

# CBCS SCHEME



21CV485

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Question Paper Version : A

## Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Green Buildings

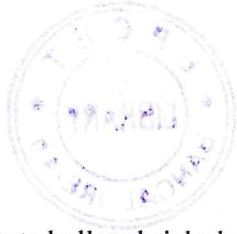
Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners on the OMR sheets are strictly prohibited.**

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1. Soil cement blocks help in reducing the amount of :  
a) Sand                      b) Cement                      c) Water                      d) Mortar
  2. Stone blocks help in saving materials by reducing wall thickness from :  
a) 30 – 20mm                      b) 20 – 10 cm                      c) 20 – 10 mm                      d) 30 – 20 cm
  3. FRP stands for  
a) Fibre reinforced polymer  
b) Fully reinforced polymer  
c) Fire resistant polymer  
d) Fibre reconditioned polymer
  4. In \_\_\_\_\_ cement mortar is reinforced with wire meshes  
a) Fibre reinforced cement  
b) Wire reinforced cement  
c) Ferrocement  
d) Mesh mortar
  5. Fibre Reinforced Concrete (FRC) is used in :  
a) Pavements                      b) Foundation                      c) Slab                      d) Beam



21CV485

6. Concrete hollow bricks have the following characteristics :
  - a) Less thermal insulation
  - b) Costly
  - c) Fast construction
  - d) Decrease floor area
7. Which of the following is/are basic building materials?
  - a) Wood
  - b) Cement
  - c) Brick
  - d) All of these
8. Lime replaces the use of cement by 50% in lime based stone masonry.
  - a) True
  - b) False
9. Recycling steel reduces
  - a) Energy use by 75%
  - b) Energy use by 50%
  - c) Energy use by 35%
  - d) Energy use by 20%
10. Which of the below roofing materials is most effective?
  - a) Asphalt
  - b) Plastic
  - c) Rubber
  - d) Metal
11. In Rat\_trap bond masonry course height is
  - a) 110mm
  - b) 75mm
  - c) 230mm
  - d) 190mm
12. By using filler slab technique :
  - a) 20% saving of concrete is there
  - b) Aesthetic ceiling is obtained
  - c) Less comfort is there
  - d) Load on foundation in creases
13. Economy can be achieved indoors, windows, ventilator by :
  - a) No frame
  - b) Less width
  - c) Steel frames
  - d) Less height
14. For sloping roofs, ferro cement roofing units can be used
  - a) True
  - b) False
15. Rat – trap bond masonry requires \_\_\_\_\_ less mortar
  - a) 10%
  - b) 50%
  - c) 40%
  - d) 20%
16. Which of the below is not a filler material in fillar slabs?
  - a) Rubber pieces
  - b) clay pots
  - c) Burnt clay bricks
  - d) Coconut shell

17. For natural and cost-effective ventilation, \_\_\_\_\_ can be used  
a) Hollow bricks      b) Walloperings      c) Skylight      d) Brick Jali
18. COSTFORD full form  
a) Centre of science and technology for rural development  
b) Centre of science and technology for rural deployment  
c) Centre of science and technology for rural department  
d) Centre of science and technology for rural division
19. The agency which demonstrate the practical usage of cost effective technology and housing concepts through model houses  
a) COSTFORD  
b) NIRMITHI KENDRA  
c) Habitat  
d) All of these
20. The Nirmithi Kendras are established under the chairmanship of  
a) Deputy Commissioner of District  
b) Chief Executive Officer, Zilla Panchayat  
c) District Commissioner  
d) MP of District
21. Which one of the following cause global warming?  
a) Carbon dioxide      b) Oxygen      c) Nitrogen      d) Hydrogen
22. Which one of the following result takes place due to global warming?  
a) Maintaining steady temperature  
b) Changes in rainfall  
c) Pleasant environment  
d) Causing less pollution
23. Which one of the following cause global warming?  
a) Radiative forcing  
b) Earth gravitation force  
c) Oxygen  
d) Centripetal force
24. The concept of carbon foot print was developed by?  
a) UNFCC  
b) UNEP  
c) William E. Rees and Mathis Wackemagel  
d) Ernst Haeckel



25. According to carbon footprint challenge, India will slash its carbon emission by \_\_\_\_\_ billion tons by the year 2030  
a) 1                      b) 2                      c) 3                      d) 4
26. You can help to decrease your carbon footprint by \_\_\_\_\_  
a) Buying daily use stuff from online  
b) By eating non-veg foods  
c) Buying your needs from the local shop  
d) Travelling a lots
27. Efforts taken in India to reduce global warming  
a) Focus on renewable energy  
b) Mobilisation of resources  
c) International of Solar Alliance (ISA)  
d) All of these
28. Embodied energy measured in buildings as  
a) Initial embodied energy  
b) Recurring embodied energy  
c) Operational energy  
d) All of these
29. The construction cost of green industrial manufacturing building is about \_\_\_\_\_ % higher than that of a conventional building  
a) 18%                      b) 28%                      c) 38%                      d) 48%
30. The green building uses comparatively \_\_\_\_\_ % lower energy than  
a) 11%                      b) 21%                      c) 31%                      d) 41%
31. Which of the following green rating systems are currently working in India?  
a) LEED                      b) GRIHA                      c) both a and b                      d) none of these
32. LEED means \_\_\_\_\_  
a) Leadership in energy and efficiency design  
b) Leadership in energy and efficiency document  
c) Leadership in energy and environmental design  
d) Leadership in energy and Environmental document
33. LEED gives rating in form  
a) 1 star, 2 star, 3 star, 4 star, 5 star  
b) Platinum, Gold and Sliver  
c) both a and b  
d) none of these

34. GRIHA means that m
- a) Green Rating for Indian Habitat Assessment
  - b) Green Rating for Integrated Habitat Assessment
  - c) Green Rating for International Habitat Assessment
  - d) Green Rating for Information Habitat Assessment
35. When GRIHA was launched in India?
- a) 2018
  - b) 2006
  - c) 2010
  - d) 2011
36. Sustainable planning considers, environmental, social, and \_\_\_\_\_ impacts of a buildings
- a) Technological
  - b) Economical
  - c) Both a and b
  - d) None of these
37. Which of the following options is not included in the sustainable development parameters?
- a) Gender inequality and diversity
  - b) Intergenerational equality
  - c) Growing annually
  - d) None of these
38. What is the definition of sustainable development?
- a) The growth that satisfies current demands without jeopardizing future generations ability to fulfill their own needs
  - b) Conserve mineral wealth and explore alternative energy sources while decreasing pollution and environmental impact
  - c) It is the process of creating land and building projects in such a way that they have environmental effect by enabling them to produce fuel efficient self sufficiency patterns
  - d) All of these
39. Sustainable building means that
- a) Green building
  - b) Environmental building
  - c) Both "a" and "b"
  - d) none of these
40. Characteristics of Green buildings
- a) location and transport
  - b) sustainable sites
  - c) efficient use of water
  - d) All of these
41. Solar energy knows as " \_\_\_\_\_ "
- a) power energy
  - b) green energy
  - c) electrical energy
  - d) all of these

42. Reasons use solar technologies for buildings
- a) Increasing energy consumption
  - b) Environmental consciousness
  - c) Global climate change
  - d) All of these
43. Solar powered building improve that heating and cooling system's efficiency by \_\_\_\_\_ %
- a) 30
  - b) 20
  - c) 10
  - d) 0
44. The key components of water efficiency in green building according to the USGBC are :
- a) Reduce indoor potable water use
  - b) Reduce water consumption to save energy
  - c) Improve Environmental well being
  - d) All of these
45. The methods to water management are as follows
- a) Rain water harvesting
  - b) Ground water recharge
  - c) Artificial ground water recharge
  - d) Drip irrigation
46. How many major sources of solids waste are there based on their origin?
- a) 10
  - b) 5
  - c) 9
  - d) 6
47. The term ISWM refers to
- a) International Solid Waste Management
  - b) Integrated Solid Waste Management
  - c) International Solid Waste Machine
  - d) integrated Solid Waste Machine
48. In how many stages the treatment of waste-water in STPs is carried out?
- a) One
  - b) Two
  - c) Three
  - d) Four
49. Green cover is a natural or planted vegetation covering a certain area of terrain, functioning as protection against soil erosion, protecting the fauna, and balancing the temperature
- a) True
  - b) False
50. Built environment can be defined as
- a) human made surroundings that provide the setting for human activity
  - b) material, spatial and cultural product of human labor that combines physical elements and energy in forms of living working and playing
  - c) human made space in which people live, work and recreate on a day to day basis
  - d) All of these.

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