



**SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR**  
Siddharth Nagar, Narayanavanam Road – 517583

**QUESTION BANK (DESCRIPTIVE)**

**Subject with Code : ENGINEERING GEOLOGY(13A01506)**

**Course & Branch: B.Tech - CE**

**Year & Sem: III-B.Tech & I-Sem**

**Regulation: R13**

**UNIT –II**

**PETROLOGY AND STRUCTURAL GEOLOGY**

- |  |     |
|--|-----|
| 1. Define term “rock” Describe the classification of rocks & their characteristics?  | 10M |
| 2. Describe the following rocks?   | 10M |
| a) Granite   b) Pegmatite   c) Sand stone   d) Marble  |     |
| 3. a) What is metamorphism? Discuss the various agents of metamorphism?  | 10M |
| b) Why heat is considered the most important agent of metamorphism?  |     |
| c) What role do chemically active fluids play in metamorphism?   |     |
| 4. Explain the classification of sedimentary rocks giving suitable example?  | 10M |
| 5. a) Describe the columnar, flow and sheet structures of Igneous rocks.   | 10M |
| b) What are extrusive and intrusive igneous rocks? Describe their salient features?  |     |
| 6. Classify and describe the different types of faults. Give the various minor structures found in the fault Zones. Discuss the effects of faulting on various engineering projects. | 10M |
| 7. a) What is an anticline? How do you differentiate asymmetrical anticline from symmetrical Anticlines?   |     |
| b) What is a monocline? How is an isoclinal fold different from a monocline?   | 10M |
| 8. What is an unconformity? Describe different types of unconformity. Add a note on the Importance of Unconformity?  | 10M |
| 9. Explain the common types of soils their origin and occurrence in India?   | 10M |
| 10. a) Define petrology?   | 2M  |
| b) Write about the occurrence of granite?  | 2M  |
| c) What is ductility of rocks?   | 2M  |
| d) Define structural geology?  | 2M  |
| e) Define dip and strike?  | 2M  |

Prepared by:

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**QUESTION BANK (OBJECTIVE)**
**Subject with Code : ENGINEERING GEOLOGY(13A01506) Course & Branch: B.Tech - CE**
**Year & Sem: III-B.Tech & I-Sem**
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- 1) Petrology is a study of \_\_\_\_\_ [     ]  
 A) Rock     B) minerals     C) Petrol     D) soil
- 2) A coarse grained plutonic igneous rock composed predominantly of quartz, microcline, and Biotite  
 A) Gabbro     B) Syenite     C) Granite     D) Anorthosite [     ]
- 3) What is the name of the rock consisting essentially of olivine and Anorthosite [     ]  
 A) Eucrite     B) Troctolite     C) Allivalites     D) Picrite
- 4) Rocks are broadly classified into how many groups [     ]  
 A) 2     B) 3     C) 4     D) 5
- 5) \_\_\_\_\_ rocks are formed by cooling and magnification of magma [     ]  
 A) Metamorphic rocks     B) Igneous rocks     C) Sedimentary rocks     D) None of these
- 6) The pressure and heat that drive metamorphism result from which three forces? [     ]  
 A) The internal heat of the Earth, the weight of overlying rocks, and horizontal pressures developed as rocks become deformed  
 B) The weight of the overlying rocks, solar heating, and nuclear fusion  
 C) Horizontal pressures developed as rocks deform, bonding, heat released during crystallization  
 D) Internal heat of the Earth, nuclear fission, heat released during chemical weathering
- 7) Granite is derived from \_\_\_\_\_ word [     ]  
 A) Latin     B) Greek     C) French     D) Korea
- 8) Rock defined as \_\_\_\_\_ [     ]  
 A) Aggregation of minerals     B) Aggregation of rocks  
 C) Aggregation of lava     D) Aggregation of magma
- 9) The texture of the granite \_\_\_\_\_ [     ]  
 A) Course-medium grained     B) Halo crystalline texture     C) Ophitic texture     D) Porphyrite texture
- 10) \_\_\_\_\_ % of earth crust is composed of igneous rocks [     ]  
 A) 90%     B) 80%     C) 70%     D) 75%
- 11) A coarse grained plutonic igneous rocks composed predominantly of Quartz, Microcline and Biotite is \_\_\_\_\_ [     ]  
 A) Gabbro     B) Syenite     C) Granite     D) Anorthosite
- 12) Which type of pressure will result in the alignment of metamorphic minerals? [     ]  
 A) Contact pressure     B) Directed pressure     C) Confining pressure     D) Chemical pressure
- 13) What is the most prominent textural feature of regional metamorphic rocks? [     ]  
 A) Foliation     B) Bedding     C) Cataclastic     D) Ripples
- 14) The temperature (at least a minimum estimate) from which the melt cooled is reflected by the \_\_\_\_\_ of the rock. [     ]  
 A) Mineralogy     B) Texture     C) Colour     D) Density
- 15) Organic sedimentary rock is \_\_\_\_\_ [     ]  
 A) Lime stone     B) Mud stone     C) Sand stone     D) Shale
- 16) The sedimentary rock without stratification is \_\_\_\_\_ [     ]  
 A) Sand stone     B) Lime stone     C) Shale     D) Tallit
- 17) The last mineral (assuming that the composition is appropriate) to crystallize from magma is:  
 A) Plagioclase     B) Olivine     C) Quartz     D) Pyroxene texture of sand stone [     ]

- 18) During crystallization of a melt plagioclase become richer in \_\_\_\_\_ [ ]  
 A) Potassium B) Sodium C) Calcium D) Krypton
- 19) The purest form of limestone is [ ]  
 A) Dolomite B) Shale C) Chalk D) Sand stone
- 20) Structural geology is concerned with [ ]  
 A) Only solids B) Only liquids C) Only gases D) All solids, liquids & gases
- 21) Which of the following is a concordant intrusive rock? [ ]  
 A) Dike B) Sill C) Stock D) Batholith
- 22) Dip is defined as [ ]  
 A) Bed of direction of intersection of the bedding plane B) maximum angle of slope of a bed  
 C) Covered by thin or thick layers D) Only with thick layers
- 23) The direction of intersection of the bedding plane with an horizontal planes [ ]  
 A) Outcrop B) Bedding C) Dip D) Strike
- 24) Which of the following igneous rocks crystallizes near the Earth's surface?  
 A) Basalt B) Gabbro C) Diorite D) Granite
- 25) Parallel folding is also termed as [ ]  
 A) Similar B) Flexural C) Flexural flow D) Concentric
- 26) Synform is a [ ]  
 A) Type of syncline B) Morphological feature resembling syncline  
 C) Morphological feature of unknowns stratigraphy D) Both b & c
- 27) A limited area of older rocks surrounded by younger rocks is called [ ]  
 A) Outlier B) Overlaps C) Inlier D) Off flap
- 28) Symmetrical fold is also known as [ ]  
 A) Upright fold B) Asymmetrical fold C) Recommended fold D) Monocline
- 29) The curved part of the fold between the normal and in vertical limb is known as  
 A) Arch bend B) Curved bend C) Normal bend D) Axial bend [ ]
- 30) Nappe structures can be formed by [ ]  
 A) Over thrusting. B) Recumbent folding. C) Normal faulting. D) (a) and (b).
- 31) Where the internal limb angle is  $>70^{\circ}$  is \_\_\_\_\_ fold [ ]  
 A) Gentle fold or open fold B) Mid fold C) Cylindrical fold D) Type fold
- 32) Shear fold is also known as [ ]  
 A) Over fold B) Slip fold C) Drag fold D) Open fold
- 33) Chevron fold is also known as [ ]  
 A) Isoclinals fold B) Similar fold C) Zig-zag fold D) Parallel fold
- 34) Faults are classified into [ ]  
 A) 2 B) 3 C) 4 D) 5
- 35) An example of fold mountain range in Southern America is [ ]  
 A) Andes B) Alps C) Rock Mountains D) Himalayas
- 36) When rock layers bend downwards, they form a [ ]  
 A) Limbs B) Syncline C) Anticline D) Cliff
- 37) Rift valleys and block mountains are landforms that are formed by [ ]  
 A) Folding B) Faulting C) Displacement D) Collision
- 38) Faulting takes place when rocks within Earth's crust form [ ]  
 A) Water Spaces B) Mountains C) Asymmetrical Mountains D) Cracks
- 39) A disconformity is \_\_\_\_\_ [ ]  
 A) A rock unit that does not contain fossils  
 B) An erosional surface between igneous and metamorphic rocks  
 C) An erosional surface between horizontal sedimentary rocks

D) An erosional surface between different rock types

40) Tight fold has inter limb angle

[     ]

A) Between 70-120°

B) Between 30-70°

A) Between 30-10°

A) Less than 10°

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