

**MHA
THIRD SEM
HOSPITAL ENGINEERING, PLANNING & MAINTENANCE
MHA – 301**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 20 min.

Marks: 20

Choose the correct answer from the following:

$$1 \times 20 = 20$$

Objective

1. The customs or attitudes of the medical profession affect hospital _____.
 - a. Environment
 - b. Utilization
 - c. Bills
 - d. Operations
2. Before "blindly" proceeding ahead with designing a facility on paper, leadership wanted to hire a _____ to assess their space needs to determine the most financially feasible solution.
 - a. Doctor
 - b. Nurse
 - c. Consultant
 - d. Social medical worker
3. The initial step will be to establish the _____ and population likely to be served by the new hospital.
 - a. Area
 - b. Requirements
 - c. Space
 - d. Infrastructure
4. Bad design of hospital can increase the risks of _____.
 - a. Disinfection
 - b. Theft
 - c. Suffocation
 - d. Cross infection
5. The _____ design of the ward units controls the pattern of staffing.
 - a. Physical
 - b. Logical
 - c. Hospital
 - d. Interior
6. The first requirement in providing for growth and change is room for _____ in the master plan.
 - a. Destruction
 - b. Construction
 - c. Expansion
 - d. Contraction
7. The India, the percentage of population residing in rural part of the country is:
 - a. 80.02%
 - b. 75.26%
 - c. 45.24%
 - d. 68.84%

8. Biomedical Waste management Rule comes under:
 - a. Ministry of Environment & Forest
 - b. Ministry of Human Resource Development
 - c. Ministry of Health and Family Welfare
 - d. Ministry of Home Affairs
9. The biomedical engineering department is mainly concerned with
 - a. Maintenance of equipment
 - b. Equipment running
 - c. Equipment defect
 - d. All of the above
10. Components of hospital includes
 - a. Clinical services
 - b. Nursing services
 - c. Support services
 - d. All of the above
11. Planning a new hospital starts with setting goals for the hospital, without which the organization cannot have a definite direction or focus. Which of the following areas is not considered by an organization while studying the existing hospital facilities in an area?
 - a. Patient perception
 - b. Hospital occupancy
 - c. Physical condition of the facilities
 - d. Bed ratio
12. Historically, most healthcare organisations have thought of the physical building as a cost centre. In evidence based design, the physical building is viewed as:
 - a. Revenue centre
 - b. Strategic investment
 - c. Minor part of the hospital experience
 - d. Both b and c
13. Ambulatory care clinics in hospitals is dealt with
 - a. Inpatients
 - b. Outpatients
 - c. Both a and b
 - d. Acute care
14. Support service of the hospital includes all except
 - a. Pharmacy
 - b. Housekeeping
 - c. Laboratory
 - d. CSSD
15. A facility's environment of care defines its
 - a. Physical design
 - b. Patient outcome
 - c. Manpower
 - d. Aesthetic
16. Maximum time must be allotted to which of the following activity:
 - a. Planning
 - b. Execution
 - c. Direction
 - d. Coordination

17. Which of the certification demonstrates a building's sustainability
- a. ISO 9001
 - b. LEED
 - c. JCI
 - d. NABH
18. What is the primary advantage of modular hospital construction?
- a. Increased construction time
 - b. Higher cost of materials
 - c. Flexibility in design and layout
 - d. Limited scalability
19. In hospital design, what aspect is crucial for infection control?
- a. Color of the walls
 - b. Airflow and ventilation
 - c. Size of the patient rooms
 - d. Type of furniture used
20. How can modular buildings enhance sustainability in healthcare?
- a. By using non-recyclable materials
 - b. By reducing waste during construction
 - c. By increasing energy consumption
 - d. By limiting the use of green technologies

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(Descriptive)

Time: 2 hr. 40 mins.

Marks: 50

[Answer question no.1 & any four (4) from the rest]

1. Explain the six phase of hospital planning. 10
2. What is hospital planning? Explain the various surveys you conduct when planning a green hospital project with examples. 2+8=10
3. What is equipment planning? Explain briefly the guidelines for purchasing capital equipment for a new hospital. 2+8=10
4. Discuss in details the floor wise plan of a hospital along with reasons for the location of various departments. 10
5. How does the design of the hospital has a positive and negative impact on the patient and staff of the hospital? 5+5=10
6. What is a master plan? Describe the financial planning for a new hospital project. 2+8=10
7. Write short notes on any two: 5+5=10
 - a. Modular Building
 - b. Green hospital project and brown hospital project
 - c. Depreciable and non-depreciable equipment
 - d. Sensitivity analysis
8. Write down the ten points every healthcare promoter must take into consideration while planning, designing and constructing a hospital. 10

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