## UPSEE 2019

## PAPER-M ARCH CODE: AA*

ANSWER KEY, Examination Date: 21-04-2019

| 1 | D | 26 | C | 51 | B | 76 | C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | B | 27 | C | 52 | A | 77 | C |
| 3 | D | 28 | C | 53 | C | 78 | C |
| 4 | B | 29 | B | 54 | D | 79 | A |
| 5 | A | 30 | D | 55 | B | 80 | B |
| 6 | A | 31 | B | 56 | A | 81 | D |
| 7 | B | 32 | A | 57 | A | 82 | D |
| 8 | C | 33 | C | 58 | B | 83 | D |
| 9 | A | 34 | D | 59 | C | 84 | C |
| 10 | A | 35 | C | 60 | B | 85 | B |
| 11 | D | 36 | A | 61 | C | 86 | C |
| 12 | A | 37 | C | 62 | C | 87 | A |
| 13 | B | 38 | A | 63 | A | 88 | D |
| 14 | D | 39 | C | 64 | B | 89 | B |
| 15 | C | 40 | A | 65 | C | 90 | A |
| 16 | A | 41 | A | 66 | A | 91 | C |
| 17 | B | 42 | C | 67 | B | 92 | B |
| 18 | B | 43 | C | 68 | C | 93 | D |
| 19 | D | 44 | A | 69 | A | 94 | A |
| 20 | B | 45 | B | 70 | A | 95 | B |
| 21 | A | 46 | A | 71 | B | 96 | B |
| 22 | B | 47 | C | 72 | B | 97 | A |
| 23 | C | 48 | C | 73 | D | 98 | C |
| 24 | A | 49 | C | 74 | C | 99 | D |
| 25 | C | 50 | C | 75 | A | 100 | A |

Note: In case of any grievance, it must be reported at upseegrievance@aktu.ac.in along with Students Roll No. with Paper Code, Question Booklet Code, Question No. and suggested answer with supporting documents on or before 03 ${ }^{\text {rd }}$ May 2019.
*प्रश्न पुस्तिका क्रमांक $\mathbf{A A}$ का प्रश्नपत्र एवं कुंजी प्रकाशित की जा रही है। प्रश्न पुस्तिका क्रमांक BB, CC तथा DD में प्रश्नों एवं उनके विकल्पों का क्रम परिवर्तित है कृपया तद्नुसार उत्तर मिलान करें।

Roll No.


AA

OMR Answer Sheet No.


Declaration :
I have read and understood the instructions given on page No. 1


Seal of Superintendent of Examination Centre


## Name of Candidate :

To be copied by the candidate in your own handwriting in the space given below for this purpose is compulsory. | "You will know you are in the right profession when : you wake anxious to go to work, you want to do your best daily, and | | you know your work is important."


* After cutting half upper part of this page, invigilator preserve it along with student's OMR sheet.


1. Use BLUE or BLACK BALL POINT PEN only for all entries and for filling the bubbles in the OMR Answer Sheet.
2. Before opening the SECURITY SEAL of the question booklet, write your Name, Roll Number (In figures), and OMR Answer-sheet Number in the space provided at the top of the Question Booklet. Non-compliance of these instructions would mean that the Answer Sheet can not be evaluated leading the disqualification of the candidate.
3. Each question carries FOUR marks. There will be negative marking on wrong answer. FOUR marks will be awarded for each correct answer and ONE mark will be deducted for each wrong answer. No marks will be deducted/awarded for unattempted questions.
4. Each multiple choice question has only one correct answer. More than one answer indicated against a question will be treated as incorrect answer.
5. Use of log table, mobile phones, any electronic gadget and slide rule etc. is strictly prohibited. Non-programmable calculator is permitted.
6. Candidate will be allowed to leave the examination hall at the end of examination time period only.
7. If a candidate is found in possession of books or any other printed or written material from which he/she might derive assistance, he/she is liable to be treated as disqualified. Similarly, if a candidate is found giving or obtaining (or attempting to give or obtain) assistance from any source, he/she is liable to be disqualified.
8. OMR sheet is placed within this paper and can be taken out from this paper but seal of paper must be opened only at the start of paper.

## M. ARCH

M. Arch.
: Q. 1 to Q. 100

1. Concept of Dry Gardens is associated with:
(A) Mughal Architecture
(B) Egyptian Architecture
(C) Chinese Architecture
(D) Japanese Architecture
2. Map is an
(A) Isometric projection
(B) Orthographic projection
(C) Axonometric projection
(D) Oblique projection
3. 'Indore slum networking program' has been planned by
(A) B.V Doshi
(B) Daulat Mukharjee
(C) Anil Laul
(D) Himanshu Parikh
4. 'Volume Zero' is a film based on the works of
(A) Peter Eisenman
(B) Charles Correa
(C) Daniel Libeskind
(D) Anant Raje
5. Unit of thermal conductivity of a material is
(A) $\mathrm{W} /(\mathrm{mK})$
(B) $\mathrm{W} /\left(\mathrm{m}^{2} \mathrm{~K}\right)$
(C) $\mathrm{mK} / \mathrm{W}$
(D) $\mathrm{m}^{2} \mathrm{~K} / \mathrm{W}$
6. As per space standards for barrier free built environment, the minimum turning radius for a wheel chair in mm is
(A) 900
(B) 1200
(C) 1500
(D) 1800
7. Shodhan House at Ahmadabad was designed by
(A) Anant Raje
(B) Le Corbusier
(C) Louis I Kahn
(D) B. V. Doshi
8. Low - emissivity coating on a glazing unit
(A) Increases solar heat gain coefficient
(B) Increases visible light transmission
(C) Reduces solar heat gain coefficient
(D) Increases solar heat gain coefficient and visible light transmission
9. Hoop and Meridional forces are associated with
(A) Dome
(B) Truss
(C) Folded plates
(D) Space frame
10. Dancing house Pargue is associated with
(A) Frank Gehry
(B) Frank Lloyd Wright
(C) Mies van der Rohe
(D) Adolf Loos
11. Damage of foundation due to 'soil liquefaction' is related to
(A) Cyclones
(B) Landslides
(C) Floods
(D) Earthquakes
12. Walls with high thermal inertia are suitable in which type of climate
(A) Hot Dry
(B) Hot Humid
(C) Temperate
(D) Cold
13. 'Demolition Contract' for a building is awarded to a
(A) Lowest Bidder
(B) Highest Bidder
(C) Second lowest Bidder
(D) Second highest Bidder
14. The fundamental right pertaining to property ownership in India does not embress
(A) Sell, lease of donate
(B) Mortgage
(C) Grant agreement
(D) Change in use
15. Baluster is a term associated with
(A) Door
(B) Dome
(C) Staircase
(D) Arch
16. Bracket is a term associated with
(A) Cornice
(B) Dome
(C) Arch
(D) Lintel
17. A colours combination forming an equilateral triangle in a colour wheel is called
(A) Analogous Scheme
(B) Triad Scheme
(C) Split complementary scheme
(D) Double complementary schems
18. Invert level of a pipe at given cross section refers to the
(A) Highest point of the internal surface
(B) Lowest point of the internal surface
(C) Highest point of the external surface
(D) Lowest point of the external surface
19. Pisa Cathedral Italy is an example of
(A) Gothic architecture
(B) Egyptian architecture
(C) Byzantine Architecture
(D) Romanesque Architecture
20. A 6 cm line on a drawing sheet in 1:300 scale represents an actual dimension of
(A) 1800 mm
(B) 18.0 m
(C) 50.0 cm
(D) 5.0 m
21. 'Rhythm' is a term related to
(A) Flow
(B) Focus
(C) Contrast
(D) Balance
22. Room size of $8 \mathrm{~m} \times 13 \mathrm{~m}$ is in
(A) Root two Ratio
(B) Golden Ratio
(C) Root three Ratio
(D) Hindu Ratio
23. Concentric contour lines represents
(A) Hill
(B) Valley
(C) Hill or valley
(D) Ridge
24. Plane table survey includes use of
(A) Alidade
(B) Theodolite
(C) Dumpy level (D) None of above
25. Marble is a type of
(A) Igneous rock
(B) Sedimentary rock
(C) Metamorphic rock
(D) Basalt
26. Evaporative cooling does NOT work in
(A) Low Relative Humidity
(B) Low Temperature
(C) High Relative Humidity
(D) High Temperature
27. Flying buttresses were used in
(A) Egyptian Architecture
(B) Greek Architecture
(C) Gothic Architecture
(D) None of the above
28. Vidyadhar Nagar was planned by
(A) H.K.Mewada
(B) Vidyadhar Bhattacharya
(C) B.V.Doshi
(D) Charles Correa
29. Mahoney's tables are used for
(A) Rental value calculation of property
(B) Climate based design
(C) Steel structure section design
(D) Depreciation assessment of machinery
30. Architect Walter Gropius was associated with
(A) Interbau
(B) Art Deco
(C) Chicago school
(D) Bauhaus
31. Flow of water in a bib-cock would increase if
(A) Height of the overhead tank is decreased
(B) The number of elbows and Ts in the pipe length decreased
(C) The number of elbows and Ts in the pipe length increased
(D) None of the above
32. The plan of 'Pink City' Jaipur is
(A) Grid-Iron
(B) Organic
(C) Radial
(D) Elliptical
33. French colonial style planning and architecture is seen in
(A) New Delhi
(B) Goa
(C) Pondicherry
(D) Andaman islands
34. Psychrometric chart is used for
(A) Electrical circuit Design
(B) Structural Design
(C) Water supply Piping Design
(D) HVAC Design
35. Reverberation Time of an auditorium is affected by
(A) Occupancy
(B) Interior Surface area
(C) Both A \& B
(D) None of the above
36. In Project Management, CPM network time is
(A) Deterministic
(B) Optimistic
(C) Probabilistic
(D) Pessimistic
37. In expansive soils the following foundation is used
(A) Isolated footing
(B) Strip footings
(C) Pile
(D) Combined footings
38. In a cantilever RCC slab, the main reinforcement is at
(A) Top
(B) Bottom
(C) Middle
(D) The position of the reinforcement is irrelevant
39. The buildable area available on a plot of one hectare with FAR of 2.25 is
(A) 15500 sqm
(B) 20500 sqm
(C) 22500 sqm
(D) 25500 sqm
40. Minimum population to sustain a Primary school as per NBC is
(A) 4000
(B) 5000
(C) 2000
(D) 3000
41. Solomon R. Guggenheim Museum (1956), New York, was designed by
(A) Frank Lloyd Wright
(B) Joseph Allen Stein
(C) Le Corbusier
(D) Auguste Perret
42. Which of the following is NOT a member of a Steel Truss?
(A) Gusset Plate
(B) Wall Plate
(C) Fish Plate
(D) Anchor Bolts
43. ECBC stands for
(A) Electrical Conduit in Building Construction
(B) Electrical Credit in Building Code
(C) Energy Conservation Building Code
(D) Energy Credit in Building Construction
44. The Coefficient of sound Absorption for an open window is
(A) 1.0
(B) 0.1
(C) 0.01
(D) 0
45. Daylight Factor (DF) is
(A) Amount of Daylight penetrating inside the room
(B) Ratio of inside and outside daylight levels
(C) Total light effect created by direct daylight and reflected light from internal surfaces, inside the room.
(D) None of above
46. A power by which the government can acquire any private property for public welfare is
(A) Power of Eminent Domain
(B) Power of Police
(C) Financial Power
(D) Power of Judiciary
47. If the original cost of a building is Rs. $25,00,000 /-$ and its scrap value after 55 years is Rs. $25,000 /=$, then its annual depreciation (in Rs.) using straight line method is
(A) 25000
(B) 35000
(C) 45000
(D) 55000
48. As per NBC, where there is only one room The area of habitable room shall not be less than
(A) 5.5 sqm
(B) 15.0 sqm
(C) 9.5 sqm
(D) 12 sqm
49. E.I.A stands for
(A) East India Association
(B) Environmental Impact Audit
(C) Environmental Impact assessment
(D) Ecological impact assessment
50. Of the following types of landscape, which one produces 'heat-island'
(A) Islands
(B) Coastal areas
(C) Urban areas
(D) Mountain ranges
51. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs is
(A) Health, education and welfare development
(B) Sustainable development
(C) Economic development
(D) Infrastructure development
52. The role of government agencies in the field of housing started changing since 1970s in the following way
(A) From provider to facilitator
(B) From plot supplier to dwelling unit supplier
(C) From designer to builder
(D) From facilitator to provider
53. The pH scale runs from $0-14$, the nearest value of drinking water is
(A) 0.0
(B) 3.5
(C) 7.0
(D) 10.5
54. Life-cycle costing includes
(A) Only initial cost
(B) Neither initial cost nor running cost
(C) Only running cost
(D) Both initial cost and running cost
55. An activity in project network analysis means
(A) Start or completion of task in time and resource
(B) Actual performance of task that consumes time and resources
(C) Total project time for completion of work
(D) Least total time required for completing the work
56. As per NBC the standard lighting required in a classroom is in the range of
(A) 200-300-500 lux
(B) 20-30-50 lux
(C) 2000-3000-5000 lux
(D) None of the above
57. The architecture inspired by the local masses of a region is
(A) Vernacular architecture
(B) Green Architecture
(C) Traditional architecture
(D) Symbolic Architecture
58. Cesspool is related to
(A) Water treatment
(B) Sewage treatment
(C) Swimming pool
(D) Leisure pool
59. SI Unit of illumination is
(A) Lumens
(B) Candela
(C) Lux
(D) None of these
60. Lucknow is situated in which climatic zone
(A) Hot Dry
(B) Composite
(C) Warm Humid
(D) Maritime
61. Desert settlement is characterized by
(A) Sparse Planning
(B) Large open spaces
(C) Compact Planning
(D) Dense vegetation
62. In acoustics, Reverberation time is $0.16 \mathrm{~V} / \mathrm{A}$, ' $A$ ' is dependent on
(A) Absorption coefficient
(B) Surface area
(C) Both A and B
(D) Neither A nor B
63. Which of the following is a water supply network system
(A) Grid iron
(B) Open ended
(C) Balanced input
(D) All of the above
64. Flow through water in a tap will increase if
(A) Pipe length is increased
(B) Pipe length is decreased
(C) Head is decreased
(D) A and B both
65. Which of the following modern architects had a major impact on post independence Indian Architecture
(A) Mies Van Der Rohe
(B) Frank Lloyd Wright
(C) Le - Corbusier
(D) Walter Gropius
66. For earthquake resistant RCC structures the design consideration is
(A) Strong column weak beam
(B) Weak column strong beam
(C) Strong column strong beam
(D) Weak column weak beam
67. Bahai temple in Delhi is a
(A) Tensile structure
(B) Shell Structure
(C) Pneumatic structure
(D) Space structure
68. Which bond is not used in brick masonry
(A) English bond
(B) Flemish bond
(C) Dutch bond
(D) Rat bond
69. Munsell is related to
(A) Colour scale
(B) Linear city
(C) BOD
(D) Light intensity
70. Vent pipe in the sewer lne of a house is used
(A) To protect the seal in the trap
(B) To ventilate the bathroom
(C) To ventilate the overhead tank
(D) None of the above
71. Acidity of the soil is indicated by
(A) BOD
(B) pH
(C) GL
(D) CLO
72. WBLOCK command in autoCAD creates
(A) Wooden block
(B) Drawing file
(C) ASCII file
(D) Data file
73. UCS in AutoCAD
(A) Cannot be altered
(B) Can be rotated
(C) Can only be translated
(D) Can be rotated and translated
74. Psychometric scaling deals with
(A) Subjective weighting
(B) Frequency of sound
(C) Thermal comfort
(D) Colour intensity
75. Wedge shaped brick or stone blocks forming an arch are called
(A) Voussoirs
(B) Cornices
(C) Springers
(D) Abutments
76. Number of common clay bricks required to make one cubic meter of brick masonry
(A) 350
(B) 420
(C) 500
(D) 550
77. In two dimensional composition spatial depth can be created by the principle of
(A) Balance
(B) Rhythm
(C) Perspective
(D) Harmony
78. The minimum diameter of longitudinal reinforcement in RCC column is
(A) 8 mm
(B) 10 mm
(C) 12 mm
(D) 16 mm
79. Tie member in king post truss is
(A) Tension member
(B) Compression member
(C) Tension and compression both
(D) Neither tension nor compression
80. Jharokha is an architectural element used in buildings as
(A) Gateway
(B) Balcony
(C) Column decoration
(D) Ceiling decoration
81. Travel behavior characteristics of an urban area can be derived from
(A) Parking survey
(B) Socio-economic survey
(C) Demographic survey
(D) Origin and destination survey
82. Central place theory was given by:
(A) Clarence Stein
(B) Von Thunen
(C) Soria Y Mata
(D) Christaller
83. Dry rot is a defect of
(A) Lime
(B) Stone
(C) Brick
(D) Timber
84. Number of edges in an octahedron
(A) 8
(B) 10
(C) 12
(D) 14
85. Stack effect is
(A) The process of supplying fresh air by electro mechanical means both vertically and horizontally
(B) The tendency of hot air in a shaft to rise and create a draft of cool air intake
(C) The air supply to a motor driven louvered opening in basement
(D) The circulation of fresh air through windows from the lintel level
86. Nosing is provided in
(A) Water proofing
(B) Masonry
(C) Staircase
(D) Painted finish
87. Support system given to dilapidated building
(A) Shoring
(B) Centering
(C) Scaffolding
(D) Shuttering
88. Pure colour is described by the term
(A) Chroma
(B) Tone
(C) Value
(D) Hue
89. Sciography refers to
(A) Study of screen printing
(B) Study of shadow projections
(C) Study of graphic design
(D) Study of textile design
90. The valve which allows the flow of water in one direction only
(A) Reflux valve
(B) Sluice valve
(C) Relief valve
(D) Score valve
91. Which pattern of layout is most commonly seen in Mughal gardens
(A) Chashme Shahi
(B) Jor bagh
(C) Char bagh
(D) Firdausi
92. Gopuram refers to
(A) Temple
(B) Gateway
(C) Village
(D) Brick dome
93. Complimentary colour of violet is
(A) Red
(B) Green
(C) Black
(D) Yellow
94. Workability of concrete mix with low water cement ratio is determined by
(A) Slump test
(B) Tensile strength test
(C) Flexural strength test
(D) Compaction factor test
95. Most efficient arch for transferring load
(A) Flat
(B) Semi circular
(C) Pointed
(D) Catenary
96. Le Corbusier put forth his theory of proportions in a book titled
(A) The dimensions
(B) The modular
(C) The golden section
(D) Towards the new architecture
97. Term comfort zone is used in relation to
(A) Bio climatic chart
(B) Sun path diagram
(C) Wind rose
(D) Sundial
98. Timber member Rail is associated with
(A) Timber floor
(B) Truss
(C) Door
(D) Staircase
99. Size of queen closer is
(A) $100 \times 100$
(B) $100 \times 50$
(C) $200 \times 100$
(D) $200 \times 50$
100. The parameter that does not appear in psychrometric chart
(A) Wind speed
(B) Dry bulb temperature
(C) Wet bulb temperature
(D) Relative humidity
