

**NEW**  
**Part-III 3-Tier**  
**2019**

**GEOLOGY**  
**(Honours)**  
**PAPER—VIII**  
**(PRACTICAL)**

*Full Marks : 100*

*Time : 6 Hours*

*The figures in the right-hand margin indicate full marks.  
Candidates are required to give their answers in their  
own words as far as practicable.*

*Answer all questions.*

**Group—A**  
**(50 Marks)**

1. (a) Give a detailed morphological account of the given specimens (3) of the Invertebrate fossils and indicate their diagnostic characters and name them. 3×5
- (b) Comment on the modes of preservation of the specimens. 3
- (c) Determine the age of the assemblage. 2

2. (a) Give a detailed morphological account of the specimen (1) of plant fossil and indicate the diagnostic characters and identify the specimen. 4
- (b) Comment on the mode of preservation of the specimen. 1
3. Compare the morphological characters between the two (2) gastropoda specimens. 5
4. (a) Interpret the given hydrogeological map. (Map attached) 5
- (b) An undisturbed sample of a medium sand weight 484.68 g. The core of the undisturbed sample is 6 cm in diameter and 10.61 cm high. The sample is oven-dried for 24 hours at 110°C to remove the water content. At the end of the 24 hours, the core sample weighs 447.32 g. Determine the bulk density, void ratio, water content, porosity and saturation percentage of the sample. 5
5. Interpret the given satellite imagery (will be provided at the examination centre). Create a vector data file of a given raster data file and mark the water bodies, rivers, roads and measure their area using appropriate GIS software. 10

### Group—B

(50 Marks)

6. Seminar presented by the students. 25
7. General Viva-Voce. 20
8. Laboratory Note Book (Gr. A). 5