

**1<sup>st</sup> June, 2021**

**GGY 3051 Quiz 1. Time allowed: 25 minutes (including submission).  
Attempt all questions**

**1. What kind of soils do you expect to have heaving effect on structures?**

- a) Shrinking soils
- b) Collapsible soils
- c) Expansive soils
- d) Cohesionless soils

**2. Which statement is true in the usefulness of Engineering Geology?**

- a) Evaluating and mitigating groundwater contamination
- b) Design of foundations, reservoir storage facilities, dams and tunnels
- c) Mitigating natural hazards such as earthquakes
- d) All of the above

**3. Stratification can be seen widely in which of the following rocks**

- a) Sedimentary rocks
- b) Fossil rocks
- c) Metamorphic rocks
- d) Igneous rocks

**4. Is it possible to have rocks that dip at an angle more than 90°?**

- a) Yes
- b) No
- c) When dip direction is at N180°E
- d) When the strike is more than N270°E

**5. In a reverse fault that results from horizontal compressive stresses, the hangingwall side moves**

- a) Sideways
- b) Downwards
- c) Upwards
- d) In same direction as Footwall

**6. Folding in rocks happens when the rocks are exposed to**

- a) Compressional stresses
- b) Tensional stresses
- c) Shear stresses
- d) Strike-slip stresses

**7. When magma from the earth's mantle extrudes to the surface of the earth in form of lava and solidifies, it forms extrusive igneous rocks. Compared to the intrusive igneous rocks that form from within the earth's crust, what will be the texture of extrusive igneous rocks?**

- a) Conchoidal
- b) Coarse
- c) Fine
- d) Amygdaloidal

**8. Ripple Marks are metamorphic structures**

- a) True
- b) False

**9. Which statement is correct?**

- a) A structural dome is anticlinal in nature and the younger rocks will be in the centre/middle
- b) A structural valley is synclinal in nature and the younger rocks will be in the centre/middle
- c) A structural dome is synclinal in nature and the older rocks will be in the centre/middle
- d) A structural valley is anticlinal in nature and the younger rocks will be in the centre/middle

**10. What are the fractures along which there has been relative movement of blocks called?**

- a) Faults
- b) Folds
- c) Intrusions
- d) Joints

**11. When a foundation is made in a soil, it undergoes both primary and secondary settlements**

- a) True
- b) False

**12. In a right-lateral fault, the block movement is on the right side of the fault line**

- a) True
- b) False

**13. Tensile stresses in rocks results in**

- a) Shear failure
- b) Shortening strain
- c) Lengthening strain
- d) None of the above

**14. Layering in igneous rocks can lead to mafic minerals and felsic minerals segregating. What kind of structure is layering?**

- a) Primary
- b) Secondary

**15. It is best to make a road cut when a hill is slopping in the opposite direction to the dip of the strata**

- a) True
- b) False
- c) Sometimes
- d) None of the above

**16. Shear stresses act**

- a) In parallel and same direction
- b) In perpendicular and same direction
- c) In parallel and opposite direction
- d) In perpendicular and opposite direction

**17. Which one is always true?**

- a) Both Faults and joints are fractures with noticeable movement on one side of the fracture
- b) Joints are fractures that are filled up with recrystallised minerals
- c) Joints are fractures with no evidence of movement on either side of the fracture
- d) Faults make up aquifers in fractured granites

**18. Limestone is not easily soluble in pure water but carbonated water dissolves the rock effectively. Would you say that is**

- a) True
- b) False

**19. Foliation is geological layering in Igneous rocks**

- a) True
- b) False

**20. For a construction project to take place, what determines its feasibility, planning, design and safety?**

- a) Cost
- b) Size of area
- c) Geological conditions
- d) Accessibility to the Area

**21. Which of the following are geological structures?**

- a) Joints, beds, folds, footwall
- b) Faults, orebody, joints, domes
- c) Folds, beds, joints, foliation
- d) Joints, contacts, faults, sediments

**22. What are the undulations or bends developed in rocks called?**

- a) Faults
- b) Folds
- c) Unconformity
- d) Joints

**23. Which type of deformation is folding?**

- a) Brittle
- b) Tensile
- c) Ductile
- d) Malleable

**24. Most structures are founded in soils because of soils'**

- a) Compressional strength

- b) Shear strength
- c) Tensional strength
- d) Rigidity

**25. Metamorphic structures are secondary structures that form in a rock when it is exposed to**

- a) Erosion and weathering
- b) High precipitation and weathering
- c) High temperature and pressure conditions
- d) Atmospheric pressure and compressional stresses

**End...**