

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

ARCHITECTURE
PAPER-III

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. Which of these is a process of varnishing?
(a) Knotting (b) Blistering
(c) Both (d) None
2. Which trap comes after jaali trap or nahni in the process of drainage from bathroom?
(a) Interceptor (b) Gully
(c) No trap (d) All of these
3. Why is Rcc preferred over plain concrete?
(a) Caters to both tension and compression (b) More slender
(c) Better in appearance (d) None of these
4. The vertical distance between the dip and crown weir of a pipe is called
(a) Vent pipe (b) Water seal
(c) Geyser (d) siphonage
5. The architect's regulations (professional conduct) were signed in
(a) 2014 (b) 1989
(c) 1856 (d) 2000
6. In the profession of architecture, how many practises are there?
(a) 3 (b) 4
(c) 2 (d) Only 1
7. When there is a dispute between an owner and a contractor, _____ helps sort it out.
(a) Arbitrator (b) Umpire
(c) Architect (d) None of these
8. What is the last stage at certification of contractor bills?
(a) Flooring (b) Whitewashing
(c) Roof work (d) None of these
9. DBOT stands for
(a) Design built operate transfer (b) Design of buildings and operate transfer
(c) Both (a) & (b) (d) None of these

10. _____ is a non profit NGO heritage conservation trust.
- (a) AMASR (b) INTACH
(c) COA (d) NONE of these
11. The mixing of various constituents of plaster in proper proportions is called
- (a) Laitance (b) Gauging
(c) Mixing (d) All of these
12. _____ are placed in ducts to control the direction and velocity of air flow in air delivery system.
- (a) Propeller (b) Damper
(c) Both (d) None
13. Which are the main energy sources in a commercial building?
- (a) Carbon (b) Natural gas
(c) Electricity and natural gas (d) Electricity only
14. If a walls height is above 3 m, what is the usual interval of vertical lifts?
- (a) 2 m (b) 3 m
(c) 1 m (d) Lifts are not used
15. A sub floor in flooring is provided for
- (a) Better appearance to flooring
(b) Impart stability to floor covering
(c) No such purpose
(d) It is used temporarily to uphold the floor coverings
16. A structure is in equilibrium when
- (a) All forces or moments acting upon it are balanced
(b) All forces or moment are perpendicular
(c) All forces or moment are greater than the load
(d) All forces or moment are less than the load
17. Which of the following valves is used to maintain pressure in the system?
- (a) Pressure relief valve
(b) Check valve
(c) Manual control valve with variable flow plug
(d) Pneumatic control valve with variable-flow plugs
18. What is the S.I unit of stress?
- (a) N/cm² (b) N/m²
(c) KN/cm² (d) KN/m²
19. As per Council of Architecture Schedule of Payment, how many stages of payment are there excluding retainer?
- (a) 5 (b) 6
(c) 7 (d) 8
20. Brick work is not measured in cum in case of
- (a) one or more than one brick wall (b) brick work in arches
(c) reinforced brick work (d) Half brick wall
21. Right to acquire light and air from the neighbor's land is an example of
- (a) Easement by express grant (b) Easement by implied grant
(c) Easement by custom (d) Easement by prescription

22. The unit of measurement of Damp Proof Course (DPC) in building construction is
(a) kg (b) cum
(c) sqm (d) m
23. Anti-siphonage pipe is connected to
(a) Top of P trap W.C (b) Main soil pipe
(c) Bottom of P trap W.C (d) Side of W.C
24. Strain in building material is
(a) Ratio of change in length to original length (b) Resistance against deformation
(c) Ratio of change in length to width (d) Resistance against wind
25. At the ends of a simply supported beam, the bending moment is
(a) 0.2 (b) 0.1
(c) 0 (d) 1
26. What is night soil?
(a) Soil containing urea (b) Human excreta
(c) Animal excreta (d) Human excreta, animal excreta and urea
27. What is the drainage basin also called as?
(a) Watershed (b) Runoff area
(c) Water pond (d) Wetland
28. What is the time period for which the water is stored in fill and draw type of sedimentation tank?
(a) 24 hours (b) 48 hours
(c) 52 hours (d) 76 hours
29. The minimum off-street parking for Residential A as per A.M.C rules is calculated for every
(a) 180 sq.m floor area (b) 150 sq.m floor area
(c) 120 sq.m floor area (d) 100 sq.m floor area
30. While calculating the handling capacity of lift, the weight of a person is taken as
(a) 60 kg (b) 62 kg
(c) 64 kg (d) 68 kg
31. The maximum permissible floor area ration (F.A.R) as per A.M.C rules for Educational building is
(a) 3.0 (b) 2.5
(c) 2.0 (d) 1.5
32. Young's Modulus of elasticity is
(a) Tensile stress / Tensile strain (b) Shear stress / Shear strain
(c) Tensile stress / Shear strain (d) Shear stress / Tensile strain
33. What is the other name for a positive bending moment?
(a) Hogging (b) Sagging
(c) Inflation (d) Contraflexure
34. To prevent the product flow in the wrong direction which of the following valve is used?
(a) Seat valve (b) Butterfly valve
(c) Seat valve and butterfly valve (d) Check valve
35. Aeration of water is done to remove
(a) Odour (b) Colour
(c) Bacteria (d) Hardness

36. As per IS: 1172–1963, water required per head per day for average domestic purposes is
(a) 65 litres (b) 85 litres
(c) 105 litres (d) 135 litres
37. How many times can a notice of change of office address of an Architect be published?
(a) 2 (b) 3
(c) 4 (d) 5
38. What is the maximum letter size allowed for advertisement for an Architect in an office or construction site?
(a) 9 cm (b) 9.5 cm
(c) 10 cm (d) 10.5 cm
39. In an Architectural Competition, how many Architects should be there as Assessors?
(a) Less than half comparing to promoter's organization
(b) At least half comparing to promoter's organization
(c) Majority of at least by one comparing to promoter's organization
(d) Majority of at least by two comparing to promoter's organization
40. What is the minimum floor area requirement of Kitchen as per A.M.C rules?
(a) 7.5 m² (b) 5.0 m²
(c) 4.8 m² (d) 4.2 m²
41. What kind of tender is suitable for single and small-scale ownership projects?
(a) Open tender (b) Closed tender
(c) Pre-Registration of Contractors tender (d) None of the above
42. What if the full form of PPP?
(a) Public – Private Property (b) Public – Property Partnership
(c) Public – Private Partnership (d) Private – Property Partnership
43. In a multi-storied building, the type of plumbing system suitable for reusing the sullage for non-potable use is
(a) Single stack system (b) Partially ventilated single stack system
(c) One pipe system (d) Two pipe system
44. Which wood should be used for first class building chaukhats?
(a) Sesame wood (b) Saal wood
(c) Teak wood (d) Arjun wood
45. What does Turbidity of raw water measure?
(a) Suspended solids (b) Acidity of water
(c) B.O.D (d) Repair Work
46. The requirement of Urinals in public building for 46-70 persons is (as per A.M.C)
(a) Four (b) Three
(c) Two (d) One
47. Which of the following is not a benchmark for environmental performance assessment?
(a) LEED (b) IGBC
(c) Gini coefficients (d) GBI tools

48. A lift machine room shall be designed
- | | |
|---------------------------------------|----------------------------------|
| (a) To be accessible from common area | (b) With access from every floor |
| (c) With a minimum headroom of 2.1m | (d) To be fire proof |
49. A fire detector cannot detect
- | | |
|---------------|-----------|
| (a) Radiation | (b) Heat |
| (c) Light | (d) Smoke |
50. One hectare is equal to
- | | |
|-------------------------|--------------------------|
| (a) 4000 m ² | (b) 4048 m ² |
| (c) 4840 m ² | (d) 10000 m ² |

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 detailed specification and state its importance in construction practice.
2. Define environmental conservation and its importance in design.
3. What are the different types of Environmental Impact Assessment?
4. State the different types of energy conservation techniques and explain any two.
5. Give three major components of a building with sketches.
6. What is the technical difference between a stone arch and a brick arch?
7. Define stress and strain with the different types of strain.
8. Explain the theory of bending moment with its equation.
9. What are the Ethics of Practice dictated by the Architects Regulations?
10. Why are Architects best suited to act as Arbitrators for construction related disputes?
11. What is the difference between Green Architecture and Sustainable Architecture?
12. What are the various norms as mentioned in NBC 2016 for firefighting services?
13. How can we improve the drainage and sanitation in Aizawl?
14. What is the difference between axial loading and transverse loading?
15. What are the different types of traps and their area of use?
16. What are oxidation ponds?
17. Explain the working of Air Handling Unit (A.H.U).
18. What are the different stages of payment as per Architect's handbook?
19. How is Architectural competition organized?
20. What is your suggestion on solar power and wind power for Mizoram? Compare the two sources of energy.