

Essar Geology Paper

Time Limit: 30 min 0 sec

Question 1. (Single Selection)

What is an irregular suture-like boundary developed in limestones, formed by pressure-controlled solution followed by immediate local redeposition called?

1. Stylolite
2. Ammoniac Suture
3. Secondary Fracture
4. None of the above

Question 2. (Single Selection)

What is a term used to describe a particle whose size is between 2 and 74 micrometers (200 mesh)?

1. Sand
2. Silt
3. Clay
4. None of the above

Question 3. (Single Selection)

The application of plant and animal fossils to date and correlate strata in order to elucidate Earth history, combining the principles of paleontology and Stratigraphy is known as

1. Biostratigraphy
2. Chronostratigraphy
3. Lithostratigraphy
4. None of the above

Question 4. (Single Selection)

The accumulation of stratigraphic sequences by deposition that stacks beds atop each other, building upwards during periods of balance between sediment supply and accommodation known as

1. Aggradation
2. Progradation
3. Transgression
4. None of the above

Question 5. (Single Selection)

The set of valves, spools and fittings connected to the top of a well to direct and control the flow of formation fluids from the well is

1. BHA
2. BHT
3. Christmas Tree
4. None of the above

Question 6. (Single Selection)

What do you call a relatively impermeable rock, commonly shale, anhydrite or salt that forms a barrier above and around reservoir rock so that fluids cannot migrate beyond the reservoir?

1. Source Rock
2. Reservoir Rock
3. Cap Rock
4. None of the above

Question 7. (Single Selection)

A mineral composed of ferrous carbonate, FeCO_3 , and having 3.8 g/cm³ specific gravity. It is found as an accessory mineral in some shales and carbonate rocks and also in some barite and hematite ores. Name the Mineral.

1. Hematite
2. Siderite
3. Pyrite
4. None of the above

Question 8. (Single Selection)

A geologic surface that separates younger strata from older strata and represents a time of non-deposition, where horizontally parallel strata of sedimentary rock are deposited on tilted and eroded layers that may be either vertical or at an angle to the overlying horizontal layers is named as

1. Angular Unconformity Surface
2. Paraconformity Surface
3. Nonconformity surface
4. None of the above

Question 9. (Single Selection)

Which rock type has relatively large amounts of organic material compared with other rock types and thus has potential to become a rich hydrocarbon source rock?

1. Sandstone
2. Shale
3. Limestone
4. Anhydrite

Question 10. (Single Selection)

An arcuate deposit of sediment, usually sand, that occurs along the convex inner edges of the meanders of channels and builds outward as the stream channel migrates is called

1. Distal Bars
2. Point Bars
3. Levees
4. None of the above

Question 11. (Single Selection)

The lower portion of the drillstring, consisting of the bit, bit sub, a mud motor (in certain cases), stabilizers, drill collars, heavy-weight drillpipe, jarring devices ("jars") and crossovers for various threadforms is referred as

1. Drill Bit Assembly
2. Bit Breaker Assembly
3. Bottom Hole Assembly
4. None of the above

Question 12. (Single Selection)

A representation of the integrity of the cement job, especially whether the cement is adhering solidly to the outside of the casing. The log is typically obtained from one of a variety of sonic-type tools. The log is

1. Cement Bond Log
2. Wait-on Cement Log
3. Cement Log
4. None of the above

Question 13. (Single Selection)

What is the Type of naturally occurring, solid, insoluble organic matter that occurs in source rocks, consists of mainly algal and amorphous (but presumably algal) kerogen and is highly likely to generate oil?

1. Kerogen I
2. Kerogen II
3. Kerogen III
4. None of the above

Question 14. (Single Selection)

An arch-shaped fold in rock in which rock layers are upwardly convex and the oldest rock layers form the core of the fold, and outward from the core progressively younger rocks occur. The structure is

1. Syncline
2. Structural Trap

3. Anticline
4. Diapir

Question 15. (Single Selection)

What is the main reservoir rock type present in the Bombay High field?

1. Limestone
2. Sandstone
3. Siltstone
4. None of the above

Question 16. (Single Selection)

The overall characteristics of a rock unit that reflect its origin and differentiate the unit from others around it is called

1. Lithological Properties
2. Geochemical Properties
3. Facies
4. None of the above

Question 17. (Single Selection)

A linear, commonly concave-based depression through which water and sediment flow and into which sediment can be deposited in distinctive, often elongated bodies, is called

1. Canyon
2. Channel
3. Valley
4. None of the above

Question 18. (Single Selection)

What is the type of fault formed when the hanging wall fault block moves up along a fault surface relative to the footwall, the fault plane generally has a shallow dip, typically much less than 45°?

1. Reverse Fault
2. Normal Fault
3. Dip Fault
4. None of the above

Question 19. (Single Selection)

A carbonate sedimentary rock predominantly composed of calcite of organic, chemical or detrital origin. Minor amounts of dolomite, chert and clay are commonly present. The sedimentary rock is

1. Limestone
2. Dolostone
3. Micrite
4. None of the above

Question 20. (Single Selection)

What is the name for a contour map that connects points of equal thickness, display the stratigraphic thickness of a rock unit as opposed to the true vertical thickness?

1. Isochron Map
2. Isopach Map
3. Isobar Map
4. None of the above

Question 21. (Single Selection)

A chronological chart of the stages and ages of events in the history of the Earth, from its initial formation to present, that has been constructed on the basis of the rock record is called

1. Chronographic Scale
2. Biostratigraphic Scale
3. Geologic Time Scale
4. None of the above

Question 22. (Single Selection)

What is a sedimentary rock and a variety of quartz made of extremely fine-grained, or cryptocrystalline, silica, also called chalcedony?

1. Opal
2. Chert
3. Rosy Quartz
4. None of the above

Question 23. (Single Selection)

The vertical distance from a point in the well (usually the current or final depth) to a point at the surface, usually the elevation of the rotary kelly bushing (RKB) is called

1. Measured Depth

2. Total Depth
3. True Vertical Depth
4. None of the above

Question 24. (Single Selection)

Which kerogen consisting of mixed terrestrial and marine source material is likely to generate waxy oil over time, when subjected to optimum temperature and pressure conditions?

1. Type - I
2. Type - II
3. Type - III
4. None of the above

Question 25. (Single Selection)

The lightest and most abundant of the hydrocarbon gases and the principal component of natural gas. It is colorless gas that is stable under a wide range of pressure and temperature conditions in the absence of other compounds, the gas is

1. Helium
2. Methane (CH₄)
3. Ethane
4. Butane

Question 26. (Single Selection)

What are sedimentary structures resulting from biological activities, which include burrows, tracks, faecal pellets etc. called?

1. Biological Fossils
2. Trace Fossils
3. Reefs
4. None of the above

Question 27. (Single Selection)

Natural gas that does not contain hydrogen sulfide [H₂S] or significant quantities of carbon dioxide [CO₂], is called as

1. Coal Bed Methane (CBM)
2. Sweet Gas
3. Condensate
4. None of the above

Question 28. (Single Selection)

The study of the ages of strata. The comparison, or correlation, of separated strata can include study of their relative or absolute ages is called

1. Biostratigraphy
2. Chronostratigraphy
3. Lithostratigraphy
4. None of the above

Question 29. (Single Selection)

In folded rocks, the imaginary surface bisecting the limbs of the fold is called

1. Mirror Plane
2. Axial Plane
3. Orthographic Plane
4. None of the above

Question 30. (Single Selection)

The geochemical process by which magnesium [Mg] ions replace calcium [Ca] ions in calcite, is called as

1. Dolomitization
2. Primary Diagenesis
3. Secondary Diagenesis
4. None of the above