



Name: ..... Roll No.: .....

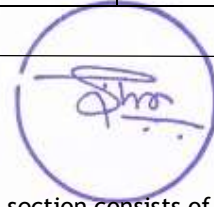
Branch: ..... Signature of Invigilator: .....

Semester: VIth Date: 28/04/2022 (MORNING)

Subject with Code: AR352 VERNACULAR ARCHITECTURE

Marks Obtained	Section A (30)	Section B (20)	Total Marks (50)

INSTRUCTION TO CANDIDATE



1. The booklet (question paper cum answer sheet) consists of two sections. First section consists of MCQs of 30 marks. Candidates may mark the correct answer in the space provided / may also write answers in the answer sheet provided. The Second section of question paper consists of subjective questions of 20 marks. The candidates may write the answers for these questions in the answer sheets provided with the question booklet.
2. The booklet will be distributed to the candidates before 05 minutes of the examination. Candidates should write their roll no. in each page of the booklet.
3. Place the Student ID card, Registration Slip and No Dues Clearance (if applicable) on your desk. All the entries on the cover page must be filled at the specified space.
4. Carrying or using of mobile phone / any electronic gadgets (except regular scientific calculator)/chits are strictly prohibited inside the examination hall as it comes under the category of unfair means.
5. No candidate should be allowed to enter the examination hall later than 10 minutes after the commencement of examination. Candidates are not allowed to go out of the examination hall/room during the first 30 minutes and last 10 minutes of the examination.
6. Write on both side of the leaf and use pens with same ink.
7. The medium of examination is English. Answer book written in language other than English is liable to be rejected.
8. All attached sheets such as graph papers, drawing sheets etc. should be properly folded to the size of the answer book and tagged with the answer book by the candidate at least 05 minutes before the end of examination.
9. The door of examination hall will be closed 10 minutes before the end of examination. Do not leave the examination hall until the invigilators instruct you to do so.
10. Always maintain the highest level of integrity. Remember you are a BITian.
11. Candidates need to submit the question paper cum answer sheets before leaving the examination hall.

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS:B.ARCH  
BRANCH:ARCHITECTURE

SEMESTER : VI  
SESSION:SP/22

SUBJECT: AR352 - VERNACULAR ARCHITECTURE

TIME: 2 HOURS

FULL MARKS:50

**INSTRUCTIONS:**

1. Section A comprises of 30 marks and Section B Comprises of 20 marks
2. All the questions are compulsory in Section A
3. In Section B , for question no. 2 & 5 , answer any one.
4. Support your answers with suitable sketches , where ever required.

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SECTION -A

1. Saraf Haveli, Jaipur is an example of (1)
  - a. Haveli planned as fraternal cluster
  - b. Haveli planned with sequential courts
  - c. Haveli without Courtyard
  - d. None of the above
2. Settlement Pattern of North Gujarat demonstrates (1)
  - a. No caste system
  - b. Heterogeneous communities
  - c. Strong Kinship and caste system
  - d. All the above
3. Which of the following is the correct arrangement of various spaces in North Gujarat dwelling (1)
  - a. Yard > Otla > Osri > Ordo
  - b. Otla > Yard > Osri > Ordo
  - c. Yard > Osri > Otla > Ordo
  - d. Yard > Ordo > Otla > osri
4. The term "Delo " in Saurashtra means (1)
  - a. Individual dwelling without enclosure for animals
  - b. Individual dwellings with enclosure for animals
  - c. Houses organized around a common courtyard
  - d. Houses arranged perpendicular to streets
5. Pongshai is the local term in khasi Village for (1)
  - a. Living room
  - b. Verandah
  - c. Window
  - d. Stair
  - e. Door

6. The most Common wooden joinery used in Khasi house is (1)
- Dovetail Joint
  - Tongue and groove Joint
  - Lap Joint
  - Tennon and Mortice joint

7. The basic elemental form of the Bangla roof is (1)
- 2 -chala
  - 4- Chala
  - 8- Chala
  - Jor Bangla

8. Banggo in Adi Village is (1)
- Village Head
  - Administrative Unit
  - Village Council
  - Priest

9. Match with suitable Option (2)

a) Public space in Dwelling	i) Morung
b) Community Centre	ii) Azhi Bo
c) Semi-private Space in Dwelling	iii) Akishekhoh
d) Private Space in Dwelling	iv) Mawbah
e) Burial Ground	v) Bathou
f) Religious Altar	vi) Abidelabo

- a- (iii) , b- (i) , c- (vi) , d- (ii) , e- (iv) , f - (v)
- a-(iii) , b- (i) , c-(ii) , d-( vi) , e -(v) , f - (iv)
- a- (v) , b- (i) , c-(ii) , d -(iv) , e -(vi) , f -(iii)
- a-(v) , b- (i) , c- (vi) , d- (ii) , e -(iv) , f-(iii)

10. The most common construction material in Adi Village is (1)
- Bamboosa Pallida
  - Caryota Uren
  - Mesua Ferrea
  - Areca Catechu

11. Hutments of Jharkhand are (1)
- Pure and Practical in Shape
  - Resistant to Earth Quake
  - Resistant to floods and heavy rainfall
  - Economical
  - Climate responsive
  - Adapts to local materials
- (i) , (ii) , (iii) & (v)
  - (i) , (iii), (iv), (v) & (vi)

- c. (i) ,(iv) , (v) & (vi)
- d. All the above

12. In traditional Khasi village, rules and regulations followed while constructing house is/are (1)

- i. Metal is permitted
  - ii. Roof of 2 houses should not overlap
  - iii. Timber can be used from sacred forests
  - iv. House should not be constructed near river
  - v. Triangular shaped plots should be avoided
  - vi. Houses should face south
- a. (ii) , (iv) & (v)
  - b. (i) , (ii) , (v) & (vi)
  - c. (ii) , (iii) , (v) & (vi)
  - d. All the above
  - e. Non of the above

13. Slate is used in construction of (1)

- a. Foundation
- b. Wall
- c. Lintel
- d. Roof
- e. Flooring

14. Match the following construction technique with materials used (2)

i) Stone House	a) Stone & Timber
ii) Dhajji Dewari	b) Timber, Stone & Earth
iii) Kath Kuni	c) Timber & Brick
iv) Taaq	d) Rubble & Ashlar Masonry

- a. (i)-b ,(ii) -d ,(iii) -a ,(iv) -c
- b. (i) -d ,(ii )-b ,(iii)-a ,(iv) -c
- c. (i )-d ,(ii) -a,( iii)-c ,(iv)-b
- d. (i)-b ,(ii) -d ,(iii)-c ,(iv)-a

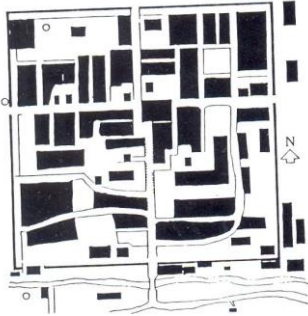
15. Match the following (2)

i) Gate house	a) Kullam
ii) Pond	b) Ara
iii) Family Temple	c) Paddyपुरa
iv) Educational Shed	d) Karu
v) Storage space	e) Kalari

- a. (i)-e ,(ii)-a, (iii)-d, (iv)-b ,(v) -c
- b. (i)-c ,(ii) -a , (iii)-d ,(iv) -b ,( v)-e
- c. (i)-c ,(ii) -a ,(iii) -d , (iv)-e , (v )-b
- d. (i) -e , (ii) -b ,(iii) -d , (iv) -c , (v) -a

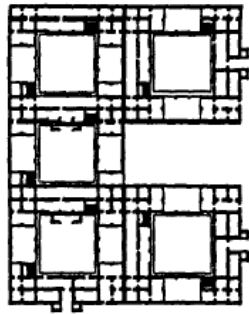
16. Nalukettu houses are inspired from (1)
- a. Ekshala
  - b. Chatushala
  - c. Panchshala
  - d. Trishala

17. The image represents settlement pattern of (1)




- a. North Gujarat
- b. Saurashtra
- c. Banni Community
- d. Rathwa Tribe




18. The image represents which type of Haveli (1)



- a. Brahmin Haveli
- b. Fraternal & Caste Cluster
- c. Sequential Court Haveli
- d. Marwari type Haveli

19. Match the following Vernacular construction with the states of origin (2)

<p>i. </p>	<p>a. Jammu &amp; Kashmir</p>
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 <p>ii.</p>	<p>b. Himachal Pradesh</p>
 <p>iii.</p>	<p>c. Meghalaya</p>
 <p>iv.</p>	<p>d. Arunachal Pradesh</p>
	<p>e. Nagaland</p>
	<p>f. Kerala</p>

- a. (i)-c , (ii)- e ,(iii)- a ,(iv)-b
- b. (i)-f , (ii)- c ,(iii)- e ,(iv)-a
- c. (i)-e , (ii)- d ,(iii)- b ,(iv)-a
- d. (i)-d , (ii)- c ,(iii)- b ,(iv)-a

20. Organic waste is added in soil before using for construction to (1)

- a. Increase Plasticity
- b. Increase Elasticity
- c. Increase adhesive properties
- d. Increase curing time

21. Which of the following statements are true for bamboo (1)

- i. Good Tensile strength
  - ii. Light weight
  - iii. High compressive strength
  - iv. Poor elasticity
  - v. Durable and long lasting
- a. (i), (iii) , (iv) & (v)
  - b. (ii) , (iii) & (iv)
  - c. (i) , (ii) & (v)
  - d. (i) , (ii) & (iii)

22. The fireplace in an Adi Gallong House is known as (1)  
a. Merom  
b. Eyap  
c. Balae  
d. Dareng
23. Clerestory Windows in 8 Chala roof houses are provided for (1)  
a. Aesthetics  
b. Light & ventilation  
c. Prevention against torrential rains  
d. Aesthetics and Lighting  
e. Ventilation & Façade improvement
24. Naga Village Pattern can be (1)  
a. Dispersed , Terraced or Linear  
b. Radial , Terraced or Fragmented  
c. Linear and Terraced  
d. Terraced , Organic and Clustered
25. Subjects covered in Pithora Paintings are (1)  
a. Farms and Wildlife  
b. Geometric shapes and patterns  
c. Depiction of God & Goddesses  
d. All the above  
e. None of the above
26. Haveli's of Shekhawati are famous for (1)  
a. Planning  
b. Landscaping  
c. Size  
d. Ornamentation

### SECTION- B

1. Explain the term “Vernacular Architecture”. As per Amos Rapoport what are the various factors affecting vernacular architecture, Explain. (5)
2. Compare the settlement Pattern and Vernacular Architecture of North Gujarat and Saurashtra region. Support with suitable sketches

OR (5)

Differentiate between sequential court haveli and Fraternal and Caste Cluster Haveli planning. Support with suitable examples.

3. Discuss the social structure of Khasi tribe. (3)
4. List down the climate responsive features of Nalukettu houses. (2)
5. Elaborate the characteristics of traditional settlements in Himalayan region.

OR (3)

Discuss the suitability of different types of Bamboo species found in Jharkhand with an emphasis on its mechanical properties for structural applications.

6. Enumerate the advantages and disadvantages of Red Soil in construction Industry. (2)