CONSTRUCTION METHODS
AND MACHINES

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer *all* questions.

PART – A

1. Choose the correct answer from the options given
    below the statement :   2×5=10

    (i)   Construction economy can be achieved
          by

          (a) Engineers

          (b) Contractors

          (c) Both (a) and (b) above

          (d) Client.

(ii) Which of the following is a hauling equipment ?

(a) Tractor

(b) Bull dozer

(c) Scraper

(d) Cranes.

(iii) The compaction process can be accomplished by which process ?

(a) Rolling

(b) Tampering

(c) Vibration

(d) All of the mentioned above.

(iv) Air compressor is a device where air pressure is

(a) above atmospheric pressure

(b) below atmospheric pressure

(c) below absolute pressure

(d) above absolute pressure.

(v) Which of the following is vulnerable to earthquake loading ?

(a) Welded joints

(b) Riveted joints

(c) Bolted joints

(d) All of the mentioned above.

2. (a) Why temperature of concrete ingredients should be controlled while doing concreting in hot weather ? 2

(b) Why delayed setting is necessary in concreting in cold weather ? 2

(c) What is quality control of concrete ? 1

(d) What is job layout ? 2

(e) Write the name of two equipments which are used in erecting steel structures. 2

(f) Mention two uses of air compressor. 2

(g) Which machine is used in compacting the surface of road ? 1

(h) What is hoisting equipment ? 1

(i) What is special equipment ? 2

PART – B

3. (a) What are the cost involved in the construction project ? **4**

   (b) What is construction economy ? What are the duties of an engineer and a contractor with respect to construction economy ?

   1+10=11

4. Why job layout is necessary ? Explain the various factors governing the job layout of a construction project. **3+7=10**

5. What is a framed structure ? Explain how placing of concrete in cold and hot weather can be done. **5+10=15**

6. What are differences between standard and special equipments ? **5**