

GEOL1010

Sample Test 4/exam

Fall, 2007

There will be 50 questions (2pts each) on the final on Dec 12, 2007.

1. The Colorado River flows into (first encounters salt water at) the:
a) *Atlantic Ocean* b) *Gulf of Mexico* c) *Pacific Ocean* d) *Gulf of California*
e) *Great Salt Lake*
2. Water in the San Luis Valley near Alamosa flows into the Rio Grande and eventually drains to (first encounters salt water at) the;
a) *Gulf of Mexico at New Orleans* b) *Gulf of Mexico at Brownsville, TX* c) *Atlantic Ocean*
d) *Gulf of California* e) *Great Salt Lake*
3. The presence of many channel bars in a river (i.e., a braided stream) indicates that:
a) *the river is actively eroding its bed* b) *the river is flowing up gradient*
c) *the river dries up periodically* d) *the river is actively depositing in its bed.*
e) *the river has a steep gradient.*
4. The outwash deposit of a mountain stream that flows into a desert valley is called a(n)
a) *alluvial fan* b) *barchan* c) *crescent* d) *dune* e) *till*
5. A crescent-shaped dune with limbs *upwind* is called a
a) *parabolic or blowout dune* b) *barchan* c) *croissant* d) *transverse dune*
e) *longitudinal dune*
6. A long desert dune oriented at parallel to the prevailing wind is a
a) *parabolic dune* b) *barchan* c) *playa* d) *transverse dune* e) *longitudinal dune*
7. An ephemeral (temporary) lake in a closed desert valley is a(n):
a) *arroyo* b) *bajada* c) *playa* d) *largo* e) *sinkhole*
8. The pebble and cobble surface on a desert floor is known as:
a) *till* b) *breccia* c) *loess* d) *rock flour* e) *desert pavement*
9. The region of a desert landscape marked by high relief, sparse or absent vegetation, and little or no soil is the:
a) *arid zone* b) *bajada* c) *zone of erosion* d) *zone of deposition* e) *playa.*
10. Deserts tend to have high relief with abundant steep slopes and cliffs because:
a) *the wind is very strong*
b) *the land is rising*
c) *there is little vegetation to prevent water erosion*
d) *deserts are tectonically active*
e) *there is no rain*
11. The black manganese oxide coating that commonly forms on vertical rock surfaces in deserts is called
a) *desert pavement* b) *desert varnish* c) *petroglyphs* d) *rock flour* e) *loess*
12. Deserts tend to occur in regions that are characterized by:
a) *tropical latitudes* b) *ascending air masses* c) *descending air masses* d) *high winds*
e) *abundant sand*
13. Any large permanent (non-seasonal) mass of ice that is formed on land and moves under the force of gravity is a
a) *snowfield* b) *crevasse* c) *icefall* d) *glacier* e) *avalanche*

14. The line dividing the zone of accumulation from the zone of wastage (ablation) on a valley glacier is called the:

- a) *snow line* b) *bergschrand* c) *cirque* d) *drumlin* e) *terminal moraine*

15. Tensional fractures in the surface of a glacier are called:

- a) *arêtes* b) *bergschrunds* c) *crevasses* d) *drumlins* e) *seracs*

16. Compressional waves on the surface of a glacier are called

- a) *avalanches* b) *bergschrunds* c) *ogives* d) *crevasses* e) *seracs*

17. A ridge of till down the center of a glacier is called a(n):

- a) *lateral moraine* b) *end moraine* c) *medial moraine* d) *drumlin* e) *esker*.

18. A narrow knife-edge ridge connecting two peaks in glacier-eroded mountains is a(n):

- a) *arête* b) *bergschrand* c) *cirque* d) *crevasse* e) *ogive*

19. Wind-deposited silt-sized particles of glacial rock flour can form significant deposits in periglacial regions. This material is called:

- a) *karst* b) *till* c) *loess* d) *moraine* e) *breccia*

20. An asymmetric ridge in dipping sedimentary layers, such as the Flatirons, is known as a

- a) *hogback* b) *mesa* c) *plateau* d) *flatiron* e) *cuesta*

21. Valleys eroded by fast-moving, high-gradient mountain streams have a characteristic:

- a) *V-shape* b) *U-shape* c) *flat bottom* d) *broad flood plain* e) *meander pattern*

22. A low-relief coastline with barrier islands, lagoons and estuaries is characteristic of

- a) *arctic coasts* b) *submergent coasts* c) *tectonically active coasts*
d) *tropical coasts* e) *emergent coasts*

23. Rocky headlands, sea caves, sea stacks and small inlet beaches are characteristic of

- a) *emergent coasts* b) *submergent coasts* c) *drowned coasts* d) *tropical coasts*
e) *arctic coasts*

24. The wave motion of water extends to a depth of approximately

- a) *1m* b) *1/2 wavelength* c) *10m* d) *1 wave height* e) *100m*

25. The bending of waves by slowing in shallow water so that they approach nearly perpendicular to the shore is called

- a) *inflection* b) *refraction* c) *reflection* d) *diffraction* e) *deflection*

26. A sand peninsula formed by long-shore drift of sand that extends into the ocean or bay is called a:

- a) *spit* b) *bay-mouth bar* c) *bar island* d) *breakwater* e) *jetty*

27. Tsunamis are principally caused by

- a) *the wind*
b) *earthquakes and submarine landslides*
c) *gravitational attraction of the moon*
d) *precession of the Earth's axis*
e) *the Coriolis force*

28. The time between low and high tide is typically about:

- a) *one hour* b) *three hours* c) *six hours* d) *twelve hours* e) *24 hours*.

29. An example of a non-renewable energy source that does not generate significant quantities of greenhouse gasses would be:

- a) *Coal* b) *Natural Gas* c) *Methane hydrates* d) *Nuclear fission of ^{235}U* e) *wind*

30. The ultimate energy source from which fossil fuels are derived is

- a) *radioactive decay of U, Th and K*
b) *thermonuclear fusion of H in the sun*
c) *primordial carbon in the Earth*
d) *nuclear fission of U in the deep Earth.*
e) *cosmic rays*