

Question Paper and Answer Keys for the post of Architectural Assistant

Written Recruitment Examination for filling up of the post of Architectural Assistant in APWD was held on 19/02/2023 from 2.30 pm to 4.30 pm at Port Blair. The Question Paper and the Answer Keys of the written examination received from the agency engaged for conduct of examination is hereby published. The candidates may submit their claims & objections if any, through email to ceapwd.recruitment@gmail.com **on or before 6th March, 2023 at 5.00 pm.**

No claims & objections will be entertained beyond the date & time mentioned above.

Date of Examination : 19.02.2023

ANSWER KEY FOR ARCHITECTURE ASSISTANT

Q.No	Key	Q.No	Key	Q.No	Key	Q.No	Key
1	d	26	d	51	c	76	b
2	b	27	d	52	d	77	b
3	b	28	d	53	d	78	c
4	a	29	c	54	a	79	a
5	b	30	c	55	a	80	a
6	d	31	c	56	a	81	d
7	c	32	c	57	d	82	a
8	a	33	a	58	d	83	b
9	b	34	a	59	d	84	b
10	a	35	d	60	d	85	d
11	b	36	c	61	a	86	a
12	a	37	b	62	a	87	b
13	a	38	c	63	a	88	a
14	a	39	a	64	d	89	a
15	c	40	c	65	a	90	a
16	a	41	a	66	a	91	b
17	c	42	d	67	c	92	a
18	b	43	b	68	c	93	a
19	a	44	c	69	a	94	a
20	c	45	a	70	c	95	a
21	a	46	a	71	b	96	a
22	a	47	a	72	b	97	c
23	b	48	a	73	c	98	b
24	a	49	a	74	b	99	d
25	d	50	b	75	c	100	a

Architecture Assistant Paper (SET - A)

1. Many architects have gained a great deal of fame for their works. Which of these individuals was not an architect of some note?
- a) Frank Lloyd Wright
 - b) Gustave Eiffel
 - c) Buckminster Fuller
 - d) Pablo Picasso
2. Which architect designed the Bank of China (Hong Kong, China)?
- a) Norman Foster
 - b) I. M. Pei
 - c) Frank Lloyd Wright
 - d) Arata Isozaki
3. Howard's idea of the garden city consisted of
- a) six small towns surrounded by greenbelts and linked to a larger central city.
 - b) planning cities to have plenty of trees, flowers and public gardens.
 - c) each privately owned house to have its own front and back garden.
 - d) tower blocks to displace the population vertically and leave most of the land available as green open spaces.
4. The 'decentralized city' can be identified by:
- a) the shift of employment and services away from the inner city towards multiple centers in smaller towns and rural areas.
 - b) the de-gendering of public space as women use local facilities more
 - c) gentrification: the movement of middle-class people back into the inner-city
 - d) all the above.
5. The Empire State Building is in which US city?
- a) Chicago
 - b) New York
 - c) Washington DC
 - d) Atlanta
6. The Statue of Liberty was a gift to the United States from the people of
- a) Italy
 - b) China
 - c) England
 - d) France

7. The tallest building in the world is in.

- a) USA
- b) Canada
- c) Dubai
- d) Malaysia

8. The word taj means...

- a) crown
- b) wife
- c) Palace
- d) tomb

9. How approx high is the Eiffel Tower?

- a) 200m
- b) 300m
- c) 400m
- d) 500m

10. What building was the world's tallest office building between 1931- 1972?

- a) Empire State Building
- b) Sears Tower
- c) World Trade Centers
- d) First Interstate Tower

11. Gateway of India is in:

- a) New Delhi
- b) Mumbai
- c) Bangalore
- d) Hyderabad

12. The base of Gol Gumbaz at Bijapur, Karnataka is:

- a) Square
- b) Rectangle
- c) Circle
- d) Octagonal

13. Spireedge, Gurgaon is designed by:

- a) Kenneth Yeang

- b) Charles Korea
- c) Joseph Allen Stein
- d) Christopher Charles Benninger

14. HUDCO Stands for:

- a) Housing and Urban Development Corporation limited
- b) Housing and urban developmental construction limited
- c) Housing under District Corporation limited
- d) None

15. Jawahar Kala Kendra, Jaipur Rajasthan is designed by:

- a) Christopher Charles Benninger
- b) Raj Rewal
- c) Charles Korea
- d) B.V.Doshi

16. Christopher Charles Benninger is an _____ architect and planner.

- a) American-Indian
- b) American
- c) Indian
- d) Finnish

17. Paimio chair is a masterpiece of:

- a) Frank Lloyd Wright
- b) Charles Corea
- c) Alvar Alto
- d) Zaha Hadid

18. Qutub Minar was completed by :-

- a) Qutb-ud-din Aibak
- b) Ilutmish
- c) Sher-Shah-Suri
- d) Firuz Shah

19. The spread of Greek culture all over the eastern Mediterranean and the former Persian Empire is known as

- a) hellenization
- b) classicization

- c) Zoroastrianism
- d) Olympization

20. The Great Pyramid-originally stood how many feet high?

- a) 281
- b) 381
- c) 481
- d) 981

21. The Ripon Building is in...

- a) Chennai
- b) New Delhi
- c) Bangalore
- d) Kochin

22. Who among the following is known as the Father of Modern Scandinavian Architecture :

- a) Alvar Alto
- b) John Utzon
- c) Zaha Hadid
- d) Tadao Ando

23. A fresco is a painting on

- a) Canvas
- b) Wet Plaster
- c) Treated wood
- d) Silk

24. Romanesque and Gothic Cathedrals have which of the following in common ?

- a) Flying buttresses used as exterior supports for a high ceiling
- b) A floor plan designed essentially in the shape of a cross
- c) Large tracery windows used in the clerestory
- d) Groined vaulting and round arches used to span large areas

25. In her work Mary Cassatt demonstrated a keen interest in

- a) Landscape of Italy
- b) animal paintings
- c) Hudson River scenes
- d) Japanese prints

26. What would you be likely to find in a mastaba?

- a) Family gatherings
- b) Bathing men
- c) Cooking women
- d) Dead bodies.

27. What is a cenotaph ?

- a) A festival center.
- b) A tomb with the body of a ruler's family.
- c) A monument of the god of death.
- d) A tomb without a body

28. What is an oculus?

- a) A kind of column that is widest at the middle.
- b) A chamber for a sarcophagus.
- c) A measuring tool used in the distribution of mortar.
- d) A horizontal circular opening.

29. Who were the first to build roads on the foundation basis?

- a) Greeks
- b) Britishers
- c) Roman
- d) Mughals

30. In a typical town in the Roman Empire, the wealthy people lived in large houses while the ordinary Romans lived in blocks of flats called.....

- a) Townhalls
- b) countryhouses
- c) insulas
- d) forums

31. A person who involves himself in the practice of constructing buildings, houses, etc. is called an architect the word architect originally comes from the Greek. What does the Greek term literally mean?

- a) Handyman
- b) Rock stacker
- c) Chief builder
- d) Housepainter

32. Urbanization occurred in the nineteenth century because:

- a) Commuters started moving out of villages and into the cities
- b) Towns and cities were becoming increasingly planned and managed

- c) Industrial capitalism led to a shift of population from rural to urban areas
- d) Transport systems were not provided; so it was easier to live in the city.

33. Example of a rock cut temple in India:

- a) Kailash temple, Ellora
- b) Khajuraho Temple
- c) Jaggannath temple
- d) Meenaxhi Temple

34. What is the term for the type of flashing used where the edge of a single roof meets another roof?

- a) Valley
- b) Step
- c) Woven
- d) Hip

35. Which type of brick bond is weakest and MOST subject to damage or deformation of the wall?

- a) Running bond
- b) Common bond
- c) Flemish bond
- d) Stack bond

36. A sedimentary rock composed of angular particles of gravel is called:

- a) Breccia
- b) Conglomerate
- c) Sandstone
- d) gravelstone

37. Sedimentary particles with a size range larger than 256mm:

- a) Gravel
- b) Boulders
- c) Clay
- d) cobbles

38. Minimum slope of staircase

- a) 30 deg
- b) 45 deg
- c) 26 deg
- d) 35 deg

39. The ratio of the air's water vapor content to its capacity at that same temperature is a Measure of the air's

- a) relative humidity
- b) mixing ratio
- c) dry adiabatic rate
- d) wet adiabatic rate

40. The CDP is one of the pre-requisites for any city to access funds under:

- a) Indira Awas Yojna
- b) Rajiv Awas Yojna
- c) JNNURM
- d) Eco-Housing

41. Which of the following types of wood flooring is the softest wood?

- a) pine
- b) oak
- c) maple.
- d) pecan

42. How many days does it take for standard Portland cement concrete to reach maximum strength.

- a) 7
- b) 14
- c) 21
- d) 28

43. In which architectural style the semi-circular arches to form vaults and domes as seen in *Pantheon*

- a) Greek
- b) Roman
- c) Egypt
- d) none of these

44. What is the MAXIMUM speed allowed for an elevator with spring buffer:

- a) 100FPM
- b) 150FPM
- c) 200FPM
- d) 300FPM

45. The symbol "O" represents which of the following glazing units:

- a) revolving door
- b) spandrel panel
- c) fixed panel
- d) sliding door.

46. Thermal resistivity of a material is the reciprocal of its

- a) Thermal conductivity
- b) Thermal Insulation
- c) Thermal expansion
- d) None of these

47. The following spanning systems may not be supported on masonry bearing walls.

- a) Precast concrete framing
- b) Wood platform framing
- c) Heavy timber framing
- d) Structural steel framing

48. Movement joints should be in masonry walls

- a) at discontinuities where cracks would tend to form
- b) every fourth course
- c) every sixth course
- d) At a change of brick bond

49. Which of the statement is true

- a) Terrazzo flooring may only be cast in place.
- b) A building code contains off-street parking requirements.
- c) First cost and life-cycle cost is the same thing.
- d) In general, it costs more to make a building more resistant to fire.

50. If ground coverage is 50% and the FAR allowed is 3.0, then to achieve this FAR minimum storey required:

- a) Three
- b) Six
- c) Four
- d) Eight

51. Lag screws are inserted with:

- a) A hammer
- b) A screwdriver

- c) A wrench
- d) A pneumatic gun

52. All the following are approved for use in water supply pipes EXCEPT

- a) galvanized iron
- b) copper
- c) plastic
- d) rubber

53. Too much water causes the concrete to?

- a) harden faster.
- b) be liquefied.
- c) expand after curing.
- d) reach a lower strength.

54. A soil with a dark brown or black color is indicative of what

- a) considerable organic matter content
- b) excessive leaching
- c) poor drainage
- d) iron oxide stains

55. Egg cartons, food cans, bottles and pipes are examples of ...

- a) manufactured shell structures.
- b) natural shell structures
- c) manufactured frame structures.
- d) natural frame structures

56. When a structure is built to withstand loads more than it normally would carry the Structure is built with a larger...

- a) foundation
- b) symmetrical base
- c) set of pilings
- d) margin of safety

57. The following is an example of a composite material

- a) a cardboard box
- b) tent
- c) drywall
- d) reinforced concrete

58. The change in the shape or size of a structure can be due to internal forces which are produced by external forces acting on the structure and are called

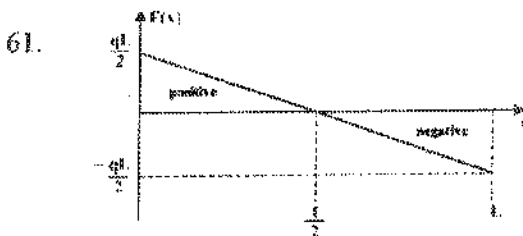
- a) structural instability
- b) deadloads
- c) live loads
- d) deformation

59. Bend or twist a certain material, by pressing on different parts, in different directions, at the same time. The force you are creating is called

- a) tension force
- b) compression force
- c) shear force
- d) torsion force

60. A hurricane or tornado is an example of a force that can cause extreme damage to a Structure when it acts on the structure, even for a short time. The environmental event is Classified as a ...

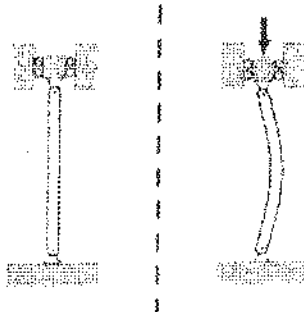
- a) live load
- b) dead load
- c) deformation
- d) torsion event



The areas shown under the diagram is

- a) Bending moment
- b) Shear force
- c) Pressure
- d) Longitudinal Force

62.



A column under a concentric axial load exhibiting the characteristic deformation called

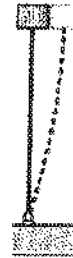
- a) Buckling
- b) Bending
- c) Compression
- d) Strain

63. The _____ is the ratio between the height or length of a structural element (such as a column, or strut) and the width or thickness of the element.

- a) Slenderness ratio
- b) Poisson's Ratio
- c) Young's Modulus
- d) Aspect Ratio

64. The mentioned figure shows buckled shaped column .
The Specified value of K is:

- a) 1
- b) 1.2
- c) 0.8
- d) 2



65. The thickness of external plaster on a brick (boundary) wall is

- a) 20mm
- b) 12mm
- c) 10mm
- d) 8mm

66. Lintel height of a window:

- a) 2100mm
- b) 1500mm
- c) 2400mm
- d) 900mm

67. Height of skirting:

- a) 50mm
- b) 75mm
- c) 100mm
- d) 200mm

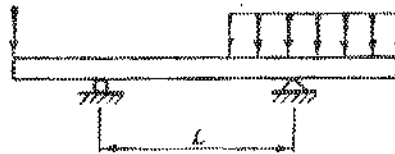
68. Average width of cupboard:

- a) 750mm
- b) 800mm
- c) 600mm
- d) 900mm

69. The construction above plinth level is called:

- a) Super structure
- b) Wall
- c) Above structure
- d) 1 & 2

70.



The beam shown above is:

- a) Simply supported beam.
- b) Continuous beam
- c) Overhanging beam
- d) Cantilever beam

71. 30 St Mary axe has _____ number of curved glass.

- a) 0
- b) 1
- c) 30
- d) 18

72. Concrete solidifies and hardens after mixing with water and placement due to a chemical process known as _____.

- a) Condensation
- b) Hydration
- c) Curing
- d) Drying

73. Both concrete and _____ are the primary contributors to what is known as the urban heat island effect.

- a) Sand
- b) Glass
- c) Asphalt

d) 1 & 2

74. Balconies should be given a slope of _____ so that rain water is drained out:

- a) 1:200
- b) 1:100
- c) 1:300
- d) 1:50

75. How much approximate time it takes to decompose paper?

- a) 1 month
- b) 2 months
- c) 10-30 days
- d) 7 days

76. Plinth area- area of wall is defined as:

- a) Circulation area
- b) Floor Area
- c) Ground coverage
- d) open Area

77. Cement bags are generally available in

- a) 20 kg bags
- b) 50 kg bags
- c) 24kg bags
- d) 40kg bags

78. Density of mud used in construction is:

- a) 700kg/m³
- b) 1600kg/m³
- c) 2000kg/m³
- d) 2500kg/m³

79. Water absorbed by first class brick by his weight is:

- a) not more than 20%
- b) not more than 30%

- c) not more than 15%
- d) not more than 10%

80. Crushing strength of first class brick :

- a) 105kg/cm²
- b) 70 kg/cm²
- c) 35 kg/cm²
- d) 120 kg/cm²

81. Glass used in windows to prevent heat loss:

- a) Colored glass
- b) Frosted glass
- c) Processed glass
- d) Insulating glass

82. The process of drying timber, under more or less controlled conditions is called:

- a) Seasoning
- b) Drying
- c) Chemical treatment
- d) 1 & 2

83. C/C spacing of urinals/dividers:

- a) 40cm
- b) 60 cm
- c) 80cm
- d) 100cm

84. Height of towel rail in a bathroom:

- a) 50cm
- b) 90cm
- c) 120cm
- d) 75cm

85. Water closet requirements for governmental and public business occupancies and offices:

- a) 1 for 50 persons
- b) 1 for 90 persons
- c) 1 for 10 persons
- d) 1 for 25 persons

86. Escalators move at approximately

- a) 0.3-0.6m/s
- b) 1m/s
- c) 0.2m/s
- d) 0.1m/s

87. IS Code is used for P.V.C Pipe for water supply:

- a) IS3114
- b) IS7634
- c) IS6530
- d) IS2065

88. Minimum size of a storm water drain pipe:

- a) 30cm dia
- b) 40cm dia
- c) 35 cm dia
- d) 50 cm dia

89.



Above shown tap is

- a) Piller Tap
- b) Biv Tap
- c) Wall mixer
- d) Monobloc Tap

90. Inlet connection in water tank:

- a) At the top
- b) at the bottom
- c) At the mid-level
- d) At absolute bottom

91. Internal electric wiring used for household purposes are:

- a) Series
- b) Parallel
- c) Both
- d) Independent

92. Electricity supplied for residential houses in India are at Voltage:

- a) 220V
- b) 440V
- c) 110V
- d) 1100V

93. General Lux level at kitchen required :

- a) 300 lux
- b) 400 lux
- c) 750 lux
- d) 250 lux

94. Green colored wire used for electrical fitting in houses is for:

- a) Live Supply
- b) Neutral Supply
- c) Earthing
- d)None

95. CAT6 wire is used for:

- a) Internet supply
- b) Telephone connections
- c) TV Cable

d) Emergency power supply

96. Minimum area for WC in a toilet according to NBC :

- a) 1.1m²
- b) 1.3m²
- c) 1.5m²
- d) 0.9m²

97. Minimum width of toilet door:

- a) 900mm
- b) 850mm
- c) 750mm
- d) 915mm

98. Trade and riser in a staircase is respectively:

- a) 150mm and 300mm
- b) 300mm and 150mm
- c) 150mm and 150mm
- d) 300mm and 300mm

99. Soil pipe carries off:

- a) Supply water
- b) Drinking water
- c) Grey water
- d) Drainage water

100. Dumbwaiter lifts are used for _____:

- a) Goods
- b) Passenger
- c) Hospital Bed
- d) 1 & 2