BITT POLYTECHNIC, RANCHI

DEPARTMENT OF CIVIL ENGINEERING

Question Set-4 Transportation Engineering

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A. Objectives Questions:

- 1. Which of the following represent a carpet of sand bitumen mix without course aggregate?
 - A. Mastic asphalt. B. Sheet asphalt. C. Bituminous carpet. D. Bituminous concrete
- Horizontal curve 480 m, for 7.5 metre to line road is to be designed for a speed of of 80 kmph. The raising of outer edge of the pavement with respect to inner edge is
 - A. 0.14m. B. 0.22 m. C. 0.24m. D. 0.27m.
- 3. As per IRC maximum load of axle of a vehicle should not exceed
 - A. 8165 kg. B. 9500 kg. C. 800 kg. D. 7500 kg
- 4. The mechanical widening of single Lane road of a horizontal curve of radius hundred for vehicle wheelbase of 3 metre is
 - A. 0.025m. B. 0.032 m. C. 0.045m. D. 0.085m.
- 5. Safe stopping distance for vehicle moving at 60 kmph is 50 m and average length of vehicle is 5 metre then find basic capacity of roadway
 - A. 700. B. 1200. C. 1090. D. 1872
- 6. For a sandy soil the most common method of stabilization is
 - A. Soil cement stabilization.B. Mechanical stabilization.C. Soil lime stabilization.D. Soil bitumen stabilization
- 7. The drain which provided parallel to roadway to intercept and divert the water from hill slopes is called
 - A. Sloping drain. B. Catch water drain. C. Side drain. D. Cross drain.
- 8. Reflection cracking is observed in

A. Flexible pavement.

- B. Rigid pavement.
- C. Rigid overlay over flexible pavement. D. Bituminous overlay over concrete pavement
- 9. The stopping sight distance depends upon
 - A. Reaction time of driver.
- B. Speed of vehicle
- C. Efficiency of brake.
- D. All of these
- 10. The best binder material to be used with stone aggregate for patch repair work to patch pothole onward pavement during the rainy season main traffic is also heavy is
 - A. Clay soil.

B. Rapid curing cutback bitumen.

C. Hot bitumen.

D. Bituminous emulsion

B. Short Answer Types Questions:

- 1. what are the various types of bituminous material used in highway?
- 2. What are the general problems while using bitumen in paving mixes?
- 3. List out the various test on bitumen?
- 4. Write a short note on penetration test?
- 5. What is spot test?
- 6. Explain water content test?
- 7. Define cutback bitumen?
- 8. What are the types of cutback bitumen?
- 9. Explain bitumenous emulsion?
- 10. Define tar?

C. Long Answer Types Questions:

- 1. Write a short note on aberration test?
- 2. Write a short note on impact test?

3.	Explain the soundness test of aggregate?
4.	Write a note on shape test?
5.	Write a short note on specific gravity and water absorption test?