

1. One of the following that does not fall under classification of planning region is
  - (A) Metropolitan or city region
  - (B) Satellite region
  - (C) Transitional region or depressed region
  - (D) River valley region
  - (E) Answer not known
  
2. Multi Nuclei Theory was developed by
  - (A) Chauncy Harris and Homer Hoyt
  - (B) Chauncy Harris and Edward Ullman
  - (C) Parks and Burgers
  - (D) Homer Hoyt and Ullman
  - (E) Answer not known
  
3. Identify the component which is not part of Greater London Plan 1944 by Patrick Abercrombie is
  - (A) Enforcement of Strick Zoning
  - (B) New open space standards
  - (C) Four rings of zoning into inner, sub urban, green belt and other country
  - (D) Rejuvenating Water bodies
  - (E) Answer not known

4. Traditional Indian Settlement pattern which is suitable for the site which is in the form of a bow or parabolic and mostly located near the seashore or river banks is called
- (A) Chaturmukha ~~(B) Karmuka~~  
(C) Dandaka (D) Padmaka  
(E) Answer not known
5. \_\_\_\_\_ development envisages application of selected smart solutions to the existing city wide infrastructure.
- ~~(A) Pan-city~~ (B) Green field  
(C) Retrofitting (D) Area Based  
(E) Answer not known
6. The urban and regional planning system in India has been divided under the two heads, namely \_\_\_\_\_ and \_\_\_\_\_
- (I) Core Area Planning  
(II) Specific and Investment Planning  
(III) Special Area Planning  
(IV) Extinct and Independent Planning
- ~~(A) (I), (II) are correct~~  
(B) (III), (IV) are correct  
(C) (I), (IV) are correct  
(D) (II), (III) are correct  
(E) Answer not known
7. The minimum density of the area to be declared as 'URBAN' as per census of India 2011 is
- (A) 600 persons per square km.  
(B) 500 persons per square km.  
~~(C) 400 persons per square km.~~  
(D) 300 persons per square km.  
(E) Answer not known

8. The planning model that serves as goal towards which the actual system can be directed is the
- (A) Descriptive model (B) Prescriptive model  
(C) Exponential model  (D) Normative model  
(E) Answer not known
9. Inductive statistics is used to derive
- (A) Generalisation (B) Descriptions  
(C) Projections (D) Limitations  
(E) Answer not known
10. The stages in the preparation of Development plan is as follows (sequential order)
- (i) Collection of data  
(ii) Consideration of views from experts and public  
(iii) Preparation of revised development plan  
(iv) Implementation  
(v) Preparation of Tentative draft of the development plan
- (A) (i), (v), (ii), (iii), (iv)  
(B) (i), (ii), (iii), (iv), (v)  
(C) (i), (v), (iii), (ii), (iv)  
(D) (i), (ii), (iv), (iii), (v)  
(E) Answer not known
11. Settlements upto a rate of growth of 1.50% per annum as per census 1971-81 were classified as
- (A) Normal (B) Sub-normal  
 (C) Static (D) Dynamic  
(E) Answer not known

12. The original layout known as plano pilots in Brasilia has been protected by strict zoning and in 1987, it was placed in the UNESCO world heritage list. This has lead to
- (i) Brasilia has a low density centre in contrast to other cities in Brazil
  - (ii) Forced poorer residents to seek accommodation beyond the city core.
  - (iii) Resulted in lower transport costs
- (A) (i) and (ii) only
- (B) (ii) and (iii) only
- (C) (i) and (iii) only
- (D) (i), (ii) and (iii) only
- (E) Answer not known
13. Who introduced the theory of location where the cost of transporting the raw materials to the plant and finished products to the market greatly influences the location of a plant?
- (A) Alfred Weber
- (B) Alfred Marshall
- (C) Adam Smith
- (D) Robbins
- (E) Answer not known
14. The law of diminishing returns in specially and quickly applicable to agriculture and other extractive occupation because of the following :
- (i) Agriculture is dependent on nature
  - (ii) The time lag between input and output is very small in agricultural production
  - (iii) Agricultural labour does not have work continuously
  - (iv) Soil does not get exhausted and fertility is not lost
- (A) (i) and (iii)
- (B) (ii) and (iv)
- (C) (ii)
- (D) (iv) and (iii)
- (E) Answer not known

15. When the national income is expressed in terms current prices, it is called
- (A) Nominal Income
  - (B) Constant Income
  - (C) Real Income
  - (D) Constant price
  - (E) Answer not known
16. Cohort survival method is used for forecasting
- (A) Housing
  - (B) Population
  - (C) Economic growth
  - (D) Density
  - (E) Answer not known
17. The following are not the special features of urban community
- (A) Moderate social contacts
  - (B) Social homogeneity
  - (C) Impersonality
  - (D) Dynamic life
  - (E) Answer not known

18. Choose the one which is not part of the EIA process
- (A) Project proponent
  - (B) SPCB
  - (C) Environmental consultants
  - (D) HUDCO
  - (E) Answer not known
19. In EIA the decision to hold the hearing has to be made within
- (A) 5 days
  - (B) 10 days
  - (C) 15 days
  - (D) 30 days
  - (E) Answer not known
20. How many Newspapers state pollution control boards are required to give notice mentioning the date, time and place of public hearing?
- (A) 2
  - (B) 4
  - (C) 6
  - (D) 8
  - (E) Answer not known
21. The following have been introduced to improve industrial activities and services
- (A) Life Cycle Assessment (LCA) and ISO-14000
  - (B) Life Cycle Assessment (LCA)
  - (C) ISO-14000
  - (D) Environmental Assessment
  - (E) Answer not known

22. The components of environment include
- (A) Biotic components
  - (B) Abiotic components
  - (C) Biotic and abiotic components
  - (D) Inert gases
  - (E) Answer not known
23. The volumetric concentrations of pollutants are measured and computed as mass emissions in \_\_\_\_\_ units.
- (A) gram/km
  - (B) ml/km
  - (C) gram/square metre
  - (D) gram/cubic metre
  - (E) Answer not known
24. A food chain
- (A) is transfer of energy from one organism to another
  - (B) is a relationship between different producers
  - (C) is a combination of organisms at different levels
  - (D) is comprising of any three organisms
  - (E) Answer not known
25. In a PPP mode of development of an urban infrastructure project, the interests of the public entity is
- (A) Presence of transparent laws/regulations
  - (B) Fair allocation of risks between the public entity and the private partner
  - (C) Continuity in service delivery, which benefits the community
  - (D) Stability in the political and economic environment
  - (E) Answer not known

26. If Q is the total quantity of water in litres required by a community per year having P as its population, then the per capita consumption or demand in litres per capita per day is given as \_\_\_\_\_.

(A)  $\frac{Q}{P \times 365}$

(B)  $\frac{P}{Q \times 365}$

(C)  $\frac{365 \times Q}{P}$

(D)  $\frac{365 \times P}{Q}$

(E) Answer not known

27. For Run-off co-efficient of park and undeveloped areas, the percentage of imperviousness as given by NDMA is

(A) 10-20%

(B) 70-90%

(C) 50-60%

(D) 80-90%

(E) Answer not known

28. Biological decomposition of Putrescible organic matter in solid waste is digested anaerobically and converted into humus and stable mineral compounds in

(A) Composting

(B) Incineration

(C) Pyrolysis

(D) Source segregation

(E) Answer not known



29. The ratio between Net profit and Net sales is
- (A) Gross profit margin
  - (B) Gross profit
  - (C) Net Profit
  - (D) Net profit margin
  - (E) Answer not known
30. The most popular risk assessment technique is
- (A) Financial ratio analysis
  - (B) Sensitivity analysis
  - (C) Economic analysis
  - (D) Cost analysis
  - (E) Answer not known
31. Name the term where the content is drafted by an engineer contains brief and adequate description of the required work and publicity advertised in the newspaper.
- (A) Tender notice
  - (B) Tender document
  - (C) Tender agreement
  - (D) Contract Document
  - (E) Answer not known

32. Identify the Quantifiable project from the following sectors

- (A) Defence
- (B) Education
- (C) Health
- (D) Industrial development
- (E) Answer not known

33. Practice of assigning high values to activities that are completed early and compensated for by assigning low values to activities that are completed late in the project is called

- (A) Front loading
- (B) Back loading
- (C) Priority value change
- (D) Binual value
- (E) Answer not known

34. As per Tamil Nadu Real Estate (Regulation and Development) rules, 2017, any refund of money along with applicable interest and compensation if any shall be paid within \_\_\_\_\_ days.

- (A) 180
- (B) 90
- (C) 150
- (D) 45
- (E) Answer not known

35. Identify the Article which delegate powers and function to Panchayat as per Indian constitution from the following.

- (A) 243 and 243 A
- (B) 243 A and 243 B
- (C) 243 G and 243 H
- (D) 243 D and 243 F
- (E) Answer not known

36. According to 74<sup>th</sup> CAA Nagar Panchayats are

- (A) Smart Cities
- (B) Larger Urban Areas
- (C) Rural hamlet
- (D) Transition from rural to urban area
- (E) Answer not known

37. \_\_\_\_\_ mean a line which is in rear of the street alignment and to which the main wall of a building abutting on a street may lawfully extend.

- (A) Rear line
- (B) Building line
- (C) Set back
- (D) Side set back
- (E) Answer not known

38. Name the first planning legislation in India before Independence
- (A) Sanitary Commission (1864)
  - (B) Bombay Improvement Trust (1898)
  - (C) Mysore Improvement Trust (1903)
  - (D) Calcutta Improvement Trust (1911)
  - (E) Answer not known
39. The world's first National Planning Law was
- (A) United Kingdom's 1909 Housing, Town Planning, etc., Act
  - (B) New York – 1893 Housing and Town Planning Act
  - (C) Chennai – City Improvement Trust, 1921
  - (D) London – Town Planning Act, 1901
  - (E) Answer not known
40. Government of India issued NUTP in 2006, to bring about comprehensive improvements in urban transport services and infrastructure – What does NUTP stands for
- (A) National Urban Transit Policy
  - (B) National Urban Transport Policy
  - (C) National Urban Traffic Policy
  - (D) National Urban Trip Policy
  - (E) Answer not known

41. The Light Rail Transit (LRT) has the following advantages
- (i) Relatively cheaper than conventional suburban rail system
  - (ii) Free from pollution caused by motor vehicles
  - (iii) Suitable for pedestrian zones.
- (A) (i), (ii), (iii)
- (B) (i), (ii)
- (C) (ii), (iii)
- (D) (i)
- (E) Answer not known
42. A radar speedometer records
- (A) Lag
- (B) Instantaneous speed
- (C) Speed timid over a long distance
- (D) Speed timid over a short distance
- (E) Answer not known
43. The minimum gradient of about \_\_\_\_\_ % is needed to ensure effective drainage of carriage ways with kerbs on flat urban roads
- (A) 0.75
- (B) 0.25
- (C) 0.5
- (D) 1
- (E) Answer not known

44. Recommended design speed for arterial roads of urban area by Indian roads congress is
- (A) 80 kmph
  - (B) 60 kmph
  - (C) 50 kmph
  - (D) 30 kmph
  - (E) Answer not known
45. Level of services (LOS) index is recorded as
- (A) Seat miles per sq. mile
  - (B) Service miles per sq. mile
  - (C) Route miles per sq. mile
  - (D) Transit miles per sq. mile
  - (E) Answer not known
46. Satellite imagery is a vital source of \_\_\_\_\_ for producing and updating maps
- (A) Global, outdated and reliable information
  - (B) Regional outdated and reliable information
  - (C) Local, updated and unreliable information
  - (D) Global, frequently update and reliable information
  - (E) Answer not known
47. Polarised light is used in
- (A) Anaglyphs
  - (B) Stereophotos
  - (C) Nectographs
  - (D) Infrared photos
  - (E) Answer not known

48. Identify the correct statement from the following
- (i) GPS surveying can be carried out without clear line of sight between stations
  - (ii) GPS surveying can be carried out at night
  - (iii) GPS surveying can be carried out underground
  - (iv) GPS surveying can be carried out in poor weather conditions
- (A) (i) and (ii) (B) (i), (ii) and (iii)  
(C) (ii), (iii) and (iv) ~~(D) (i), (ii) and (iv)~~  
(E) Answer not known
49. Identify the fundamental components of GPS in terms of basic segments
- ~~(A) Space, control and user~~
  - (B) Space, time and resolution
  - (C) Speed, control and connectivity
  - (D) Space, control and service provider
  - (E) Answer not known
50. In Electro magnetic remote sensing process, identify the correct sequence of steps from the following in relation to data acquisition and analysis
- 1. Energy interaction with earth's surface
  - 2. Energy sources
  - 3. Generation of sensor data in the form of pictures
  - 4. Air borne/space borne sensors to record the reflected energy
  - 5. Propagation of energy through the atmosphere
- ~~(A) 2-5-1-4-3~~ (B) 2-4-5-3-1  
(C) 3-5-4-2-1 (D) 3-5-1-4-2  
(E) Answer not known
51. \_\_\_\_\_ is the important segment of Indian Space Research Organization (ISRO) with the mandate of providing Earth Observation (EO) data from space and aerial platforms to user's.
- ~~(A) National Remote Sensing Centre (NRSC)~~
  - (B) Survey of India (SOI)
  - (C) Aerial Photography Transaction Registry (APTR)
  - (D) Air Survey Company (ASC)
  - (E) Answer not known

52. \_\_\_\_\_ was constituted by the Ministry of Commerce and Industry to study the existing SEZ policy in India and submitted recommendation in Nov, 2018.
- (A) Chokle led Committee
  - (B) Baba Kalyani led Committee
  - (C) Panchi led Committee
  - (D) Dharwad led Committee
  - (E) Answer not known
53. \_\_\_\_\_ are fenced in, duty-free areas that offer warehousing, storage and distribution facilities for trade, transshipment and re-export operations.
- (A) Special warehouse
  - (B) Warehouse
  - (C) Super Economic zone
  - (D) Free Trade Warehousing zones
  - (E) Answer not known
54. URDPFI guidelines suggested that the terminology of City Development plan be renamed as \_\_\_\_\_ to avoid confusion as in many states statutory plans are named as Development plan.
- (A) Perspective plan
  - (B) City Sanitation plan
  - (C) Zonal Development plan
  - (D) City Investment plan
  - (E) Answer not known



55. National Rural Health Mission seeks to reduce the following in our Country
- (i) Maternal Mortality Ratio
  - (ii) Infant Mortality Ratio
  - (iii) Total Fertility Rate
  - (iv) Sex Ratio
- (A) (i), (ii), (iii) and (iv)                       (B) (i), (ii) and (iii) only  
(C) (i) and (ii) only                                      (D) (ii) and (iii) only  
(E) Answer not known
56. Identify the thrust areas of AMRUT mission from the following
- (i) Water supply
  - (ii) NMT
  - (iii) Health
  - (iv) Public Transport Facilities
  - (v) Power
- (A) (i), (ii), (iii) and (iv) only                      (B) (ii), (iii), (iv) and (v) only  
 (C) (i), (ii) and (iv) only                              (D) (iii) and (v) only  
(E) Answer not known
57. Number of cities that will be covered under AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme by the Government of India is
- (A) 400     (B) 500  
(C) 300    (D) 100  
(E) Answer not known
58. One of the following is not a Milestone of Swach Bharat Mission
- (A) Elimination of open defecation
  - (B) Penalise inefficient waste collection
  - (C) Transportation of waste
  - (D) Scientific disposal
  - (E) Answer not known

59. Modulus of Elasticity of concrete is

- (A)  $5700 f_{ck} \text{ N/mm}^2$
- (B)  $5700 (f_{ck})^2 \text{ N/mm}^2$
- (C)  $5700 \sqrt{f_{ck}} \text{ N/mm}^2$
- (D)  $5700 \times 10^5 \text{ N/mm}^2$
- (E) Answer not known

60. The tensile strength of concrete is expressed as

- (A)  $f_{cr} = 0.72 \sqrt{f_{ck}}$
- (B)  $f_{cr} = 0.71 \sqrt{f_{ck}}$
- (C)  $f_{cr} = 0.70 \sqrt{f_{ck}}$
- (D)  $f_{cr} = 0.69 \sqrt{f_{ck}}$
- (E) Answer not known

61. For a building on the side of a busy street, where the ordinary scaffolding will obstruct the traffic on road, the type of scaffolding provided is

- (A) Brick layer's scaffold
- (B) Mason's scaffold
- (C) Steel scaffold
- (D) Needle scaffold
- (E) Answer not known

62. Quoins are

- (A) The place where two or more stones meet
- (B) The internal corner or angle of a wall
- (C) The external corner or angle of a wall
- (D) A projection provided on the inside face of the wall
- (E) Answer not known

63. Gypsum is added in the manufacture of Portland cement in order to
- (A) Decrease the setting time of cement
  - (B) Increase the setting time of cement
  - (C) Decrease the burning temperature
  - (D) Increase the grinding time
  - (E) Answer not known
64. In analysis of rates, contractor profit is taken at the rate of
- (A) 4%
  - (B) 5%
  - (C) 10%
  - (D) 15%
  - (E) Answer not known
65. PERT stands for
- (A) Programme Estimation and Reporting Technique
  - (B) Process Estimation and Review Technique
  - (C) Programme Evaluation and Review Technique
  - (D) Planning Estimate and Resulting Technique
  - (E) Answer not known
66. In PERT analysis The standard deviation ( $\sigma$ ) is given by \_\_\_\_\_.  
Given that  $t_p$  = Pessimistic time,  $t_o$  = Optimistic time,  $t_m$  = Most likely time
- (A)  $\sigma = \sqrt{\frac{t_m - t_o}{6}}$
  - (B)  $\sigma = \frac{t_p + t_o}{6}$
  - (C)  $\sigma = \sqrt{\frac{t_p - t_o}{6}}$
  - (D)  $\sigma = \frac{t_p - t_o}{6}$
  - (E) Answer not known

67. One of the types of information collected in vital survey is
- (A) Forest and other natural vegetation
  - (B) Mines and other location
  - (C) History of the past growth of population
  - (D) Location and classification of historic buildings
  - (E) Answer not known
68. The sum of the interior angles of a closed traverse is
- (A)  $(2n + 4) 90^\circ$
  - (B)  $(2n - 4) 90^\circ$
  - (C)  $(2n - 8) 90^\circ$
  - (D)  $(n - 4) 90^\circ$
  - (E) Answer not known
69. In visible region, the Red light is having a wavelength range of \_\_\_\_\_  $\mu\text{m}$ .
- (A) 0.52 – 0.60
  - (B) 0.63 – 0.69
  - (C) 0.76 – 0.90
  - (D) 0.90 – 1.55
  - (E) Answer not known
70. In any case, to get a well proportioned or well-conditioned triangle in chain surveying, no angle should be less than
- (A)  $20^\circ$
  - (B)  $30^\circ$
  - (C)  $40^\circ$
  - (D)  $45^\circ$
  - (E) Answer not known

71. Match the items in List I with List II and select correct answer.

List I

List II

- |                          |                |
|--------------------------|----------------|
| (a) Structure in a truss | 1. Bending     |
| (b) Tie in a truss       | 2. Compression |
| (c) Beam                 | 3. Torsion     |
| (d) Rotating shaft       | 4. Tension     |

(a) (b) (c) (d)

(A) 1 3 2 4

(B) 2 4 1 3

(C) 3 4 2 1

(D) 2 4 3 1

(E) Answer not known

72. Tendon splices are required in

(A) Hoyer's long line method of prestressing

(B) Short span prestressed members

(C) Long span prestressed members

(D) Both (A) and (B)

(E) Answer not known

73. Maximum permissible shear stress given in IS 456 – 1978 is based on

(A) Diagonal tension failure

(B) Diagonal compression failure

(C) Flexural tension failure

(D) Uniaxial compression

(E) Answer not known

74. Match List - I (Type of structure) with List - II (Static indeterminacy) and select the correct answer using the codes given below the lists:

Number of members =  $m$ , number of joints =  $n$ , number of reaction elements =  $r$

List I	List II
(a) Plane frame	1. $m+r-3n$
(b) Space truss	2. $6m+r-6n$
(c) Space frame	3. $6m+r-3n$
	4. $3m+r-3n$

Codes :

	(a)	(b)	(c)
(A)	1	2	3
(B)	4	3	2
(C)	2	1	3
<del>(D)</del>	4	1	2
(E)	Answer not known		

75. If a simply supported beam carrying a load whose intensity varies uniformly from zero at one end to 'W' per unit run at the other end, then the maximum bending moment is equal to

- (A)  $\frac{WL^2}{8}$
- (B)  $\frac{WL^2}{12}$
- (C)  $\frac{WL^2}{24}$
- ~~(D)~~  $\frac{WL^2}{9\sqrt{3}}$
- (E) Answer not known

76. The value of Young's modulus of soil ( $E_S$ ) used in immediate settlement equation can be found out using
- (A) Compression test (B) Direct shear test  
(C) Plate load test  (D) Triaxial test  
(E) Answer not known
77. For a compact building site covering an area of 0.4 Hectre number bore notes required for soil investigation as per I.S. 1892- are
- (A) 1 (B) 4  
 (C) 5 (D) 3  
(E) Answer not known
78. Unconfined compression test is applicable only to
- (A) fully saturated, non-fissured clays  
(B) unsaturated clays  
(C) partially saturated clay  
(D) any type of clay  
(E) Answer not known
79. Assertion [A] : The effective stress is equal to the total stress minus the pore water pressure.
- Reason [R] : The effective stress controls the volume changes and shearing resistance of soil.
- (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 not the correct explanation of [A]  
(C) [A] is true but [R] is not true  
(D) Both [A] and [R] are not true  
(E) Answer not known