
155. The detail assessment of the potential environment impacts of a proposed action and alternate actions is known as
- (A) Environmental impact assessment
 - (B) Environment assessment
 - (C) Potential assessment statement
 - (D) Assessment statement
 - (E) Answer not known
156. Factors that can affect the selection of EIA team member are
- (1) Available finances
 - (2) Range of impacts to be studied
 - (3) Demonstrated expertise and experience
 - (4) Local knowledge
 - (5) Ability to work with others
- (A) (1) and (2)
 - (B) (2) and (3)
 - (C) (1), (2), (3), (4), (5)
 - (D) (1), (2), (3), (4)
 - (E) Answer not known

157. Environmental impact studies are often conducted by
- (A) Interdisciplinary teams
 - (B) Multidisciplinary teams
 - (C) Both (A) and (B) teams
 - (D) None of the above
 - (E) Answer not known
158. As per IGBC existing green cities, the tangible benefits on reduction in the water consumption due to better metering and monitoring.
- (A) 10 – 12%
 - (B) 25 – 30%
 - (C) 15 – 20%
 - (D) 8 – 10%
 - (E) Answer not known
159. As per IGBC green cities due to higher share of solar and wind energy. The power demand is reduced by
- (A) 8 – 10%
 - (B) 10 – 12%
 - (C) 8 – 12%
 - (D) 12 – 14%
 - (E) Answer not known
160. “Hot spot areas” have
- (A) Low density of bio diversity
 - (B) Only endangered plants
 - (C) High density of endangered animals
 - (D) High density of bio diversity
 - (E) Answer not known

168. The proper way to measure multiple effect is to estimate incremental changes in a particular industry and the access changes in the overall economic activity level in
- (A) A given geographical area
 - (B) Other industries
 - (C) Similar industries
 - (D) Income of employees
 - (E) Answer not known
169. Multiplier effect concept is primarily depend on
- (A) Income
 - (B) Expenditure
 - (C) Interest rate
 - (D) Investment
 - (E) Answer not known
170. A type of economies of scale apply to an individual business is
- (A) External economies of scale
 - (B) Internal economies of scale
 - (C) Technical economies of scale
 - (D) Marketing economies of scale
 - (E) Answer not known
171. The below is NOT a measurement of Agglomeration economics
- (A) Congestion
 - (B) Prices
 - (C) Wages
 - (D) Quantities
 - (E) Answer not known

172. The first stage of a town where a community having economy based on agriculture is called
- (A) Polis (B) Eo Polis
(C) Megalopolis (D) Metropolis
(E) Answer not known
173. The government scheme aims to provide employment opportunities in rural areas of India
- (A) PMAY (B) MGNREGA
(C) SGSY (D) NSAP
(E) Answer not known
174. As per 2011 census, the National Capital region comprises 108 cities which include three metropolises
- (A) Meerut, Faridabad and Ghaziabad
(B) Meerut, Rohtak, Jafrabad
(C) Gurugram, Muzaffarnagar, Ghaziabad
(D) Gurugram, Rohtak, Faridabad
(E) Answer not known
175. As per 2011 census, the average density of population in Tamilnadu at urban areas was
- (A) 4526 persons per sq.km (B) 2845 persons per sq.km
(C) 3521 persons per sq.km (D) 1826 persons per sq.km
(E) Answer not known

176. TamilNadu accounted for _____ percent of the total urban population in the country
- (A) 23.8 (B) 11.5
(C) 6.3 (D) 9.3
(E) Answer not known
177. _____ does not take into account that there are human beings in groups or individuals, which are directly or indirectly affected by a plan, and which react autonomously to its challenges or promises.
- (A) Functional planning (B) Blue print planning
(C) Process approach planning (D) Disjointed incrementalism
(E) Answer not known
178. The planning approach emphasizes creating an ideal urban environment and substantial rationality taking goals into consideration is
- (A) Normative planning
(B) Functional planning
(C) Blue print mode of planning
(D) Disjointed incremental mode of planning
(E) Answer not known
179. The characteristics of disjointed incrementalism is
- (A) Fixed, detail plan (B) Large scale development
(C) Incremental changes (D) Long term vision
(E) Answer not known

185. As per URDPFI guidelines the Accommodation density can be calculated using the following formula

- (A)
$$\frac{\text{Number of habitable rooms in the study area/sub division}}{\text{Net area of the study area/sub division}}$$
- (B)
$$\frac{\text{Total number of population in the study area}}{\text{Total area of the study area}}$$
- (C)
$$\frac{\text{Population density}}{\text{Accommodation density}}$$
- (D)
$$\frac{\text{No. of habitable rooms in the study area/sub division}}{\text{Gross area of the study area/sub division}}$$
- (E) Answer not known

186. In generating plans and policies the method used to arrive at a group opinion and draws upon the experience of panel of experts is called as

- (A) Delphi Technique (B) Brain blend Technique
(C) Simulation Technique (D) Gravity analysis
(E) Answer not known

187. In designs and plan generation which theory deals with decision making situations where two or more competing decisions makers are faced with choice in taking some finite action in a scenario where some knowledge of the alternative outcomes is available

- (A) Game theory (B) Simulation theory
(C) Decision theory (D) Gravity model
(E) Answer not known

188. Limitations imposed by topography which restrict urban expansion are called
- (A) Structural thresholds (B) Physical thresholds
(C) Locational thresholds (D) Quantitative thresholds
(E) Answer not known
189. _____ city uses information, communication and technology to enhance its liveability, workability and sustainability.
- (A) Smart city (B) Green city
(C) Compact city (D) Sustainable city
(E) Answer not known
190. The constraints in multilevel planning in India
- (1) It could people's participation.
(2) State lacked the required level of finance.
(3) Local bodies are not having any constitutional mandata.
(4) Only central plan central are implemented
- (A) (1) and (2) (B) (2) and (3)
(C) (1), (2) and (3) (D) (1), (2), (3) and (4)
(E) Answer not known
191. Mixed layer development provides redevelopment opportunities that case the was towards
- (A) Smart city (B) Green city
(C) Compact city (D) Sustainable city
(E) Answer not known

192. Stages in preparation of detailed development plan

- (i) Data collection
 - (ii) Implementation
 - (iii) Preparation of draft plan
 - (iv) Consideration of views from expert
 - (v) Preparation of revised plan
- (A) (i), (ii), (v), (iv), (iii) (B) (i), (iii), (iv), (v), (ii)
(C) (i), (iv), (v), (iii), (ii) (D) (i), (iii), (iv), (v), (ii)
(E) Answer not known

193. ————— plan consists of physical and fiscal details of new and on to going projects to be implemented during the respective financial year.

- (A) Annual plan (B) Perspective plan
(C) Master plan (D) Development plan
(E) Answer not known

194. Under smart city guidelines, issued by the ministry of urban development, redevelopment envisages an area of more than ————— acres identified by local bodies in consultation with citizens.

- (A) 25 (B) 50
(C) 5 (D) 10
(E) Answer not known

195. One of the following is not a type of regional disparities/Inbalance.
- (A) Global disparity (B) Urban-Rural disparity
 (C) Interstate disparity (D) Gender disparity
 (E) Answer not known
196. The plans Macro levels as
- (A) Five year plan (B) Block level plan
 (C) Village plan (D) Hill area plan
 (E) Answer not known
197. Macro-level planning concept are
- (A) Central planning (B) State planning
 (C) Regional planning (D) District planning
 (E) Answer not known
198. “The labour would flow from (migration) low wage region to high wage region, while capital will flow in the reverse direction” is the theoretical explanations is
- (A) Classical economists view (B) Marxist view
 (C) Perrouxian view (D) Myrdal’s view
 (E) Answer not known
199. According to _____ theory, the process of economic development of accompanied by a shift in the employment pattern first from primary to secondary sector and later to tertiary sector.
- (A) Central place (B) Growth poles
 (C) Gunnan Myrdal’s (D) Sector
 (E) Answer not known

200. Which of the following is not in the cause of regional economic under development?

- (A) Lack of natural resources
 - (B) Cultural resistance to change
 - (C) Vicious circle generated by circular and cumulative causation
 - (D) Surplus capital
 - (E) Answer not known
-