No. of Printed Pages : 03 **Roll No. .....**

2041

B. Arch. EXAMINATION, Dec. 2017

(Fifth Semester)

(Old Scheme) (Re-appear Only)

(ARCH.)

AR-303-G

BUILDING CONST. & MATERIALS-V

Time : 3 *Hours*] [*Maximum Marks :* 50

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *three* questions in all. Q. No. **1** is compulsory. Attempt any *two* questions from four Units. Suitable assumptions may be made for steel sections wherever applicable.

1. Present an overview of the properties of steel that make it suitable for the construction industry while also outlining the advantages of using steel as a construction material and illustrate your argument with appropriate examples. **20**

Unit I

2. Identify the various methods of making joints in steel and illustrate through sketches the various types of joinery details that can be undertaken in a typical steel frame. The size of the frame can be assumed. **15**

Unit II

3. Draw all relevant details of a Grillage Foundation being recommended for a five floor steel frame building measuring 17.0 m × 13.0 m × 3.5 m (1xbxh) that is standing on a soil with relatively poor bearing capacity. **15**

Unit III

4. A parcel godown in a railway station of size 42.0 m × 15.0 m × 5.0 m (l×b×h) is to be built in steel. Present all details of the wall finish to be undertaken as steel cladding. **15**

Unit IV

5. A factory shop floor of size 17.0 m × 9.0 m × 7.0 m (l×b×h) is to be built in steel. It is provided with a mezzanine floor for the shop floor supervisor measuring 3.0 m × 2.5 m × 2.75 m (l×b×h). Draw all relevant details pertaining to the mezzanine floor. **15**