University of Mumbai

Civil Engineering Examination

Sub: CEC303/ Engineering Geology Year/Sem:- SE/ III Sem
Max. Marks: 80 Duration: - 2Hrs

Q1. Attempt all the MCQS (20 X 2 mark= 40 marks)

1. Paleontology is a subdivision of
   a) Petrology
   b) Historical Geology
   c) Mining Geology
   d) Metrology

2. Nature of L waves are,
   a) Shear
   b) Compression
   c) Torsion
   d) Flexure

3. The core region of the earth was identified by
   a) S.D. Jason
   b) Andrija Mohorovičić
   c) R.D. Oldham
   d) Charles Lyell

4. The disintegration of rocks due to the formation of sodium chloride crystals within cavities is called
   a) Exfoliation
   b) Scree
   c) Exudation
   d) Dyke

5. A plunge pool is a phenomenon observed in
   a) River Meandering
   b) Flood Plains
   c) Cuesta
   d) Waterfalls

6. Length of 1 S-shaped meander is equal to
   a) 4 times the width of stream
   b) 6 times the width of stream
   c) 2 times the width of stream
   d) 7 times the width of stream

7. Refreezing of meltwater in cavities and cracks of rocks is known as
   a) Frost action
   b) Cryovico
   c) Niviation
   d) Exudation

8. Which of the following type of moraines is absent if there is only a single glacier valley
   a) End Moraine
   b) Medial Moraine
   c) Lateral Moraine
   d) Ground Moraine

9. Approximately how long did the Big Bang take place?
   a) 10-15 thousand years ago
   b) 10-15 million years ago
   c) 100-150 million years ago
   d) 10-15 billion years ago

10. Which of the following is considered as father of geology?
   a) John Butler
   b) Art Smith
   c) James Hutton
   d) Alfred Wegner

11. The Si: Al ratio for feldspar group is
   a) 4:1 to 1:1
   b) 3:1 to 1:1
   c) 2:1 to 1:1
   d) 1.5:1 to 1:1

12. Si:O ratio of 4:11 is a peculiar characteristic of this group
   a) Pyroxene
   b) Amphibole
   c) Mica
   d) Oxide

13. The minimum number of limbs for a fold are
   a) 1
   b) 2
   c) 3
   d) 4

14. The phenomenon of change of colour due to the oxidation of minerals at the surface is known as
   a) Iridescence
   b) Allochromatism
   c) Tarnish
   d) Silky

15. A solid barrier constructed at a suitable location across a river valley to impound water is called
   a) Dam
   b) Reservoir
   c) Bridge
   d) Retaining wall

16. When liquids cool down in existing cavities forming new minerals the structure is known as
    a) Vesicular
    b) Amygdaloidal
    c) Pillow
    d) Orbicular

17. Clastic rocks with particle size between 2 mm & 1/16 mm are known as
    a) Gravel
    b) Basalt
    c) Granite
    d) Sand

18. Which of the following is not true about a mineral
    a) Organic Substance
    b) Inorganic Substance
    c) Naturally occuring
    d) Definite chemical composition

19. Pick the option which does not determine the texture of igneous rocks.
    a) Colour
    b) Size
    c) Shape
    d) Arrangement of constituents within rock mass

20. The layered arrangement in sedimentary rocks is called
    a) Ripple Marks
    b) Mud cracks
    c) Stratification
    d) Rain Prints

Q2. Attempt any FOUR **(04 X 05 marks= 20 marks)**

1. With neat sketches explain fold terminology.
2. Give suitable precautions while dam construction.
3. In an area 3 vertical drill holes were driven to probable fault. The location of drill holes and altitude of fault are as follow. What is the attitude of fault

Drill Hole Level	Location	Altitude of fault
B	1000 feet east of A	900 ft
C	1000 feet north of A	100 ft
D	1200 feet N60W of A	700 ft

4. With neat sketch explain working principle Seismograph
5. Difference between
    i. Rock forming mineral & ore forming minerals
    ii. Steak & Strike
6. Write short note on Perched Water table

Q3. Attempt any TWO **(02 X 10 marks= 20 marks)**

1. Describe with neat sketches the internal structure of Earth.
2. Explain with neat sketches geological action of wind with different types of landforms
3. Explain metamorphic agents with various types of metamorphism
4. Explain various methods for artificial recharge of ground water