PROVISIONAL ANSWER KEY

Question Paper Code: 9/2019/OL Category Code: 159/2016 Exam: AssistanrTown Planner (Departmental quota) Medium of Question: English Date of Test 05-04-2019 Department Town and country planning Alphacode А Question1:-Regarding the Government of India Act, 1935, who made the remark, 'It was a new charter of slavery'? A:-Netaji Subhas Chandra Bose B:-Mahatma Gandhi C:-Jawaharlal Nehru D:-Dr. Rajendra Prasad Correct Answer:- Option-C Question2:-Name the author of 'Bhoogola Charitham' A:-M. Ramavarma Thamban B:-K. Damodaran C:-V.T. Bhattathirippad D:-M.B. Bhattathirippad Correct Answer:- Option-A Question3:-The social reformer who participated in the 'Paliyam Satyagraham' A:-Parvathi Nenmenimangalam B:-Parvathi Manazhi C:-A.V. Kuttimalu Amma D:-Arya Pallam Correct Answer:- Option-D Question4:-Singapore emerged on top of the first Human Capital Index, released by the World Bank on October 11, 2018 in Bali. India was placed at the ______ spot. A:-85th B:-115th C:-95th D:-125th Correct Answer:- Option-B Question5:-Which Article of the Indian Constitution deals with the 'Promotion of International Peace and Security? A:-Article 51 B:-Article 58 C:-Article 71 D:-Article 78 Correct Answer:- Option-A Question6:-One among the following books is written by Arundhati Roy? A:-A Portrait of the writer as a Young Wife **B:-Strangers No More** C:-The Ministry of Utmost Happiness **D:-The Inheritors** Correct Answer:- Option-C Question7:-The social reformer known as 'Mithavaadi' A:-C. Kesavan B:-K. Ayyappan C:-K. Damodaran D:-C. Krishnan Correct Answer:- Option-D Question8:-'Reuters' is the news agency of ______. A:-The United States of America **B:-The United Kingdom C:-United Arab Emirates** D:-People's Republic of China Correct Answer:- Option-B

Question9:-Which great nationalist leader was also known as 'Patriot of Patriots'? A:-Netaji Subhash Chandra Bose **B:-Bhagath Singh** C:-Mahatma Gandhi D:-Chandrasekhar Azad Correct Answer:- Option-A Question10:-The communist leader who was sentenced to death in connection with "Morazha" case, 1940 was A:-Ayillyath Kuttiari Gopalan B:-C.K. Chandrappan C:-K.P.R. Gopalan D:-K. Damodaran Correct Answer:- Option-C Question11:-Who is accorded a rank next to the President of India in the official warrant of precedence? A:-Chief Justice of India B:-Speaker of Lok Sabha C:-Prime Minister of India D:-Vice-President of India Correct Answer:- Option-D Question12:-Name the author of the Malayalam drama 'Ningalenne Kammunistakki' A:-A.K. Gopalan **B:-Thoppil Bhassi** C:-Ponkunnam Varkey D:-N.N. Pillai Correct Answer:- Option-B Question13:-Which country was ranked the happiest country on the UN World Happiness Report, 2018? A:-Switzerland **B:-Finland** C:-Cuba D:-Singapore Correct Answer:- Option-B Question14:-The book 'Satyagraha at Champaron' is written by A:-Dr. Radhakrishnan **B:-Jawaharlal Nehru** C:-Dr. Rajendra Prasad D:-Mahatma Gandhi Correct Answer:- Option-C Question15:-The person associated with 'Pattini Jatha', 1936, from Malabar to Madras A:-V.T. Bhattathirippad B:-M.B. Bhattathirippad C:-Mannath Padmanabhan D:-Chandroth Kunhiraman Nair Correct Answer:- Option-D Question16:-The Prime Minister of India in December 2018 announced renaming the three islands of the Andaman and Nicobar archipelago. The Rose Island was renamed A:-Shaheed Bhagath Singh Dweep B:-Madan Mohan Malavya Dweep C:-Deen Dayal Upadhyaya Dweep D:-Netaji Subhas Chandra Bose Dweep Correct Answer:- Option-D Question17:-'Shadow Cabinet' is the feature of the parliamentary system of A:-France **B:-Britain** C:-Spain D:-Portugal Correct Answer:- Option-B Question18:-The founder of 'Akhila Cochi Mishra Vivaha Sangham' was A:-Chovvara Parameswaran B:-Brahmananda Sivayogi C:-Pandit K.P. Karuppan

D:-V.T. Bhattathirippad Correct Answer:- Option-A Question19:-Name the founder of "Ezhava Mahasabha" A:-C. Kesavan **B:-Kumaran Asan** C:-Dr. Palpu D:-Sree Narayana Guru Correct Answer:- Option-C Question20:-The first day session of the Constituent Assembly of India was chaired by A:-Alladi Krishnaswami Iyer B:-Kanaiyalal Maneklal Munshi C:-Bhogaraju Pattabhi Sitaramayya D:-Dr. Sachchidanand Sinha Correct Answer:- Option-D Question21:-If `p_1` and `p_2` are the principle stresses in a two dimensional stress state, the maximum shear stress is given by A:-`sqrt{p_1^2 + p_2^2}` B:-`sqrt{p_1 p_2}` C:-`{(p_1 - p_2)}/{2}` D:-zero Correct Answer:- Option-C Question22:-The deflection at free end of a uniform cantilever beam of span L and with flexural rigidity EI subjected to moment M at free end is A:-`"ML^2/(2EI)"` B:-`"ML^2/(3EI)"` C:-`"ML/(2EI)"` D:-`"ML/(3EI)"` Correct Answer:- Option-A Question23:-For a uniform elastic long column with flexural rigidity El has one end fixed and the other end is free. The distance between fixed end and free end is L. For this column, the expression for crippling load is given by A:-`(pi^2 EI) /(L^2)` B:-`(pi^2 EI) /(4L^2)` C:-`(4pi^2 EI) /(L^2)` D:-`(2pi^2 EI) /(L^2)` Correct Answer:- Option-B Question24:-Consider the three statements S1, S2 and S3 given below.

S1 : A two hinged arch is statically determinate.

S2 : A three hinged arch is statically indeterminate.

S3 : Eddy's theorem is not applicable to three hinged arches.

Pick the correct choice about S1, S2 and S3 from the following :

A:-Both S1 and S2 are correct and S3 is incorrect

B:-Both S1 and S2 are incorrect and S3 is correct

C:-S1, S2 and S3 are correct

D:-S1, S2 and S3 are incorrect

Correct Answer:- Option-D

Question25:-Consider a uniform simply supported beam AB of span 6 m. The maximum ordinate of influence line diagram for bending moment corresponding to a single concentrated unit load on the beam is

A:-1/2

B:-1

C:-3/2

D:-2

Correct Answer:- Option-C

Question26:-A uniform beam ABC has ends A and C fixed which are 6 m apart and is supported by a roller at B, which is located at 4 m from A between A and C. For moment distribution method of analysis, the distribution factors `"DF_{BA}"` and `"DF_{BC}"` are respectively:

A:-1/3 and 2/3

B:-1/4 and 3/4

C:-1/6 and 5/6 D:-1/2 and 1/2

Correct Answer:- Option-A

Question27:-In a stiffness matrix [k] corresponding to a linear elastic system, each stiffness coefficient k_{ij} (with usual notations) is defined as:

A:-Force developed at joint `i` due to unit displacement at joint `j` while all other joints are fixed

B:-Force developed at joint `i` due to unit displacement at joint `j` while all other joints are released

C:-Displacement occurred at joint `i` due to unit force at joint `j` while all other joints are fixed

D:-Displacement occurred at joint `i` due to unit force at joint `j` while all other joints are released

Correct Answer:- Option-A

Question28:-An undamped single degree of freedom system is represented by the equation: $m({d^2 x} / {dt^2}) + kx=0$ with usual notations. If it is given an initial velocity v_0 without any initial displacement, the maximum amplitude of the resulting free vibration is:

A:-`v_0 sqrt{k/m}`

B:-`2 v_0 sqrt{k/m}`

C:-`v_0 sqrt{m/k}`

D:-`2 v 0 sqrt{m/k}`

Correct Answer:- Option-C

Question29:-In limit state of collapse-flexure, the maximum strain in tension reinforcement in the section at failure shall be (usual notations apply):

A:-Equal to 0.0035

B:-More than $0.002 + f_y$ / $(1.15 E_S)$ C:-More than $0.002 + f_y$ / E_S D:-Less than $0.002 + f_y$ / $(1.15 E_S)$ Correct Answer:- Option-D

Question30:-Select the correct statement with reference to plastic analysis:

A:-Upper bound theorem of plastic collapse is known as static theorem

B:-At a plastic hinge, all fibers of the section reach yield stress

C:-The collapse mechanism corresponding to a fixed beam has only one plastic hinge

D:-Shape factor of a rectangular section is 4/3

Correct Answer:- Option-B

Question31:-If bulk density of a soil sample is `"18 KN/m^3"` and its water content is 20% then corresponding dry density is A:-`"13 KN/m^3"`

B:-`"14 KN/m^3"` C:-`"15 KN/m^3"` D:-`"16 KN/m^3"` Correct Answer:- Option-C Question 32:-Equation for "A-line" in the plasticity chart is given by ("I p" = plasticity index, "w L" = Liquid limit) A:-`"I p = w L"`B:-`"I p = 0.73 (w L - 20)"` C:-`"I p = 0.85 (w L - 20)"` D:-`"I p = w L - 30"` Correct Answer:- Option-B Question33:-"Hydrometer" is used in A:-Triaxial shear test **B:-Consolidation test** C:-Permeability test D:-Sieve analysis Correct Answer:- Option-D Question34:-The critical hydraulic gradient for a certain soil, with specific gravity 2.72 and voids ratio 0.72, will be A:-1.0 B:-1.1 C:-1.2 D:-1.3 Correct Answer:- Option-A Question35:-CBR Test is used for design of A:-Permanent ways **B:-Flexible pavements** C:-Rigid pavements

D:-Tunnels Correct Answer:- Option-B Question36:-Friction circle method is used for analysis of A:-Bearing capacity of soil B:-Seepage through soil C:-Stability of slopes D:-Flow nets Correct Answer:- Option-C Question37:-Name the traffic survey data which is plotted by means of "desired lines" A:-Accident **B:-Origin and destination** C:-Classified volume D:-Speed and delay Correct Answer:- Option-B Question38:-Which one of the following signals is provided beyond the trailing points and switches in a railway yard? A:-Repeater signal **B:-Departure signal** C:-Advance starter D:-Routing signal Correct Answer:- Option-C Question39:-On permanent tracks, points and crossings are provided to change A:-Direction B:-Space C:-Gradient D:-Gauge Correct Answer:- Option-A Question40:-Which of the following is used to find the orientation of runway to get the desired wind coverage? A:-Wind cycle diagram B:-Wind flow diagram C:-Wind star diagram D:-Wind rose diagram Correct Answer:- Option-D Question41:-In a steady flow of an oil in a pipe in laminar regime, the shear stress is A:-constant across the pipe B:-maximum at the centre and decreases parabolically towards the sides C:-zero at the centre and increases parabolically towards the sides D:-zero at the centre and increases linearly towards the sides Correct Answer:- Option-D Question42:-The term alternate depths in an open channel flow is used to designate the depths A:-before and after a hydraulic jump B:-having the same kinetic energy for a given discharge C:-having same specific energy for a given discharge D:-having same specific force for a given discharge Correct Answer:- Option-C Question43:-In hydraulic modeling of flow pattern around a body submerged in a fluid, the non-dimensional number which has to be kept the same in the model and the prototype is A:-Weber number **B:-Reynolds number** C:-Froude number D:-Mach number Correct Answer:- Option-B Question44:-The specific speed of a turbine is independent of A:-dimension of actual turbine B:-head of the actual turbine C:-power developed by actual turbine D:-none of the above Correct Answer:- Option-A Question45:-As one moves from the head of the main canal to head of the water course, duty of water A:-decreases

B:-first increases and then decreases C:-first decreases and then increases D:-increases Correct Answer:- Option-D Question46:-For no tension to develop in a gravity dam of base width b, the eccentricity should be A:-greater than b/3 B:-less than b/3 C:-less than b/6 D:-greater than b/6 Correct Answer:- Option-C Question47:-A head regulator is provided A:-across the river where a canal takes off B:-across the canal when it takes off from a river C:-when the canal is to be taken above the river D:-none of the above Correct Answer:- Option-B Question48:-The colour of water is measured on A:-silica scale B:-turbidity scale C:-platinum cobalt scale D:-threshold scale Correct Answer:- Option-C Question49:-Biochemical oxygen demand (BOD) of waste water is a measure of A:-total concentration of organic matter B:-quantity of oxygen required for biochemical oxidation of decomposible matter C:-concentration of biodegradable organic matter D:-quantity of carbon in organic matter Correct Answer:- Option-B Question 50:-The suitable method of forecasting population for an young and rapidly growing city is A:-geometrical increase method B:-arithmetical increase method C:-incremental increase method D:-graphical method Correct Answer:- Option-A Question51:-The imaginary line passing through points of equal elevation is called A:-Level line **B:-Reduced level** C:-Mean sea level D:-Contour Correct Answer:- Option-D Question52:-The measurement of depth below the water surface is called A:-Traversing **B:-Sounding** C:-Remote sensing D:-Contouring Correct Answer:- Option-B Question53:-Selection of satellites in view, acquiring GPS signals and recovering navigational data is done in GPS by the A:-Control segment **B:-Space segment** C:-User segment D:-None of the above Correct Answer:- Option-C Question54:-This is awarded for work done or service rendered when price thereof is not fixed by contract A:-Quantum merits **B:-Contingencies C:-Deviations** D:-Force majeure Correct Answer:- Option-A

Question55:-For a project activity of 7 days optimistic time, 8 days most likely time and 15 days pessimistic time, the expected duration is

A:-5 days B:-13 days C:-9 days D:-11 days Correct Answer:- Option-C Question56:-If a Cold Formed Steel (CFS) member is designated as 600 S 162-33, what does 162 stand for? A:-Sheet thickness B:-Flange width C:-Depth D:-Yield strength Correct Answer:- Option-B Question57:-The core holes in extruded bricks result in A:-uniform drying and burning of bricks B:-lesser compressive strength C:-better bond between bricks and mortar D:-all of the above Correct Answer:- Option-D Question58:-Which of the following is not considered as outflow in valuation? A:-Municipal tax B:-Rent C:-EMD D:-Annual sinking fund Correct Answer:- Option-B Question59:-Additional length for one 45° cranked (bent up) bar of diameter d is A:-0.42 d B:-0.75 d C:-0.30 d D:-1.73 d Correct Answer:- Option-A Question60:-In brickwork, no deduction shall be made for opening upto A:-1 sq.m B:-5 sq.m C:-0.5 sq.m D:-0.1 sq.m Correct Answer:- Option-D Question61:-Which is the first site identified as Indus-Saraswati site of Indus valley civilisation? A:-Harappa **B:-Mohenjodaro** C:-Kalibangan D:-Dholavira Correct Answer:- Option-A Question62:-The basic shape of the plan of a Ziggurat is A:-Square **B:-Trapezium** C:-Rectangle D:-Rhombus Correct Answer:- Option-C Question63:-Which is the time period when the earliest settlements began to take shape? A:-Upto 20,000 BC - 15,000 BC B:-Upto 15,000 BC - 10,000 BC C:-Upto 10,000 BC - 5,000 BC D:-Upto 5,000 BC - 1 AD Correct Answer:- Option-C Question64:-Which is the first planned city in India? A:-New Delhi **B:-Chandigarh** C:-Ahmedabad

D:-Gandhinagar

Correct Answer:- Option-B

Question65:-"Our greatest need today is to see life as whole, to see its many sides in their proper relations; but we must have a practical as well as a philosophical interest in such an integrated view of life". Whose quote is this?

A:-Le Corbusier

B:-Ebenezer Howard

C:-Patric Geddes

D:-Richard Barry Parker

Correct Answer:- Option-C

Question66:-Which among the following is not a principle associated with Garden City Concept?

A:-Development which enhances the natural environment

B:-Land value capture for the benefit of the community

C:-Mixed-tenure homes and housing types that are genuinely affordable for everyone

D:-The short-term stewardship of assets

Correct Answer:- Option-D

Question67:-Name the scheme which was launched in India for providing interest subsidy on housing urban poor to make the housing affordable and within the repaying capacity of Economically Weaker Sections (EWS)/Low Income Group (LIG)

A:-Rajiv Awas Yojana (RAY)

B:-Interest Subsidy Scheme for Housing the Urban Poor (ISHUP)

C:-Pradhan Mantri Gramin Awaas Yojana

D:-Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

Correct Answer:- Option-B

Question68:-Who proposed ekistics as the science of human settlement which became a major incentive for the development of the science related to the emergence of increasingly large and complex settlements, tending to regional conurbations and even to a worldwide city

A:-Constantinos Doxiadis

B:-Don Arturo Soria Mata

C:-Ebenezer Howard

D:-Edgar M. Horwood

Correct Answer:- Option-A

Question69:-Which is not a characteristics of Radburn Superblock?

A:-Low traffic volume in the neighborhood

B:-Open space linked the residential areas

C:-Houses built around cul-de-sac which are connected to open space

D:-Houses are linked with main roads

Correct Answer:- Option-D

Question70:-The concept of the neighbourhood unit in 1900s by _____, is an early diagrammatic planning model for residential development in metropolitan areas which was attempting to design functional, self-contained and desirable neighbourhoods in the early 20th century in industrializing cities.

A:-Homer Hoyt

B:-Walter Christaller

C:-Clarence Perry

D:-Ernest Burgess

Correct Answer:- Option-C

Question71:-Which among the following is the name given to the model which was first suggested by Ronald R. Boyce and Edgar M. Horwood in 1959?

A:-Core frame model

B:-Sector model

C:-Hoyt model

D:-Multiple nuclei model

Correct Answer:- Option-A

Question72:-Medellin, Colombia's second largest city, was voted 'Most Innovative City' in the world during 2012, by the Wall Street Journal and CitiBank, through a governmental experiment in

A:-Social urbanism

B:-Landscape urbanism

C:-Participatory planning process

D:-Sustainable development process

Correct Answer:- Option-A

Question73:-What is the aspect ratio of a Long canyon L/H?

A:-~= 5

B:-~=6C:-~= 7 D:- = 8Correct Answer:- Option-C Question74:-In planning concepts see the public interest in terms of upholding individuals' and affected groups' rights, based on principles ranging from liberal democracy to ultra-liberal individualism and libertarianism. A:-Dialogical concepts **B:-Deontic concepts** C:-Unitary concepts D:-Pluralistic concepts Correct Answer:- Option-B Question75:-Who is the creator of that geographical theory that seeks to explain the number, size and location of human settlements in a residential system? A:-Jane Jacobs **B:-Bill Hillier** C:-Walter Christaller D:-Aldo Rossi Correct Answer:- Option-C Question76:-Who developed the concept of urbanism as a way of life? A:-Louis Wirth **B:-Aldo Rossi** C:-Fisher D:-Louis Coser Correct Answer:- Option-A Question77:-Durkheim's concept of organic solidarity is found in a A:-Agricultural society **B:-Tribal society** C:-Modern society D:-Traditional society Correct Answer:- Option-C Question78:-V7 concept given by Le Corbusier refers to A:-Neighbourhood Planning **B:-Housing Typologies C:-Architecture Design Principle** D:-Hierarchy of Roads Correct Answer:- Option-D Question79:-Landscape design of Shakti Sthal, the 'Samadhi' of late Prime Minister Smt. Indira Gandhi, was done by architect A:-Raj Rewal **B:-Ravindra Bhan C:-Mohammed Shaheer** D:-Ram Sharma Correct Answer:- Option-B Question80:-Which of the following book is authored by Ebenezer Howard? A:-Tomorrow : A peaceful path to real reform B:-Garden cities of tomorrow C:-Model cities of future D:-The birth and death of great American cities Correct Answer:- Option-B Question81:-What does UDO stand for? A:-Unified Development Ordinance **B:-Urban Development Organization** C:-Urban Development Office D:-Urban Development Ordinance Correct Answer:- Option-A acknowledges that individual countries have different capabilities in combating climate change, Question82:owing to economic development, and therefore puts the obligation to reduce current emissions on developed countries on the basis that they are historically responsible for the current levels of greenhouse gases in the atmosphere.

A:-Brundtland Commission

B:-Rio Declaration

C:-Kyoto protocol **D:-European Commission** Correct Answer:- Option-C Question83:-Which among the following is not part of the theory developed on urban planning by Jane Jacobs? A:-Highlighting the decline with regeneration (Slumming and unslumming) B:-Examination of city planning errors C:-Study of the economics behind city centre D:-Modernisation of sectors Correct Answer:- Option-D Question84:-The urban form of Srirangam town in Tamil Nadu refers to A:-Dandaka B:-Sarvotabhadra C:-Swastika D:-Nandyavarta Correct Answer:- Option-B Question85:-"A City is Not a Tree" is related to? A:-David Harvey B:-Jane Jacobs C:-Christopher Alexander D:-Kevin Lynch Correct Answer:- Option-C Question86:-Which is the year in which an act to unify and amend the law for acquisition of land for public purposes in the State of Kerala was formed? A:-1959 B:-1960 C:-1961 D:-1962 Correct Answer:- Option-C Question87:-Which among the following is not a condition for Land Acquisition in Kerala? A:-Existence of a public purpose B:-Acquisition should be as per rules and procedures C:-Reasonable compensation D:-Town planner has right to determine the compensation Correct Answer:- Option-D Question88:-Which among the following does not belong to the region of Kerala? A:-Town Planning Act 1108 ME B:-Madras Town Planning Act 1920 C:-Tamilnadu Town and Country Planning Act, 1971 D:-Town and Country Planning Act 1120 ME Correct Answer:- Option-C Ouestion89:-Ozone depletion is determined as excessive release of chlorine and bromine from man-made compounds such as chlorofluorocarbons (CFCs) and each chlorine atom breaks more than molecules of ozone. A:-10000 B:-100000 C:-1000000 D:-10000000 Correct Answer:- Option-B Question90:-Which of the following is/are not an objective (s) of sustainable development? A:-Continue to implement the family planning program B:-Maintain a dynamic balance of arable land (not less than 123 million hectares) and implement an agricultural development strategy C:-Maintain a dynamic balance of water resources by reducing water consumption for every unit of gross development product growth and agricultural value added D:-To bring about a gradual and sometime catastrophic transformation of environment Correct Answer:- Option-D Question91:-What are the activities in a buffer zone? A:-Sustainable use of natural resources **B:-Use of Natural Resources** C:-Ecosystems to protect **D:-Human activities**

Correct Answer:- Option-A

Question92:-How many Sustainable Development Goals (SDGs) have been agreed to, by all the world's nations, as part of the 2030 Agenda? A:-15 B:-16 C:-17 D:-18 Correct Answer:- Option-C Question93:-Equality issues are specifically mentioned in how many of the Sustainable Development Goals (not including the targets)? A:-In two of them : Goal 6 on water, and Goal 12 on sustainable production and consumption B:-In three of them : Goal 4 on education, Goal 5 on gender, and Goal 10 on reducing inequality within and among countries C:-In four of them : Goal 2 on hunger, Goal 7 on energy, Goal 8 on economic growth and jobs, and Goal 14 on preserving the oceans and seas D:-In one of them : Goal 16 on promoting peaceful and just societies for all Correct Answer:- Option-B Question94:-One hectare of biologically productive space with world average productivity is A:-an imperial hectare B:-a global hectare C:-a world hectare D:-a continental hectare Correct Answer:- Option-B Question95:-Which of the following appears to contribute to global cooling rather than global warming? A:-Nitrous oxide **B:-Methane** C:-Chlorofluorocarbons D:-Aerosols Correct Answer:- Option-D Question96:-What is Eutrophication? A:-Thermal change in water B:-Pollution of water due to solid waste C:-Filling up of water body with aquatic plants due to excessive nutrients D:-None of the above Correct Answer:- Option-C Question97:-Which among the following is used for rain water harvesting? A:-Loose Stone bandhare B:-Coconut fiber cement tank C:-Ferro cement tank D:-All the above Correct Answer:- Option-D Question98:-Low lying tract of land enclosed by dikes that forms an artificial hydrological entity is known as A:-Polder **B:-Resign** C:-Derelict D:-Catchment Correct Answer:- Option-A Question99:-The concepts of 'serial vision', 'punctuation' and 'closure' were proposed by A:-Le Corbusier B:-Kevin Lynch C:-Louis I Kahn D:-Gordon Cullen Correct Answer:- Option-D Question100:-The Venice Charter (1964) led to the establishment of A:-ICCROM **B:-ICOMOS** C:-ASI D:-INTACH Correct Answer:- Option-B