Chettinad College of Engineering & Technology
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

Department of Civil Engineering

CE8022 – Prefabricated Structures

Unit V – MCQ Bank

1..... is the factor by which the actual base shear force, that would be generated if the structure were to remain elastic during its response to the Design Basis Earthquake.

a)Importance factor

b)Response reduction

c) factor

d)All of the above

Answer: b

2..... is the factor used to obtain the design seismic force depending on the functional use of the structure, characterized by hazardous consequences of its failure, its post-earthquake functional need, historic value, or economic importance.

a) Importance factor

b) Response reduction factor

c) All of the above

d) None of the above

Answer: a

3.The elastic rebound theory is an explanationfor how ... is spread duringearthquakes

a) Load

b) Stress

c) Energy

d) Intensity of load

Answer: c

4.Damping is the energy dissipation properties of a material or system under stress.

a) Dynamic stress

b) Static stress

c) Non cyclic stress

d) Cyclic stress

Answer: d

5. Damping is the effect of .....

i) Enternal friction

ii) Perfect elasticity of material

iii) Slipping

iv) Sliding

a) (i),(ii)

b) (ii),(iii)

c) (iii),(iv)

d) All of the above

Answer: c

6. Choose the correct answer.

a) Converting static load into dynamic load is known as equivalent design loads.

b) Converting dynamic load into static load is known as equivalent design loads.

c) Both a &b

d) None of the above

Answer: b

7. Which of the following does not comes under progressive collapse?

a) Local over loading

b) Service system (gas) explosion

c) Vehicular and falling material impacts

d) Planned localised fire

8. Which of the following defines intensity?

a) The severity of earthquake shaking is assessed using a descriptive scale b) Quantitative measure of the size of the earthquake at its source

c) Both a &b

d) None of the Above

Answer: a

9. Which of the following defines Magnitude?

a) The severity of earthquake shaking is assessed using a descriptive scale

b) Quantitative measure of the size of the earthquake at its source

c) Both a &b

d) None of the Above

Answer: b

10. Degree of progressivity is the ratio of

i) total collapsed area by the triggering event.

ii) Affected region to the damaged by the triggering event

a) only(i)

b) only(ii)

c) both i &ii

d) none of i &ii

Answer: a

11.How many methods are generally used to avoid the disproportionate collapse in a building?

a) Oone

b) Two

c) Three

d) Zero

Answer: c

12. Which is the are the approaches to avoid progressive collapse? a) Redundancy or alternate load path.

b) Local resistance

c) Interconnection or continuity

d) All of the above

Answer: d

13.Choose the correct answer in terms of special requirements for building in High Seismic Zones

a) The height of the building shall generally restricted to 5 stores in Zone IV

b) The height of the building shall generally restricted to 7 stores in Zone IV

c) The height of the building shall generally restricted to 8 stores in Zone IV

d) The height of the building shall generally restricted to 10 stores in Zone IV

Answer: d

14.Choose the correct answer in terms of special requirements for building in High Seismic Zones

a) The height of the building shall generally restricted to 5 stores in Zone V

b) The height of the building shall generally restricted to 6 stores in Zone V

c) The height of the building shall generally restricted to 7 stores in Zone V

d) The height of the building shall generally restricted to 8 stores in Zone V

Answer: a

15.In a Prefabricated R C floors in a cyclone prone zone the Structural deck concrete of grade not leaner than ..... should be provided over pre-cast components to act monolithic with them.

a) M10

b) M15

c) M20

d) M25

Answer: c

16.Which of the following does not comes under the types of progressive collapse

a) Domino-type collapse

b) Section type collapse

c) Stability type collapse

d) Mixed-type collapse

Answer: c

17.Which type of failure follows the initiating event, separation of structural components, release of potential energy and the occurrence of impact forces.

(a) Pancake-type collapse

(b) Zipper-type collapse

(c) Domino-type collapse

(d) Section type collapse

Answer: a

18.Which type of failure can be termed as “fast fracture” instead of progressive failure?

(a) Pancake-type collapse

(b) Zipper-type collapse

(c) Domino-type collapse

(d) Section type collapse

Answer: d

19.Structural integrity in a structure can be achieved by

(a) Connections between structural components should be ductile.

(b) Good plan layout

(c) Providing an integrated system of ties among the principal elements of the structuralsystem

(d) All of the above

Answer: d

20.What are the causes of failure during earthquake?

(i) Misconception of structural system which lacked lateral stability and strength

(ii) failure of connections

(iii)Inability of the system to undergo large deformation

a) (i),(ii)

b) (ii),(iii)

c) (iii),(i)

d) All of the above

Answer: d

21. How many types of progressive collapse

a) 5

b) 6

c) 4

Answer: a

22. Several cases of progressive collapse have been caused by

a**) Accidental impact**

b) Foundation failure

c) Faulty construction

Answer: a

23. The _____ compressive strength required from structural consideration.

a) Nominal

b) Minimum

c) Maximum

d) No

Answer: b

24. Depending on the degree of workability and placing condition determine the _____

a) Slump value

b) The maximum size of aggregate

c) The amount of mixing water

d) The minimum water-cement ratio

Answer: a

25. The lower the w/c ratio _____ the strength of concrete.

a) Higher

b) Lower

c) Poor

d) Moderate

Answer: a