Register Number: ……..

B.E DEGREE EXAMINATIONS: NOV/DEC 2010

Third Semester

CIVIL ENGINEERING

U07AG302: Applied Geology

Time: Three Hours **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 1 = 10 Marks)

1. Outer layer of Earth

A) Mantle B) Crust C) Core D) Jetty

2. Local ground water above the regional ground water table and separated from it by an impervious layer

A) Perched water table B) Aquiclude C) Aquifer D) Aquitard

3. Hardness of Diamond is

A) 8 B) 9 C) 1 D) 10

4. Example for migrating mineral is

A) Coal B) Peat C) Petroleum D) Lignite

5. The rocks are formed by the solidification of molten materials

A) Sedimentary Rock B) Metamorphic Rock C) Igneous Rock D) Crystalline rock

6. Foliated crystalline metamorphic rock

A) Schist B) Talus C) Scree D) 10

7. Hanging wall apparently moved down with respect to Foot wall

A) Normal fault B) Reverse fault C) Dip fault D) Oblique fault

8. The fold in which the axial plane is essentially vertical is

A) Symmetrical fold B) Asymmetrical fold C) Recumbent fold D) Over turned fold

9. India’s major coal deposit

A) Gondwana coal B) Tertiary coal C) Peat coal D) Anthracite coal

10. Injection of slurry of water and cement and some chemical into the ground is

A) Grouting B) Treating C) Tunnelling D) Injecting

PART B (10 x 2 = 20 Marks)

11. What are the civil engineering considerations to product the coast from marine erosion?

12. Distinguish Deluvium and Eluvium

13. Define the term Crystal and give the elements of symmetry of normal class of isometric system

14. Describe Cavity filling deposits

15. Describe Talus and Scree

16. Distinguish with neat sketch Lapoliths and Laccoliths

17. What are the Photo recognition elements?

18. What are the types of seismic methods and their uses?

19. Write a brief notes on Litttoral and Rip current.

20. Give the Physical properties of Building Stones.

PART C (5 x 14 = 70 Marks)

21. (a) How do rivers cause erosion, transportation and deposition ? Give the erosional and depositional land forms made by rivers.

(OR)

(b) Explain the occurrence, movement and geological aspects of Ground water.

22. (a) Explain the different physical properties of minerals with example for each.

(OR)

(b) Describe the following

(i) Felspar family of minerals (7)

(ii)Various forms of orthorhombic system (7)

23. (a) Give the composition, texture , physical properties , occurrence and uses of granite and basalt

(OR)

(b) (i) How will you distinguish the three kinds of rocks? (10)

(ii) List out the chief intrusive forms igneous rocks. (4)

24. (a) How will you distinguish joint from faults? Describe with neat sketches the terminology and various types of faults.

(OR)

(b) Describe the various types of folds and add note on engineering importance of folds.

25. (a) What is tunnel ? Describe the various geological problems met during the construction of tunnels.

(OR)

(b) Write technical notes on (i) Coal reserves of India. (ii)Grouting (iii) Preventive measures to mitigate the land slides.

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