

MIZORAM PUBLIC SERVICE COMMISSION
TECHNICAL COMPETITIVE EXAMINATIONS FOR
ASSISTANT ARCHITECT (CONTRACT)
UNDER PUBLIC WORKS DEPARTMENT, GOVERNMENT OF MIZORAM, JULY-2023

ARCHITECTURE
PAPER-II

Time Allowed : 3 hours

FM : 200

SECTION - A (Multiple Choice questions) (100 Marks)

All questions carry equal mark of 2 each. Attempt all questions.

*This Section should be answered only on the **OMR Response Sheet** provided.*

1. India has _____ no. of climatic zones.
(a) 1 (b) 4
(c) 5 (d) 10
2. How much percentage of humidity does not have major impact on thermal comfort?
(a) 40-50 % (b) 20%
(c) 10% (d) 12%
3. U-value of double glazed window is
(a) 10 (b) 2.8
(c) 1.26 (d) 3.4
4. Loft insulation means
(a) Means of insulation a loft (b) Ways of insulating roof
(c) Inserting insulating materials in a loft (d) Applying insulating treatment as paint.
5. The difference between the surface reflectivity of normal roof and cool roof is
(a) 0.76 (b) 0.90
(c) 0.854 (d) 1.6
6. Natural ventilation saves upto _____ % of energy consumption.
(a) 10-30% (b) 20%
(c) 50% (d) 90%
7. When oriented towards the _____ clerestory windows contribute to direct solar gain.
(a) Tropic of cancer (b) Tropic of Capricorn
(c) Souther hemisphere (d) Equator
8. What is c-Value?
(a) Reciprocal of r value (b) Conductance
(c) Both of these (d) None of these.
9. Where is the Walker Ware house located?
(a) Kalimpong, India (b) Chicago, Illinois
(c) Trivandrum, india (d) Austin, texas

10. Who designed “crystal palace”?
(a) Walter Gropius (b) Les Corbusier
(c) Joseph Paxton (d) Tony Garner
11. Guild house designed by Robert venturi is used for
(a) School for orphans (b) Home for the aged
(c) Departmental store (d) Private school
12. What is the world’s longest cantilever bridge?
(a) Brooklyn Bridge (b) London bridge
(c) Howrah bridge (d) Viaduc de Millau
13. Who introduced Iberian style in India?
(a) British (b) French
(c) Portuguese (d) Africans
14. What were the main building materials used in Chicago during Wright’s era?
(a) Red brick, stucco, stained wood (b) R.C.C, stone and steel
(c) Concrete, granite, brick (d) Wood and timber
15. Which one of these is the feature in a post modern style of design?
(a) Floral forms (b) Assymetrical forms
(c) Elegant and smooth forms (d) Ornamentation
16. Mi6 building is also called
(a) The great building (b) SIS building
(c) LE building (d) None of these
17. Autoclaved calcium silicate bricks are popularly known as
(a) Sand lime bricks (b) Red dried bricks
(c) Both of these (d) None of these
18. VRM stands for
(a) Vertical Roller Mills (b) Vertical Railing meet
(c) Veneered Railing mill (d) None of these
19. What does a refractory means?
(a) A substance that refracts white light better to create spectrum\
(b) A substance that can resist high temperatures
(c) Both (a) & (b)
(d) None of these
20. Why is knotting done in woodwork?
(a) To prevent roughness in the wood surface (b) To prevent resin to exude
(c) To help drying (d) To help better attachment.
21. Minimum thickness of wall with Flemish bond should be
(a) 1½ bricks (b) 2 bricks
(c) 1 brick (d) 90 cm
22. The plaster of paris calcined with alum is called
(a) POP (b) Barium plaster
(c) Keen’s plaster (d) Depeter

23. Ventilators are also called
- (a) Casements
 - (b) Projected windows
 - (c) Hopper windows
 - (d) Venetian windows
24. For folded plates, the assumption that is done is
- (a) The material is elastic and homogenous
 - (b) The material is isotropic
 - (c) None of these
 - (d) Both
25. What is the technical term of the steel flat bar that keeps the door frame in position?
- (a) Holdfast
 - (b) Horns
 - (c) Rebate
 - (d) Styles
26. What is the ratio of M25 concrete mix?
- (a) 1:3:6
 - (b) 1:1:2
 - (c) 1:1.5:2
 - (d) 1:2:4
27. How long should curing be done for Damp proof course?
- (a) At least 6 days
 - (b) At least 7 days
 - (c) At least 8 days
 - (d) At least 9 days
28. Cloud seeding is one method of?
- (a) Soil modification
 - (b) Weather modification
 - (c) Plant modification
 - (d) Soil testing
29. Who design the Lodhi Estate in Delhi?
- (a) J.A Stein
 - (b) Charles Correa
 - (c) B.V Doshi
 - (d) Kanvinde
30. In flooring the horizontal structural members placed at right angles to bridging joists are
- (a) Binders
 - (b) Girders
 - (c) Screed
 - (d) Topping
31. Carbon footprint can be measured by
- (a) Carbon dating
 - (b) Instruments
 - (c) Carbon accounting
 - (d) Formula
32. V7 concept of Le-Corbusier refers to
- (a) Neighbourhood Planning
 - (b) Housing Typologies
 - (c) Architecture Design Principal
 - (d) Hierarchy of Roads
33. What is “green fatigue”?
- (a) Living in Sick building
 - (b) Weariness in talking about all things green
 - (c) An erosion of materials in green construction
 - (d) Endorsing something which is not as green as it sounds
34. The unit of Thermal Transmittance is
- (a) W/K
 - (b) W/m²
 - (c) W/mK
 - (d) W/m²K
35. Bulking of sand is highest in
- (a) Coarse sand
 - (b) Medium sand
 - (c) Fine sand
 - (d) Sand saturated with water

36. Who was the founder of the De Stijl movement?
(a) Theo van Doesburg (b) Julian Koenig
(c) Pablo Picasso (d) El Lissitzky
37. Who pioneered Cubism?
(a) Douglas Cooper and Allan Quartermain (b) Georges Valmier and Pablo Picasso
(c) Allan Quartermain and Georges Braque (d) Pablo Picasso and Georges Braque
38. Which of the following is not a component of a door shutter?
(a) Style (b) Panel
(c) Frame (d) Rail
39. Which material is a poor conductor of heat and the cracks when heated and then suddenly cools down?
(a) Glass (b) Steel
(c) Brick (d) Aluminium
40. Earth coupling utilizes the earth as
(a) Ventilator (b) Heat sink
(c) Filter (d) Water source
41. In a flat slab, the load is transferred through
(a) Beam action (b) Membrane action
(c) Plate action (d) Vector action
42. Le-Corbusier's five points of architecture includes
(a) Open facades (b) Open floor plan
(c) Both (a) & (b) (d) None of these
43. The concrete shell roof has been widely used to cover
(a) Small floor spaces (b) Large floor spaces
(c) Middle span spaces (d) Edge floor spaces
44. During the construction of tall buildings, the equipment used for hoisting building materials to the upper floors is a
(a) Goods lift (b) Capsule lift
(c) Gantry crane (d) Tower crane
45. Daylighting factor in architecture is
(a) The ratio of the light level inside a structure to the light level outside the structure
(b) The level of light on a given day
(c) The factors affecting the design of windows
(d) The ratio of light in the morning and evening
46. The acoustic value of materials is measured in terms of
(a) Thickness of material (b) Sound absorption
(c) Density of material (d) Decibel of sound
47. Low-emissivity coating on a glazing unit
(a) Increases the SHGC (b) Increases the VLT
(c) Reduces the SHGC (d) Increases the VLT and SHGC

48. Hip roof is formed by surfaces sloping in

- (a) One direction
- (b) Two directions
- (c) Three directions
- (d) Four directions

49. The purpose of a green building include

- (a) Increase indoor air quality
- (b) Reduce use of water
- (c) Both (a) & (b)
- (d) None of the above

50. The statue of Unity in India is the world's tallest statue of

- (a) M.K Gandhi
- (b) Sardar Vallabhbhai Patel
- (c) Vinoba Bhave
- (d) Dr. B.R Ambedkar

SECTION - B (Short answer type question) (100 Marks)

All questions carry equal marks of 5 each.

This Section should be answered only on the Answer Sheet provided.

1. Define stack ventilation and its effectiveness on climate responsive architecture.
2. What is the arts and crafts movement?
3. What is the difference between Green roof and Cool roof?
4. What are the few characteristics of postmodernism?
5. What are the advantages of louvered doors?
6. Explain the parts of a king post truss.
7. Explain a filler slab.
8. What are the factors affecting human Thermal Comfort?
9. Mention any five Passive Design strategies
10. What are the basic planning concepts of Le Corbusier's Chandigarh?
11. Explain 'Urban Heat Island'
12. What are the various types of pitched roof?
13. What is the effective cover of R.C.C column, beam and slab?
14. Compare between brick and AAC block for external wall construction
15. What are the advantages and disadvantages of lintel?
16. What is micro-climate? What is the effect of vegetation on micro-climate of a place?
17. How has Modern architecture or Modernism influenced Indian architecture?
18. What is the style, inspiration and philosophy behind the works of B.V Doshi?
19. Match the Elements in Group I with their Application in Group II

Group I

- (a) Bracket
- (b) Baluster
- (c) Key stone
- (d) Holdfast
- (e) Drum

Group II

- 1) Door
- 2) Dome
- 3) Cornice
- 4) Arch
- 5) Staircase

20. Match the Green rating System in Group I with their Country in Group II

Group I

- (a) LEED
- (b) IGBC
- (c) Casbee
- (d) Breeam
- (e) Pearl

Group II

- 1) India
- 2) U.A.E
- 3) U.K
- 4) U.S.A
- 5) Japan
- 6) Canada