

Question Booklet No. :

TPAR/2022

Register
Number

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2022

TOWN PLANNING
(P.G. Degree Standard)

Duration : Three Hours]

[Total Marks : 300

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. You will be supplied with this question booklet 15 minutes prior to the commencement of the examination.
2. This question booklet contains **200** questions. Before answering the questions, you shall check whether all the questions are printed serially and ensure that there are no blank pages in the question booklet. **If any defect is noticed in the question booklet, it shall be reported to the invigilator within the first 10 minutes and get it replaced with a complete question booklet. If the defect is reported after the commencement of the examination, it will not be replaced.**
3. Answer **all** the questions. All the questions carry equal marks.
4. You must write your register number in the space provided on the top right side of this page. Do not write anything else on the question booklet.
5. An answer sheet will be supplied to you separately by the room invigilator to shade the answers. Instructions regarding filling of answers etc., which are to be followed mandatorily, are provided in the answer sheet and in the memorandum of admission (Hall Ticket).
6. You shall write and shade your question booklet number in the space provided on page one of the answer sheet with **BLACK INK BALL POINT PEN**. If you do not shade correctly or fail to shade the question booklet number, your answer sheet will be invalidated.
7. Each question comprises of five responses (answers) : i.e. (A), (B), (C), (D) and (E). You have to select **ONLY ONE** correct answer from (A) or (B) or (C) or (D) and shade the same in your answer sheet. If you feel that there are more than one correct answer, shade the one which you consider the best. **If you do not know the answer, you have to mandatorily shade (E).** In any case, choose **ONLY ONE** answer for each question. If you shade more than one answer for a question, it will be treated as a wrong answer even if one of the given answers happens to be correct.
8. You should not remove or tear off any sheet from this question booklet. You are not allowed to take this question booklet and the answer sheet out of the examination room during the time of the examination. After the examination, you must hand over your answer sheet to the invigilator. You are allowed to take the question booklet with you only after the examination is over.
9. **You should not make any marking in the question booklet except in the sheets before the last page of the question booklet, which can be used for rough work. This should be strictly adhered to.**
10. Failure to comply with any of the above instructions will render you liable for such action as the Commission may decide at their discretion.

SEAL

SPACE FOR ROUGH WORK



1. Identify the first city in India, from the following which adopted the TDR concept in a regulated manner for land acquisition and development of city.
- (A) Bombay (Mumbai)
 - (B) Kolkatta (Calcutta)
 - (C) Puna (Pune)
 - (D) Madras (Chennai)
 - (E) Answer not known
2. One of the following is not the purpose of adoption of Transferable development rights
- (A) Heritage conservation
 - (B) Road indexing
 - (C) Create special economic zone
 - (D) Lake and water bodies conservation
 - (E) Answer not known
3. The creation of "Sustainable equitable economically vibrant Cities" is the proclaimed objective of
- (A) JNNURM
 - (B) AMRUT
 - (C) Urban Transport
 - (D) Atma Nirbhar Bharat
 - (E) Answer not known
4. In JNNURM programme which was launched by the Government of India, the Central Grant is _____%.
- (A) 50%
 - (B) 60%
 - (C) 100%
 - (D) 40%
 - (E) Answer not known

5. As per AMRUT, the District Level Review and Monitoring Committee (DLRMC) will be constituted and _____ will be the Co-Chairperson with the District Collector.
- (A) Member(s) of Legislative Assembly
(B) ✓ Member(s) of Parliament
(C) Deputy District Collector
(D) Member of council of Minister's of state
(E) Answer not known
6. The Unfinished National e-Governance Plan (NeGP) has now been subsumed in the NeGP 2.0 or _____ as part of a highly ambitious "Digital India Programme".
- (A) e-Agmarknet (B) Aaadhar
(C) Nav Krishi (D) ✓ e-Kranti
(E) Answer not known
7. JNNURM will provide financial assistance for the preparation of following under its Mission.
- (a) City Development Plan
(b) Detailed Project Reports
(c) Master Plan
(d) Regional Plan
- (A) (a), (b), (c) and (d)
(B) ✓ (a) and (b) only
(C) (c) and (d) only
(D) (a), (b) and (c) only
(E) Answer not known
8. In Transportation modelling, the process of quantifying the sub such that it is able to reproduce observed behaviour is known as
- (A) Specification (B) ✓ Calibration
(C) Validation (D) Deliberation
(E) Answer not known

9. Identify the first unmanned satellite, designed to acquire data about the earth resources on a systematic, repetitive, medium resolution and multi spectral basis from the following.
- (A) ERTS - 1 (B) SPOT - 1
(C) LISS - 1 (D) HCMM - 1
(E) Answer not known
10. The Imageries from CARTOSAT - 1 have a spatial resolution of 2.5 meter and covers a swath of _____ Km.
- (A) 25 Km (B) 30 Km
(C) 35 Km (D) 20 Km
(E) Answer not known
11. _____ is a process by which it is possible to take two or more different thematic map layers of the same area and overlay them on top of the other to form a composite new layer.
- (A) Three dimensional classification (B) Map densification
(C) Map recreation (D) Map overlay
(E) Answer not known
12. _____ is the creation of Polygon, that surround other points, lines or polygons.
- (A) Rounding (B) Circling
(C) Buffering (D) Enlarging
(E) Answer not known
13. De Skewing in editing of Spatial Data in GIS refers to
- (A) removing low valued pixels in the image
(B) rotate the image by small angle to align with the Co-ordinates
(C) remove unwanted pixels
(D) filling the holes and gaps in the image
(E) Answer not known

14. In GIS, the term 'LCGU' denotes _____ which is one of the options available to build or construct GIS real world model.
- (A) Least Control Geographical Unit
 - (B) Large Common Geographical Unit
 - (C) Large Control in Geographical Unit
 - (D) Least Common Geographical Unit
 - (E) Answer not known
15. Potential application of Remote Sensing and GIS is due to
- (A) capability to capture fine resolution images
 - (B) capability to capture fine resolution image with temporal imaging
 - (C) capability to capture, large area
 - (D) capability to capture census
 - (E) Answer not known
16. Visible light is electromagnetic radiation with wavelengths ranging approximately between
- (A) $0.4 \mu m$ and $0.7 \mu m$
 - (B) $0.1 \mu m$ and $0.3 \mu m$
 - (C) $0.7 \mu m$ and $1.0 \mu m$
 - (D) $1.0 \mu m$ to $1.4 \mu m$
 - (E) Answer not known
17. Which among the following is not an urban application of GIS?
- (A) Construction material inventories
 - (B) Urban and regional planning
 - (C) Slope stability studies
 - (D) Shortest path time studies
 - (E) Answer not known
18. GIS is unique because, it handles
- (A) Special information
 - (B) Attributes
 - (C) Graphics
 - (D) Spatial information
 - (E) Answer not known

19. Match the following in connection with remote sensing:
- | | | |
|--------------------|---|---|
| (1) Equator | P | drawn from pole to pole |
| (2) Prime Meridian | Q | circle rounding the globe |
| (3) Latitude | R | circle of greater circumference in globe |
| (4) Longitude | S | starting or zero point for angular measurements |
- (A) 1 - R, 2 - Q, 3 - P, 4 - S
(B) 1 - Q, 2 - R, 3 - P, 4 - S
(C) 1 - S, 2 - P, 3 - Q, 4 - R
(D) 1 - R, 2 - S, 3 - Q, 4 - P
(E) Answer not known
20. Top policy does not include
- (A) Last mile connectivity
(B) High density mixed income development
(C) Public facilities at needs of public transport
(D) Low dense housing
(E) Answer not known
21. As per URDPFI guidelines the recommended modal split by public transport mode for city of 1.5 million population is
- (A) 30%
(B) 50% plus
(C) 40% plus
(D) 35%
(E) Answer not known
22. In trip distribution studies; the 2 well known opportunity models are:
- (A) interactive and competing
(B) intervening and competing
(C) inductive and competing
(D) integral and competing
(E) Answer not known

23. _____ is the super elevation to be provided for a horizontal curve with a radius of 400 m for a design speed of 100 K.P.H.
- (A) 0.11 (B) 0.22
(C) 0.33 (D) 0.44
(E) Answer not known
24. If a vehicle is ascending a grade at constant speed and comes across a descending grade such that it maintains same speed without any effort or brakes; it is called :
- (A) ruling grade (B) momentum grade
(C) floating grade (D) minimum grade
(E) Answer not known
25. The method available for conducting an OD (Origin – Destination) survey are
- (1) Home interview survey
(2) Road side interview survey
(3) Tags on vehicles
(4) Street side survey
- (A) (1) and (2) are correct (B) (3) and (4) are correct
(C) (3) alone is wrong (D) (4) alone is wrong
(E) Answer not known
26. _____ is provided to demarcate the boundary between the road and foot path, which is of suitable height and made visible at night.
- (A) Gradient (B) Kerbs
(C) Traffic island (D) Rotary
(E) Answer not known
27. The common levels of measurement of vehicle flow are:
- (i) Average annual flow, expressed in vehicles per year
(ii) Average monthly flow, expressed in vehicles per month
(iii) Annual average daily traffic, expressed in vehicles per day
(iv) Hourly flow, expressed in vehicles per hour
- (A) (ii) alone is wrong (B) (iv) alone is wrong
(C) (i) alone is wrong (D) (ii) and (iv) are wrong
(E) Answer not known

28. Identify the Traffic junction from the following, which converts all crossing into merging and diverging sequences?
- (A) Automatic signal (B) Manual signalling
(C) Grade separators (D) Rotary
(E) Answer not known
29. If Total Float is 30 days and Free Float is 10 days then the Interfering Float will be
- (A) 40 days (B) -20 days
(C) 3 days (D) 20 days
(E) Answer not known
30. The Critical Path Method (CPM) was discovered by :
- (A) Du Pont Corporation (B) Gantt
(C) Fulkerson (D) Hamilton Corporation
(E) Answer not known
31. Critical Path lies along the activities having total float
- (A) positive (B) negative
(C) zero (D) same
(E) Answer not known
32. Name the float of an activity where there is excess of 'available time' over the activity time, when all jobs start as early as possible.
- (A) Total float (B) Free float
(C) Independent float (D) Interfering float
(E) Answer not known
33. _____ does not belong to a network technique.
- (A) LESS
(B) CPM
(C) UNETICS
(D) LIST
(E) Answer not known

34. A project is worthwhile if its Internal Rate of Return (IRR) _____ the cost of capital.
- (A) equal to (B) less than
 (C) exceeds (D) zero
 (E) Answer not known
35. If Present Value of Benefits (PVB) is 100 and Initial investments is 1000, then Benefit Cost Ratio (BCR) is equal to
- (A) 0.1 (B) 0.2
 (C) 1 (D) 10
 (E) Answer not known
36. If C_t is the cash flow at the end of year t , n is the life of the project, and r is the discount rate, the Net Present Value (NPV) of project will be
- (A) $\sum_{t=1}^n \frac{C_t}{(1+r)^t} - \text{Initial investment}$ (B) $\frac{C_t}{(1+r)^t} - \text{Initial investment}$
 (C) $\frac{(1+r)^t}{C_t} - \text{Initial investment}$ (D) $\sum_{t=1}^n \frac{C_t}{(1+r)^t}$
 (E) Answer not known
37. The _____ is defined as the present value of benefits (Cash inflows) divided by the present value of costs (Cash outflows).
- (A) Discount ratio (B) Benefit ratio
 (C) Cost ratio (D) Benefit cost ratio
 (E) Answer not known
38. A project is worthwhile if its net present value is
- (A) greater than zero (B) less than zero
 (C) equal to zero (D) maximum
 (E) Answer not known

39. The building to which the public or any class or section of the public are granted access or any building which is open to the public or any class or section of the public as per Tamil Nadu Town country Planning Act is
- (A) private building (B) public building
(C) library building (D) cosmopolitan building
(E) Answer not known
40. The section that gives the Government to approve detailed development plan as per Tamil Nadu Town and Country Planning Act is
- (A) Section 18 (B) Section 28
(C) Section 38 (D) Section 48
(E) Answer not known
41. As per Town and Country Planning Act, 1971 the Town Planning Scheme (TPS) of Maharashtra or Gujarat has been re-designated as
- (A) Master plan (B) Perspective plan
(C) Development plan (D) Detailed development plan
(E) Answer not known
42. Identify the schedule from the following which is concerned with Urban planning including town planning in the Indian Constitution
- (A) 10th Schedule (B) 11th Schedule
(C) 12th Schedule (D) 13th Schedule
(E) Answer not known
43. As per 74th Constitutional Amendment Act 1992, a transitional area, that is to say, an area in transition from rural area to an urban area is called
- (A) Nagar Panchayat
(B) Village Panchayat
(C) Municipal Council
(D) Municipal Corporation
(E) Answer not known

44. Every meeting of the Grama Sabha shall be convened by the _____ of the Village Panchayat.

(A) Vice – President

(B) President

(C) Members

(D) Elder Member

(E) Answer not known

45. Zoning regulation deals with

P. Density

Q. Minimum areas of room

R. Land use

S. Building materials

T. Height

U. Reserved land areas

(A) P, R, T

(B) P, Q, R, S

(C) P, R, S

(D) Q, R, U, T

(E) Answer not known

46. The three tier Panchayat Raj system is made possible by

(A) 73rd Constitutional Amendment Act

(B) 74th Constitutional Amendment Act

(C) Town Planning Act

(D) National Rural Development Mission

(E) Answer not known

47. RFCTLARR Act (2013) requires the market value of land be calculated as the _____ for the registration of sale deeds in the area.

(A) maximum land value specified under Indian Stamp Act, 1989

(B) minimum land value specified under Indian Stamp Act, 1899

(C) minimum land value specified under Indian Stamp Act, 1989

(D) maximum land value specified under Indian Stamp Act, 1899

(E) Answer not known

48. Sun light, is the presence of water of shallow depth
- (A) reduce turbidity (B) impedes the growth of algae
(C) increase dissolved oxygen (D) increase acidity
(E) Answer not known
49. _____ refers to the award of tender to private partner for the implementation of the PPP project.
- (A) Project Manager (B) Concessionaire
(C) Special purpose vehicle (D) Consultant
(E) Answer not known
50. Turbidity of raw water is a measure of
- (A) acidity (B) suspended solids
(C) B.O.D (D) Alkalinity
(E) Answer not known
51. The housing stock of a town has total number of 9090 dwelling units. Present population of the town is 45,450. Assuming an average household size of 4.5, the housing shortage in town in percentage is
- (A) 15 (B) 20
(C) 10 (D) 13
(E) Answer not known
52. In design of sewer systems, a minimum slope of _____ is required for sewers of diameter greater than 600 mm.
- (A) 1 in 1000 (B) 1 in 600
(C) 1 in 1250 (D) 1 in 750
(E) Answer not known

53. The solid waste resulting from growing, handling, preparation and consumption of putrescible organic matter is called
- (A) Refuse (B) Rubbish
 (C) Garbage (D) Cinders
 (E) Answer not known
54. Large sized floating objects can be removed from sewage by a process called
- (A) Skimming (B) Screening
 (C) Filtration (D) Percolation
 (E) Answer not known
55. The Recommended Design period of sewage treatment plant as per URDPFI Guidelines, 2014 is _____ years.
- (A) 50 (B) 30
 (C) 25 (D) 40
 (E) Answer not known
56. What is the value of maximum daily consumption of water?
- (A) $1.5 \times$ average daily demand (B) $1.6 \times$ average daily demand
 (C) $1.7 \times$ average daily demand (D) $1.8 \times$ average daily demand
 (E) Answer not known
57. Increased density and mixed land use discourages
- (A) walking (B) cycling
 (C) public transport (D) private car
 (E) Answer not known
58. The sewers should be laid at such a gradient, that a minimum velocity which will prevent the silting of particles in sewers over a wide variation in discharge of sewage is called
- (A) Shield velocity (B) Self-cleansing velocity
 (C) Non-Scouring velocity (D) Gravitational velocity
 (E) Answer not known

59. The aim of environmental assessment is
- (A) justify the project
 - (B) find the faults in the project
 - (C) introducing the environmental facts of the project
 - (D) find the economic loss
 - (E) Answer not known
60. The lowest dose of pollutant at which there is an observable effect is known as
- (A) Admissible dose
 - (B) Allowable dose
 - (C) Threshold dose
 - (D) Limiting dose
 - (E) Answer not known
61. The Air (Prevention and Control of Pollution) Act was enacted in the year
- (A) 1981
 - (B) 1996
 - (C) 2000
 - (D) 1974
 - (E) Answer not known
62. Water pollution may be caused by
- (i) atmospheric dissolved gases
 - (ii) decomposition of animal and vegetable materials
 - (iii) mining activities
 - (iv) industrial effluents and sewage disposal
- (A) (i) and (ii)
 - (B) (i) and (iii)
 - (C) (i), (ii), (iii) and (iv)
 - (D) (i), (ii) and (iii)
 - (E) Answer not known
63. Regarding noise level the term PTS refer to
- (A) Permissible Threshold Shift
 - (B) Permissible Temporal Shift
 - (C) Permanent Threshold Shift
 - (D) Permanent Temporal Shift
 - (E) Answer not known

64. Biotic components of environment are
- (i) Plants
 - (ii) Animals
 - (iii) Human beings
- (A) ✓ (i), (ii) and (iii) (B) (i)
(C) (ii) (D) (iii)
(E) Answer not known
65. Environmental resources may be classified as follows:
- (i) Renewable
 - (ii) Non-renewable
 - (iii) Flow resources
- (A) (i) (B) ✓ (i) and (ii)
(C) (i), (ii) and (iii) (D) (i) and (iii)
(E) Answer not known
66. Identify is the major contributor of SO_x emission (harmful toxic pollutant) from the following:
- (A) Factory
 - (B) ✓ Automobile
 - (C) Thermal Power Station
 - (D) Lignite Power Station
 - (E) Answer not known
67. The following emission is the most visible sign of vehicular (particularly diesel) pollution.
- (A) Carbon monoxide
 - (B) Oxides of nitrogen
 - (C) Hydro carbons
 - (D) ✓ Particulates
 - (E) Answer not known

68. The transformation of a working - class or vacant area of the central city into middle class residential and/or commercial use is called
- (A) Urban sprawl (B) Gentrification
(C) Decentralization (D) Suburbanization
(E) Answer not known
69. Contemporary city (1992) is the vision of
- (A) Lewis Mumford (B) Le Corburier
(C) Ebenezer Howard (D) Patrick Geddes
(E) Answer not known
70. "Core of the city" is also referred as
- (A) Sector (B) Nodes
(C) Central business district (D) District
(E) Answer not known
71. Counter Urbanization is a demographic and social process where people
- (A) move from urban areas to urban areas
(B) move from rural areas to rural areas
(C) move from urban areas to rural areas
(D) move from city to metropolis
(E) Answer not known
72. Which of the following is correct
- (i) Labour can be separated from labourer
(ii) Labour is both means and end of economic activity
(iii) Labour is perishable
(iv) Labour is less mobile
- (A) (i), (ii), (iii) and (iv) only
(B) (ii), (iii) and (iv) only
(C) (i) only
(D) (i) and (iii) only
(E) Answer not known

73. "The division of labour and specialization would lead to better organization and more result". This is possible only
- (A) If the scale of marginal return is curved
 - (B) If the scale of production is large
 - (C) If the scale of production is small
 - (D) If the efficiency work is neutral
 - (E) Answer not known
74. Inferior goods which are purchased in smaller quantities as the income increases are called as
- (A) Giffen goods
 - (B) Speculative goods
 - (C) Prestige goods
 - (D) Normal goods
 - (E) Answer not known
75. The city rights movement of the late 1950's and early 1960's focused attention on issues of _____ and _____
- (A) Justice and fairness
 - (B) Equity and poverty
 - (C) Prestige and power
 - (D) Housing and poverty
 - (E) Answer not known
76. Total utility is maximum when
- (A) Marginal utility is zero
 - (B) Marginal utility is at its highest point
 - (C) Marginal utility is equal to the average utility
 - (D) Average utility is maximum
 - (E) Answer not known
77. Identify the factors which causes people to move to urban areas
- (A) Larger open spaces
 - (B) Cheaper food
 - (C) Clean atmosphere
 - (D) Better opportunity services and lifestyle
 - (E) Answer not known

78. The method that projects changes in a region's share of certain economic export activity is called
- (A) Location quotient method (B) Shift share method
(C) Econometric method (D) Ratio method
(E) Answer not known
79. Following statements are true with respect to the formation of Dandakaranya development authority
- (a) Backward region
(b) Sparrely populated tribal region
(c) Located between south eastern Madhya Pradesh and Southern Orissa
(d) Established in the year 1960
- (A) (a), (b), (c)
(B) (a), (b), (c) and (d)
(C) (a), (b), (d)
(D) (b), (c), (d)
(E) Answer not known
80. The concept of "squaring the circle" in Renaissance planning was followed by
- (A) Campanella (B) Da vinci
(C) Filarete (D) Michaelangelo
(E) Answer not known
81. The blocks within the chess board pattern of Roman towns were called
- (A) Decumanus (B) Plaza
(C) Insulae (D) Castrum
(E) Answer not known
82. In which five year plan Regional planning approach was emphasized to curb the increasing imbalances in socio-economic development of various areas in our country
- (A) Third plan (B) Fourth plan
(C) Fifth plan (D) Sixth plan
(E) Answer not known

83. Region delineated for certain specific purposes such a development of water resource, mineral resources etc. is called
- (A) Homogenous region (B) Nodal region
(C) ✓ Adhoc region (D) Socio cultural region
(E) Answer not known
84. The hierarchy of planning regions are as follows
- (A) ✓ Macro, Meso and Micro (B) Meso, Macro and Micro
(C) Micro, Meso and Macro (D) Macro, Micro and Meso
(E) Answer not known
85. The city of Chandigarh has a clear, segregation of pedestrian and vehicular traffic in the following sector's
- (A) ✓ In all the sector (B) Commercial sector's
(C) Industrial sector's (D) Recreational sector's
(E) Answer not known
86. In "Mansara Shilpa-Shastra" the lotus shaped town is called as
- (A) ✓ Padmaka (B) Karmukha
(C) Swastika (D) Danolaka
(E) Answer not known
87. In the early day, the concept of regional planning primarily meant
- (A) ✓ The development of water resources and the adjacent land resources within a given river basin
(B) The development of Road network with a given region
(C) The development of Infrastructures facilities within the given region
(D) Similar to the raster plan
(E) Answer not known

88. Match the correct combination

Planning system		Time Frame in years
(a) Perspective plan	1.	20
(b) Regional plan	2.	1
(c) Local area plan	3.	20-30
(d) Annual plan	4.	5-20

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

89. Floor Area Ratio (FAR) is the significant tool to

- (A) ✓ Control the density of built up area
- (B) Control the density of population
- (C) Control the building height
- (D) Control traffic
- (E) Answer not known

90. According to URDPFI Guideline's a megapolis should have a population range of

- (A) ✓ More than 1 crore
- (B) 50 Lakh to 1 crore
- (C) More than 2 crore
- (D) More than 10 Lakhs
- (E) Answer not known

91. The required population to support primary school for a neighbourhood development is

- (A) 5000 to 10,000
- (B) ✓ 3,500 to 5,000
- (C) 10,000 and above
- (D) 5,000 and above
- (E) Answer not known

92. Delphi Techniques was advocated by
(A) Lowry and Garin
(B) Helmer and Dalkey
(C) Perry and Stein
(D) Hogatt and Lockhart
(E) Answer not known
93. The urban planning game which traces medium sized British country town is called
(A) PTRC
(B) CLUG
(C) Wei-Hai
(D) GO
(E) Answer not known
94. The 2 theories of residential location are
(A) Trade off & Trickle down
(B) Trade off & Bottom up approach
(C) Trade off & Top down approach
(D) Filter down & Trade off
(E) Answer not known
95. The simplest form of simulation extrapolating future performance from past behaviour and experience is called
(A) Futuristic projections
(B) Linear projections
(C) Cyclic projections
(D) Non-linear projections
(E) Answer not known
96. The model that analyses the collective movements of large number of shoppers is called
(A) Gravity model
(B) Spatial interaction model
(C) Lowry model
(D) Grain model
(E) Answer not known

97. Urban structure is the result of a community effort to overcome distance between residents and facilities was stated by
- (A) Walter Christaller (B) A.Z. Guttenberg
(C) Sir Patrick Abercrombie (D) Baron Hausmann
(E) Answer not known
98. District Level Planning was emphasised by the Planning Commission in :
- (A) 1st Five Year Plan (B) 2nd Five Year Plan
(C) 3rd Five Year Plan (D) 4th Five Year Plan
(E) Answer not known
99. "Impossibility Theorem" that no system meets the requirements of rational aggregation was defined by
- (A) Banfield
(B) Kenneth J. Arrow
(C) Lichfield
(D) Hutchinon
(E) Answer not known
100. The specially designed and socially integrated model town of Victoria was proposed by
- (A) Robert Owen (B) Chadwick
(C) George Cadbury (D) J.S. Buckingham
(E) Answer not known
101. Decision making takes place under 3 different conditions are
- (A) certainty, choice, uncertainty
(B) certainty, risk, uncertainty
(C) certainty, preference, intuition
(D) uncertainty, choice, risk
(E) Answer not known

102. Identify the Value Capture Financing (VCF) tools from the following:
- (I) Betterment charges
 - (II) Sale of Reserved Plots
 - (III) Land Value Tax
 - (IV) Tax Increment Financing (TIF)
- (A) (I) and (II) only (B) (I), (II) and (III) only
(C) (I), (II), (III) and (IV) only (D) (I), (III) and (IV) only
(E) Answer not known
103. _____ is based on the principle that private land and buildings benefit from Public investments in infrastructure and policy decisions of Governments.
- (A) Value decision (B) Value capture
(C) Value making (D) Value finalization
(E) Answer not known
104. Asia's first EPZ (Export Processing Zone) was established in
- (A) 1965 at Kandla, Gujarat (B) 1975 at Indore, Madhya Pradesh
(C) 1975 at Hyderabad, Telangana (D) 1975 at Noida, Delhi
(E) Answer not known
105. Which one of the following does NOT belong to the salient features of SEZ in India?
- (A) Licence required for Imports
(B) No extra documents required for customs and exim policy
(C) No routine examination by the customers of export and import cargo
(D) 100% tax break upto 2010 u/s 10 A of the income tax act
(E) Answer not known
106. HRIDAY is associated with
- (A) Preservation and development of heritage cities of India
(B) Conservation of temple towns of India
(C) Re Development of historic cities in India
(D) Identification of heritage cities of India
(E) Answer not known

107. The total fund allocated for AMRUT is _____ crore for five years from FY 2015-16 to FY 2019-20.
- (A) ✓ 50,000 (B) 40,000
(C) 1,00,000 (D) 75,000
(E) Answer not known
108. AMRUT Programme will cover all cities and towns in India with a population of over _____ with notified municipalities as per census 2011, including cantonment boards (Civilian Areas).
- (A) 5 Lakh (B) 4 Lakh
(C) 2 Lakh (D) ✓ 1 Lakh
(E) Answer not known
109. Identify the special focus states in India with respect to National Rural Health Mission.
- (a) Rajasthan
(b) Uttar Pradesh
(c) Andhra Pradesh
(d) Madhya Pradesh
- (A) (a), (b), (c) and (d) (B) ✓ (a), (b) and (d) only
(C) (a), (b) and (c) only (D) (a) and (b) only
(E) Answer not known
110. Identify the expected outcomes of JNNURM from the following:
- (a) Basic level of urban services
(b) Modern and Transport budgeting
(c) Introduction of e-Governance application in Local Bodies
(d) Establishment of city wide frame works for planning and governance
- (A) (a), (b) and (c) only (B) (a) and (b) only
(C) (b), (c) and (d) only (D) ✓ (a), (b), (c) and (d)
(E) Answer not known

111. "A Sustainable transportation system should ensure efficient use of Scarce Resources". Choose correct statements from the list given below in achieving the above mentioned objective

- (a) by promoting fuel efficient and green vehicles
- (b) car sharing strategy
- (c) encouraging the use of non motorized transportation
- (d) encouraging the use of private cars
- (A) (a), (c) and (d) only
- (B) (a), (b) and (d) only
- (C) (b), (c) and (d) only
- (D) (a), (b) and (c) only
- (E) Answer not known

112. The main objective of a sustainable transportation system is to reduce the demand for transportation by

- (A) reducing the number of trips and reducing the length of travel distance
- (B) reducing the number of trips and increasing the length of travel distance
- (C) increasing the number of trips and reducing the length of travel distance
- (D) increasing the number of trips and increase the length of travel distance
- (E) Answer not known

113. Higher income group travel more than low income group, because low income groups

- (A) live in slum close to city centre
- (B) do not have the capacity to travel more
- (C) don't prefer to travel
- (D) are employed to close to their home
- (E) Answer not known

114. In false colour infra red photos; "red" records as:

- (A) greenish gray
- (B) blue
- (C) yellow
- (D) greenish red
- (E) Answer not known

115. In GIS, Digital Terrain Modelling (DTM) encompasses the following general tasks.
- (1) Generation
 - (2) Manipulation
 - (3) Moderation
 - (4) Interpretation
- (A) (1), (2) is wrong (B) (4) alone is wrong
(C) ✓ (3) alone is wrong (D) (1), (2), (3), (4) are correct
(E) Answer not known
116. _____ has been developed to facilitate the querying of relational databases in GIS.
- (A) ✓ Standard Query Language (SQL)
 - (B) Soft Query Language (SQL)
 - (C) System Query Logit (SQL)
 - (D) Synchronized Query Logit (SQL)
 - (E) Answer not known
117. _____ data structures do not provide precise locational information because geographic space is now divided into discrete grids, as much as we divide a checker board into uniform squares.
- (A) Vector
 - (B) ✓ Raster
 - (C) Block coding
 - (D) Chain coding
 - (E) Answer not known
118. Identify the four key activities which can be enhanced by using the information system technologies through GIS:
- (A) Measurement, Mediation, Monitoring and Modelling
 - (B) ✓ Measurement, Mapping, Monitoring and Modelling
 - (C) Magnification, Mapping, Monitoring and Modelling
 - (D) Measurement, Mixing data, Monitoring and Mapping
 - (E) Answer not known

119. _____ scatter takes place when a photon has a partially elastic collision with a molecules, giving up energy to rotation or vibration.

- (A) Raman (B) Mie
(C) Non - Selective (D) Rayleigh
(E) Answer not known

120. _____ (ENVI) software provides the most complete set of image processing tools and function available for land cover analysis.

- (A) Environment for visualizing image
(B) Energy for vision image
(C) Environment for vital image
(D) Environment and vision interpretation
(E) Answer not known

121. Match the terms in Group I with Group II.

Group I	Group II
P Toposheet	1. Path/Row
Q Satellite Image	2. Contour
R Wave length	3. Focal length
S Scan line	4. Spectral signature
	5. Bits/Inch

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

122. Match the following in connection with Map projects on properties:

- (1) Projection that retains the (a) equal area or equivalent projection property of maintaining correct angular correspondence that can be preserved
(2) Projection by which (b) equidistant projections areas can be preserved
(3) Projection by which (c) angular confirmity the distance are preserved

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

123. The most important and primary factor in establishing zones in a transportation survey is
- (A) Population (B) Location
 (C) Vehicle count (D) Land - Use
 (E) Answer not known
124. In traffic engineering; TRANSTT and FLEXIPROG refers to
- (A) computer programme (B) public transport systems
 (C) advanced para transit (D) mathematical programmes
 (E) Answer not known
125. Transit which enables road and rail freight transport to be closely integrated is called as
- (A) multi - back (B) piggy - back
 (C) modal split (D) dual back
 (E) Answer not known
126. The average headway distances between cycles when moving in groups should be
- (A) 1.5 m (B) 1 m
 (C) 2 m (D) 0.5 m
 (E) Answer not known
127. _____ is the recommendation from the Traffic Engineering hand book for the base length for the long base method in spot speed survey, when vehicle is travelling at greater than 65 KPH speed.
- (A) 81 m (B) 78 m
 (C) 84 m (D) 87 m
 (E) Answer not known
128. In vertical curve classification; at change of grade; the sag valley is also referred to as
- (A) Sag crest (B) Sag curve
 (C) Sag trough (D) Sag point
 (E) Answer not known

129. Width of carriage way for single lane road as per Indian Roads Congress is
 (A) 3.75 m (B) 4.75 m
 (C) 5.75 m (D) 6.0 m
 (E) Answer not known
130. In a road having 'n' number of lanes and l – length of the curve, and r – radius of the curvature, the total mechanical widening is
 (A) $W_m = \frac{nl^2}{2R}$ (B) $W_m = \frac{nl}{2R}$
 (C) $W_m = \frac{nR}{2l^2}$ (D) $W_m = \frac{nR}{2l}$
 (E) Answer not known
131. Braking distance (l) at the design speed of V m/sec will be
 (A) $l = \frac{V^2}{2gf}$ (B) $l = \frac{V}{2gf}$
 (C) $l = \frac{V^2}{gf}$ (D) $l = \frac{V^2}{2f}$
 (E) Answer not known
132. The time interval between the passing of the reference line by 2 successive vehicles in a lane of traffic is called as :
 (A) Slack (B) Lag
 (C) Float (D) Gap
 (E) Answer not known
133. In Traffic and Transportation Planning, ADT refers to
 (A) Annual Daily Traffic
 (B) Adjusted Daily Traffic
 (C) Average Daily Traffic
 (D) Adjunct Daily Traffic
 (E) Answer not known

134. Beta distribution, a typical type of probability distribution fits well for :
- (A) CPM analysis (B) PERT analysis
(C) SWOT analysis (D) SWOC analysis
(E) Answer not known
135. In a project, square root of sum of variance along critical path is called
- (A) standard deviation (B) variance
(C) slack (D) float
(E) Answer not known
136. The difference between the Latest Start Time (LST) and Earliest Start Time (EST) of an activity is called
- (A) Precedence (B) Critical difference
(C) Float (D) Flamboyance
(E) Answer not known
137. Programmes and projects with strong monitoring and evaluation component to
- (A) stay on track (B) get delayed
(C) involves more cost (D) get incentives
(E) Answer not known
138. The ratio of net sales and average total assets is
- (A) Total assets turnover (B) Fixed assets turnover
(C) Debtor's turnover (D) Inventory turnover
(E) Answer not known
139. The most common methods of shortening the payback period and increasing the required rate of return is
- (A) risk adjustment
(B) risk assessment
(C) benefit cost ratio
(D) net present value
(E) Answer not known

140. _____ investment belongs the non-discounting criteria.
- (A) Net present value (B) Benefit cost ratio
(C) Internal rate of return (D) Accounting rate of return
(E) Answer not known
141. Directives issued by the owner to change the contract by adding or subtracting features within the scope of work is called
- (A) change order (B) mutual concern
(C) change directives (D) adjust directives
(E) Answer not known
142. Name the term which refers to the process of rebuilding of core area of cities and towns which have become obsolete and abandoned or are in a state of considerable decay.
- (A) Urban reconstruction (B) Urban renewal
(C) Urban restoration (D) Urban conservation
(E) Answer not known
143. The following is to develop a plan to invest in buildings, machineries, equipments, research godowns and other long-lived assets
- (A) capital budgeting process (B) capital structure
(C) capital management (D) working capital management
(E) Answer not known
144. As per Tamil Nadu Real Estate (Regulation and Development) Rules, 2017, the Registration fee shall not be Levied for which the following:
- (a) Tamil Nadu Slum Clearance Board Developed projects.
(b) Affordable Housing Projects of the Tamil Nadu Housing Board.
(c) Affordable Housing Projects by Tamil Nadu State Co-operative Society.
- (A) (a), (b) and (c)
(B) (a) and (c) only
(C) (a) and (b) only
(D) (b) and (c) only
(E) Answer not known

145. Metropolitan area means, an area having a population of _____ lakhs or more as per 74th Constitutional Amendment Act 1992.
- (A) 25 (B) 20
(C) 15 (D) 10
(E) Answer not known
146. Identify the Constitutional Amendment Act from the following which provides Constitutional status to Panchayat Raj Institutions.
- (A) 71st Amendment, 1992 (B) 72nd Amendment, 1992
(C) 73rd Amendment, 1992 (D) 74th Amendment, 1992
(E) Answer not known
147. Eminent Domain provides powers to the Government to
- (A) Acquire the land for private developers
(B) Take the private property and convert it to public use
(C) Forcible land acquisition for development
(D) To acquire economic freedom
(E) Answer not known
148. As per the TNULB Act, 1998 (Tamil Nadu Urban Local Bodies) which of the following shall NOT be the function of the Council?
- (A) Protection of public ponds and fountains
(B) Destruction of stray dogs
(C) Mosquito control
(D) Maintenance of Educational Institutions
(E) Answer not known
149. The land contained in get back of the property belongs to
- (A) Owner
(B) State Government
(C) Local body
(D) Central Government
(E) Answer not known

150. Under the Right to fair compensation and transparency in land acquisition rehabilitation and resettlement act, 2013, acquired land can be returned to original owners if the state so decides with the constitution that land is not used within _____ years in accordance with the purpose for which it is acquired.
- (A) 3 Years (B) 10 Years
 (C) 20 Years (D) 5 Years
 (E) Answer not known
151. Identify a country from the following which has no National – Level Legislation for planning regulations.
- (A) Germany (B) United States
 (C) United Kingdom (D) India
 (E) Answer not known
152. A clover leaf interchange, is a _____ leg interchange with a single structure.
- (A) 4 (B) 3
 (C) 5 (D) 6
 (E) Answer not known
153. Identify the Non Planning Control tool from the options given below:
- (A) Development control regulation (B) Land-use control
 (C) Facade control (D) Building byelaws
 (E) Answer not known
154. Rent Control act is one of the main factors of _____ in old areas.
- (A) Urban decay (B) Rural deterioration
 (C) Urban deformation (D) Urban growth
 (E) Answer not known
155. The primary goal of financial management is
- (A) maximize the value of the firm (B) minimize the labour
 (C) minimize the value of the firm (D) working capital management
 (E) Answer not known

156. Minimum velocity of _____m/sec should be maintained in case of separate sewers for present peak flow.
- (A) 0.6 (B) 0.7
(C) 0.8 (D) 0.9
(E) Answer not known
157. Change in direction of a sewer is generally made at
- (A) Flushing tank (B) Man hole
(C) Siphon (D) Head room
(E) Answer not known
158. Water treatment units have a design period of _____ years.
- (A) 30 (B) 15
(C) 50 (D) 70
(E) Answer not known
159. Efforts should be made to reduce the water losses in transmission and distribution. The contingency provision of _____ to be made to account for the losses.
- (A) 15 - 20% (B) 30%
(C) 25% (D) 40%
(E) Answer not known
160. Factor essential in estimating the quantity of water required for water supply scheme is
- (A) rate of demand (B) quantity of rainfall
(C) catchment area (D) types of treatment plant
(E) Answer not known
161. Salvaging means
- (A) Dumping of solid waste (B) Sanitary land filling of solid waste
(C) Composting and soil conditioning (D) Extraction of materials from waste
(E) Answer not known

162. _____ is provided at the top end of shaft to allow the escape of sewer gases.
- (A) Flexible rod (B) Surface drain
(C) ✓ Cowl (D) Mechanical tool
(E) Answer not known
163. Identify the water distribution layout system, where the mains, sub-mains and branches are interconnected.
- (A) Dead-end system (B) Tree system
(C) Two pipe system (D) ✓ Grid-iron system
(E) Answer not known
164. Advocates of the _____ city claim that intensifying urban areas would lead to safer, more vibrant urban areas, support for local businesses and services and greater social equity.
- (A) Healthy (B) Eco
(C) Core (D) ✓ Compact
(E) Answer not known
165. EIA is defined as
- (A) A report written by government agencies on the planned development impacts
(B) Project lifecycle assessment
(C) ✓ Systematic identification and evaluation of impacts
(D) Document given for environmental clearance
(E) Answer not known
166. Name the law that enforces the control of noise level in India.
- (A) ✓ Noise Pollution (Regulation and Control) Rules 2000
(B) Pollution Control Act 1993
(C) Noise Control Rule 2012
(D) Environmental noise control act 1998
(E) Answer not known

167. The main causal organism of biological pollution are

- (i) air borne micro-organisms
- (ii) pathogenic bacteria
- (iii) viruses
- (iv) parasite

(A) (i) and (ii)

(B) (ii) and (iii)

(C) (i), (ii) and (iii)

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

(E) Answer not known

168. Eutrophication of lakes is due to the enrichment of

(A) chlorides

(B) phosphates and nitrates

(C) sulphates

(D) nitrates

(E) Answer not known

169. Agent responsible for ecological imbalance is

(A) Carnivores

(B) Anthropos intervention

(C) Herbivores

(D) Environmental pollution

(E) Answer not known

170. Identify the act formulated by the Indian Government to provide immediate relief to persons affected by accidents occurred due to handling of any hazardous substance and for matters connected therewith or incidental there to

(A) Air (Prevention and Control of Pollution) Act

(B) Public Liability Insurance Act

(C) The Biological Diversity Act

(D) Environmental (Protection) Act

(E) Answer not known

171. Among the following statements identify the incorrect statement regarding land fill system and waste disposal liners:
- (A) ✓ Land fill for hazardous waste disposal should be designed with liners which have low chemical resistance flexibility and low permeability
 - (B) Durability
 - (C) Able to withstand climatic conditions
 - (D) Withstand the stress of daily operations
 - (E) Answer not known
172. Part of non-living components of environment that includes landforms, climate, water bodies, temperature etc., is called
- (A) ✓ Physical Environment
 - (B) Cultural Environment
 - (C) Biological Environment
 - (D) Cognitive Environment
 - (E) Answer not known
173. Parts of nature that can provide the goods and services needed by Anthropos are called as
- (A) Environmental treasure
 - (B) Environmental science
 - (C) ✓ Environmental resources
 - (D) Environmental elements
 - (E) Answer not known
174. Among air pollutants ————— refers to the dispersion of solids or liquid particles of microscopic size in gaseous media such as smoke, fog or mist.
- (A) ✓ Aerosols
 - (B) Mists
 - (C) Fumes
 - (D) Fog
 - (E) Answer not known
175. As per URDPFI guidelines, one LPG godown cases to a population of
- (A) ✓ 40,000 to 50,000
 - (B) 80,000 to 1,00,000
 - (C) 5,000 to 10,000
 - (D) 12,000 to 15,000
 - (E) Answer not known

176. In the principle of economics identify one indicator which is not required as conditions for operating the multiplier
- (A) Existence of voluntary unemployment
 - (B) Existence of industrialized economy
 - (C) Existence of excess capacity in consumer goods industries
 - (D) Existence of an elastic supply of capital
 - (E) Answer not known
177. An example of non-renewable energy sources is
- (A) Hydropower
 - (B) Wind
 - (C) Solar
 - (D) Coal
 - (E) Answer not known
178. When increased dose of labour and capital in production yield the same returns as before _____ is said to operate
- (A) Law of diminishing return
 - (B) Law of constant returns
 - (C) Law of increasing return
 - (D) Law of indivisibility return
 - (E) Answer not known
179. _____ disputed the notion of concentric zonal structure for the industrial city and argued that residential areas could be more properly understood as a pattern of sectors
- (A) Burgers
 - (B) Hoyt
 - (C) Harris and Ullman
 - (D) Weber
 - (E) Answer not known
180. Spatial configuration of economic activities is the outcome of a process involving two opposing types of forces that is agglomeration and _____ forces
- (A) Centripetal
 - (B) Dispersion
 - (C) Pressure
 - (D) Hydraulic
 - (E) Answer not known

181. IRDP stands for
- (A) Induced Rural Development Programme
 - (B) Integrated Riparian Development Programme
 - (C) Internal Riparian Development Programme
 - (D) Integrated Rural Development Programme
 - (E) Answer not known
182. The areas characterized by substandard housing conditions within a city are known as the
- (A) Slums
 - (B) Squatter
 - (C) Cluster
 - (D) Concentric
 - (E) Answer not known
183. The first person to evolve an elaborate theory of "the law of migration" which was concerned with trends of direction of migrants
- (A) Ravenstein
 - (B) Mckenzie
 - (C) Cooley's
 - (D) Mckenvle
 - (E) Answer not known
184. Social stratification refers to the presence of distinct social groups which are ranked one above the other in terms of factors such as _____ and _____
- (A) Prestige and wealth
 - (B) Common interest and identity
 - (C) Identity and power
 - (D) Prestige and interest
 - (E) Answer not known
185. Hierarchy of central places in a Metropolitan region is as follows
- (a) District centre
 - (b) Multi-district centre
 - (c) Metropolitan city
 - (d) Sub regional centre
 - (e) Mandi centre
 - (f) Rural service centre
- (A) (c), (d), (b), (a), (e), (f)
 - (B) (a), (b), (c), (d), (e), (f)
 - (C) (d), (c), (a), (b), (e), (f)
 - (D) (b), (a), (c), (d), (e), (f)
 - (E) Answer not known

186. Regional diversity is essentially caused by
- (A) Per capita income
 - (B) Natural Resource base
 - (C) Industrial and park development
 - (D) Levels of urbanization
 - (E) Answer not known
187. The techniques usually employed in actual delineation of functional regions are
- (a) The flow analysis
 - (b) The gravitational analysis
 - (c) Regression analysis
 - (d) Equilibrium analysis
 - (A) (a) and (b)
 - (B) (a), (b) and (c)
 - (C) (a), (b), (c) and (d)
 - (D) (b) and (c)
 - (E) Answer not known
188. Concept of region is
- (A) A region is a flexible concept, referring to a continuous area.
 - (B) A region is a planning of an area's physical structure-land use, communication's etc.,
 - (C) A region is a flexible concept, referring to a continuous and localized area intermediate between national and urban levels.
 - (D) A region is an economic structure of an area and its overall level of prosperity.
 - (E) Answer not known
189. One of the following is not part of "five great industrial areas" gives in imperial Gazettee in 1903-04
- (A) Bengal and Assam
 - (B) Northern India
 - (C) Burma
 - (D) Central India
 - (E) Answer not known

190. A statutory town as per the census of India, 2011

- (A) It is a place with a minimum population of 5000
- (B) It is a place with municipality, corporation cantonment board or notified town area committee
- (C) It is a place with a population density of at least 400 persons/sq.km
- (D) It is a place with predominant agriculture area
- (E) Answer not known

191. Match the concepts in Group I with their corresponding author in Group II

Group I	Group II
(a) Proxemics theory	1. Gordon Cullen
(b) Serial vision	2. Edward T. Hall
(c) Imageability	3. Oscar Newman
(d) Defensible space	4. Paul Zucker
	5. Kevin Lynch

- | | (a) | (b) | (c) | (d) |
|---|------------------|-----|-----|-----|
| (A) <input checked="" type="checkbox"/> | 2 | 1 | 5 | 3 |
| (B) | 2 | 1 | 3 | 4 |
| (C) | 4 | 1 | 5 | 2 |
| (D) | 3 | 5 | 2 | 1 |
| (E) | Answer not known | | | |

192. The Master plan of Chandigarh was designed for an initial population of

- (A) 1.5 lakhs
- (B) 2 lakhs
- (C) 1 lakh
- (D) 3 lakhs
- (E) Answer not known

193. The "End-means" concept of PPBS (Planning - Programming - Budgeting System) denotes
- (A) Problems - Solutions
 - (B) ✓ Objectives - Resources
 - (C) Goals - Resources
 - (D) Objectives - Solutions
 - (E) Answer not known
194. _____ are the potential towns for investment and development identified on the basis of their inter-aerial relationship with the regional nodal centre.
- (A) Growth centres / points
 - (B) ✓ Priority towns
 - (C) Satellite towns
 - (D) Counter magnets
 - (E) Answer not known
195. The measure of association between variables using the concept of "between samples" and "within samples" is called as
- (A) Correlation analysis
 - (B) Matrix analysis
 - (C) Regression analysis
 - (D) ✓ Analysis of variance
 - (E) Answer not known
196. The technique that establishes certain boundaries for economic growth calculation in long range land use planning is called
- (A) Cost Benefit analysis
 - (B) ✓ Urban threshold analysis
 - (C) Cost effectiveness analysis
 - (D) Central Border analysis
 - (E) Answer not known

197. Tests for significance in statistics; are divided into 2 broad categories such as :
- (A) Homogeneous and Heterogenous
 - (B) Occurrence and Non occurrence
 - (C) ✓ Parametric and Non Parametric
 - (D) Progression and Regression
 - (E) Answer not known
198. The provision and location of educational facilities is largely dependent upon the components of
- (A) Movement survey
 - (B) ✓ Population survey
 - (C) Shopping survey
 - (D) Housing survey
 - (E) Answer not known
199. The basic elements of a Development Plan are :
1. Land use
 2. Circulation
 3. Utilities, services and facilities
 4. Civic design
 5. Open spaces
 6. Special problems
- (A) ✓ 1, 2, 3, 4, 5, 6
 - (B) 1, 2, 3, 4, 5
 - (C) 1, 3, 5, 6
 - (D) 1, 4, 5, 6
 - (E) Answer not known
200. Rittel & Webber have called the kinds of problems with which planning must deal as
- (A) Realistic problems
 - (B) Crucial problems
 - (C) False problems
 - (D) ✓ Wicked problems
 - (E) Answer not known

SPACE FOR ROUGH WORK



SPACE FOR ROUGH WORK



SPACE FOR ROUGH WORK



SPACE FOR ROUGH WORK

SEAL

