



Fill in the Blanks on Pavement Materials

These questions are suitable for **Diploma and B.Tech Civil Engineering** students.

-
1. The uppermost layer of a pavement is called the _____.

Answer: Surface course

-
2. The main function of pavement is to transfer wheel loads safely to the _____.

Answer: Subgrade

-
3. The natural soil layer supporting the pavement is called the _____.

Answer: Subgrade

-
4. The layer provided above subgrade to improve load distribution is called the _____.

Answer: Sub-base

-
5. The layer immediately below the surface course is called the _____.

Answer: Base course

-
6. Bitumen is mainly used as a _____ **material** in flexible pavements.

Answer: Binding

-
7. Cement concrete pavements are classified as _____ **pavements**.

Answer: Rigid

8. Asphalt and bitumen are commonly used in _____ pavements.

Answer: Flexible

9. The test used to determine the strength of pavement subgrade is the _____ test.

Answer: CBR (California Bearing Ratio)

10. Aggregates used in pavement construction should have high _____ strength.

Answer: Crushing

11. The resistance of aggregates to wear is measured by the _____ test.

Answer: Abrasion

12. The property of bitumen that indicates its hardness is called _____.

Answer: Penetration

13. The softening point of bitumen is determined by the _____ and ball test.

Answer: Ring

14. The ductility test measures the stretching ability of _____.

Answer: Bitumen

15. The material used to fill voids between coarse aggregates is called _____.

Answer: Fine aggregate

16. The most common coarse aggregate used in pavement is _____.

Answer: Crushed stone

17. The measure of aggregate size distribution is called _____ **analysis**.

Answer: Sieve

18. The process of mixing bitumen with aggregates is called _____ **mixing**.

Answer: Asphalt

19. The layer provided for drainage in pavements is called the _____ **layer**.

Answer: Drainage

20. The failure caused by repeated wheel loads is called _____ **failure**.

Answer: Fatigue

21. The cracking pattern caused by fatigue in flexible pavement is called _____ **cracking**.

Answer: Alligator

Mcq\$

. The main function of a pavement is to:

- A) Increase traffic speed
- B) Provide decoration to roads
- C) **Transfer wheel loads safely to the subgrade**
- D) Reduce road width

Answer: C

2. The topmost layer of a flexible pavement is called:

- A) Subgrade
- B) Sub-base
- C) Base course
- D) **Surface course**

Answer: D

3. Flexible pavements are mainly constructed using:

- A) Cement concrete
- B) Steel
- C) **Bitumen and aggregates**
- D) Bricks

Answer: C

4. Rigid pavements are generally made of:

- A) Bitumen
- B) Gravel
- C) **Cement concrete**
- D) Soil

Answer: C

5. The natural soil layer supporting pavement is called:

- A) Base course
- B) Surface course
- C) **Subgrade**
- D) Wearing course

Answer: C

6. CBR test is used to determine:

- A) Bitumen viscosity
- B) Aggregate size
- C) **Strength of subgrade soil**
- D) Cement quality

Answer: C

7. Bitumen is used in flexible pavement as a:

- A) Filler
- B) **Binding material**
- C) Aggregate
- D) Drainage material

Answer: B

8. The penetration test of bitumen determines its:

- A) Strength
- B) Color
- C) **Hardness/consistency**
- D) Density

Answer: C

9. The ductility test is performed on:

- A) Cement
- B) Aggregate
- C) Soil
- D) **Bitumen**

Answer: D

10. The Ring and Ball test determines the:

- A) Flash point
- B) **Softening point of bitumen**
- C) Aggregate strength
- D) Water absorption

Answer: B

11. The abrasion test of aggregates determines:

- A) Shape
- B) **Resistance to wear**
- C) Water content
- D) Specific gravity

Answer: B

12. The impact test of aggregates measures:

- A) Hardness
- B) **Toughness**
- C) Plasticity
- D) Moisture content

Answer: B

13. The size distribution of aggregates is determined by:

- A) CBR test
- B) Penetration test
- C) **Sieve analysis**
- D) Ductility test

Answer: C

14. The layer between surface course and subgrade is:

- A) Shoulder
- B) **Base course and sub-base**
- C) Median
- D) Drain

Answer: B

15. The main purpose of compaction of pavement materials is to:

- A) Increase voids
- B) Reduce strength
- C) **Increase density and stability**
- D) Increase water content

Answer: C

16. Alligator cracking occurs mainly due to:

- A) Excess drainage
- B) **Fatigue failure**
- C) Low temperature only
- D) Poor markings

Answer: B

17. Rutting in pavement is caused by:

- A) Expansion joints
- B) **Permanent deformation under wheel loads**
- C) Road signs
- D) Rainfall only

Answer: B

18. Coarse aggregates in pavement should have:

- A) Low strength
- B) High water content
- C) **High crushing strength**
- D) Low durability

Answer: C

19. The material used to fill voids between coarse aggregates is:

- A) Bitumen
- B) **Fine aggregate**
- C) Cement
- D) Soil

Answer: B

20. The pavement layer that provides direct contact with vehicle tyres is:

- A) Subgrade
- B) Sub-base
- C) Base course
- D) **Wearing course**

Answer: D