

Question Bank (I scheme)

Name of Subject: Emerging Trends in Civil Engineering (ETC)

Subject code: 22603

Semester: VI

Unit Test: II

Course: CE6I

Each question carries 1 mark

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Unit 3: Latest Tools and Equipment

1. Fullform of LiDAR is:

- a. Light detection and removal
- b. Longitudinal direction and ranging
- c. Light detection and ranging
- d. Laser direction and ranging

Ans. c. Light detection and ranging

2. _____ is a surveying method that targets the object of interest with a pulse of light, and measures the time taken for the light to reflect back to the detector.

- a. LiDAR
- b. GPS
- c. Chain surveying
- d. Plane table surveying

Ans. a. LiDAR

3. A system used to detect the position of objects on the earth's surface using satellites that orbit the earth is called:

- a. GPS
- b. GIS
- c. GFS
- d. GBPS

Ans. a. GPS

4. Photogrammetry is the process of:

- a. deriving metric information about an object through measurement made on the photograph of the object.
- b. Processing photos in software
- c. Creating coloured photos from monochromatic ones
- d. None of the above

Ans. a. deriving metric information about an object through measurement made on the photograph of the object.

5. _____ is loader machine with a tracked chassis and a loader that can be used for digging and moving/loading materials

- a. Skid Loader
- b. Crawler Loader
- c. Excavator
- d. All of the above

Ans. b. Crawler Loader

6. Forklift truck is used for:

- a. Lifting and lowering
- b. Vertical Transportation
- c. Both 'a' and 'b'
- d. None of the above

Ans. c. Both 'a' and 'b'

7. The trencher which cuts with a digging chain or belt that is driven around a rounded metal frame or boom is called:

- a. Rockwheel trencher
- b. Chain Trencher
- c. Micro Trencher
- d. Portable trencher

Ans. b. Chain Trencher

8. _____ is used to lift and move materials over short distances.

- a. Cranes
- b. Forklift truck
- c. Belt conveyor
- d. None of the above

Ans. b. Forklift truck

9. The main advantage of mobile concrete mixer is:

- a. Convenient to move from site to site
- b. Convenient to change installation site according to need of construction project
- c. Both 'a' and 'b'
- d. None of the above

Ans. c. Both 'a' and 'b'

10. Cranes are used for:

- a. Lifting and lowering
- b. Vertical transportation
- c. Both 'a' and 'b'

d. None of the above

Ans. c. Both 'a' and 'b'

11. The following is used to transport materials having flat bottoms.

- a. Belt conveyor
- b. Roller conveyor
- c. Chain conveyor
- d. None of the above

Ans. b. Roller conveyor

12. _____ is a machine used for moving or removing dirt, gravel and any other unnecessary material from the surface.

- a. Scrapper
- b. Shovel
- c. Trencher
- d. Backhoe

Ans. a. Scrapper

Unit 4: Sustainable Resource Management

13. Which is not a strategy for sustainable water resource management?

- a) non maintenance of water resources
- (b) rational strategic visions
- (c) conjunctive regional water supply systems
- (d) reconstruction of water environments

Ans: a) non maintenance of water resources

14. _____ is one of the key methods of resolving water scarcity.

- a) Drought
- (b) water saving
- (c) dewatering
- (d) irrigation

Ans: (b) water saving

15. Prevent water pollution and to reconstruct water environment are achieved by:

- a) Environment protection laws and policies
- (b) water environmental educational
- (c) sufficient financial investment
- (d) all of the above

Ans: (d) all of the above

16. Sustainable water resource management should simultaneously satisfy ___ demands.

a) social, economic and environmental (b) social, educational and commercial (c) water, waste water and solid waste (d) all of the above

Ans: a) social, economic and environmental

17. Water scarcity is a result of ____.

a) Efficient management of water (b) Effective management of water (c) Mismanagement of water (d) all of the above

Ans: (c) Mismanagement of water

18. The 4 R's in waste management stand for:

a) reduce, reuse, record, recover (b) reuse, recycle, recover, resupply (c) reduce, reuse, recycle, recover (d) reuse, recycle, recover, rehabilitate

Ans: (c) reduce, reuse, recycle, recover

19. Solar, wind, geothermal, ocean thermal energy sources are all examples of:

a) renewable energy sources (b) non-renewable energy sources (c) exhaustible energy sources (d) none of the above

Ans: a) renewable energy sources

20. India receives solar energy equivalent to _____ kWh every year.

a) over 5000 trillion (b) over 5000 million (c) over 5000 billion (d) none of the above

Ans: a) over 5000 trillion

21. The first batch of steel windmills specially built for electricity generation were erected in:

- a) Germany (b) Norway (c) Denmark (d) USA

Ans: (c) Denmark

22. Any power system that combines two or more energy conversion devices, or two or more fuels for the same device is called as:

- a) hybrid energy system (b) dualtech power system (c) tetrach power system (d) geothermal system

Ans: a) hybrid energy system

23. _____ is an inspection survey and an analysis of energy flows for energy conservation in a building.

- a) solar audit (b) structural audit (c) financial audit (d) energy audit

Ans: (d) energy audit

24. A physical event or phenomena which may cause injury or loss of life, damage to property, social and economic disruption or environmental degradation is called:

- a) hazard (b) disaster (c) disaster preparedness (d) vulnerability

Ans: a) hazard

Unit 5: Advancement in Construction

25. A building with net energy consumption equal to nil is called as _____.

- a) green building (b) zero energy building (c) passive energy building (d) economic building

Ans: (b) zero energy building

26. The principle of zero energy building is ____.

a) to reduce carbon emissions (b) to optimize carpet area (c) to minimize use of pollutants (d) to use fossil fuels

Ans: a) to reduce carbon emissions

27. Which of the following is not used for zero energy building?

a) high-efficiency solar panels (b) high-efficiency heat pumps (c) highly insulating furniture (d) highly insulating low-E triple-glazed windows

Ans: (c) highly insulating furniture

28. To reduce use of electricity one can suggest to use ____.

a) generators (b) rechargeable battery (c) kerosene based lamps (d) photovoltaic cells

Ans: (d) photovoltaic cells

29. Which of the following organisations certifies green buildings in India?

a) LEED (b) DGNB (c) CASBEE (d) GRIHA

Ans: (d) GRIHA

30. Which of the following is a feature of green buildings?

a) Minimal disturbance to landscapes and site condition (b) Use of non-toxic and recycled / recyclable material (c) Efficient use of water and water recycling (d) all of the above

Ans: (d) all of the above

31. Fullform of LEED is:

a) Leadership in environmental and ecological design (b) Leadership in environmental and economic design (c) Leadership in energy and environmental design (d) None of the above

Ans: (c) Leadership in energy and environmental design

32. When a large number of houses are constructed to suit the requirements of population of an area or country, then it is termed as:

a) prefab housing b) precast housing (c) mass housing (d) affordable housing

Ans: (c) mass housing

33. Which of these is not an advantage of precast housing:

a) saves construction time (b) quality assurance (c) cost-effective (d) transportation issue

Ans: (d) transportation issue

34. India is presently facing a deficiency of ____ housing units.

a) 10 million (b) 20 million (c) 30 million (d) 40 million

Ans: (c) 30 million

35. India's first net zero building is:

a) Parliament house (b) Indira Gandhi airport (c) Indira Paryavaran Bhawan (d) None of the above

Ans: (c) Indira Paryavaran Bhawan

36. The main objective of mass housing is to:

a) construct large number of houses (b) serve the upper class of society (c) produce mass quantity of affordable houses for middle class people and people below poverty line (d) none of the above

Ans: (c) produce mass quantity of affordable houses for middle class people and people below poverty line