

SHIVAJI UNIVERSITY, KOLHAPUR
QUESTION BANK FOR MARCH 2022 (SUMMER) EXAMINATION

SUBJECT CODE: 79706

SUBJECT NAME: GEOLOGY

B.Sc III SEMESTER V

Paper XII DSE 44E– Applied Geology – Prospecting and Mining Geology

1. The Schlumberger Configuration is used in _____ method .
a. Magnetic b. Gravity c.**Electrical** d. Seismic
2. Uranium is prospected by using _____ method.
a. Magnetic b. Seismic c.**Radioactivity**d. Gravity
3. The excavation, loading, and removal of ore from the ground is called _____.
a. Winning b. Harvesting c. Draft d. Scraff
4. Dynamites are used in _____ method .
a. Electrical b. Magnetic c.**Seismic**d. Gravity
5. A horizontal passage underground following a mineral vein is called _____.
a.Drift b. Winze c.Adit d. Shaft
6. Profile shooting arrangement is used in _____ survey.
a. Reflection b.**Refraction** c. Magnetic d. Seismic
7. The percussion method of drilling is also called _____ drilling.
a. Rotary b. Cable c.**Diamond**d. Copper
8. FCC are used in _____ method.
a. **Remote Sensing** b. Gravity c. Magnetic d. Seismic
9. The p-wave velocities are found to be maximum in _____.
a. Sand b.**Granite** c. Mud d. Water
10. The Wenner configuration is used in _____ survey.
a. Electrical b. Seismic c. Magnetic d. Gravity
11. The Coning and Quartering method is associated with _____.
a. Air-crossing b.**Sampling** c. Assaying d. Excavation
12. Mineral Magnetite can be detected by using _____ method .

- a. Electrical **b.Magnetic** c. Radioactivity d. Gravity
13. Geophones are used in _____ method.
a. Radioactivity b. Magnetic **c.Seismic** d. Gravity
14. Fan shooting arrangement is used in _____ survey.
a. Reflection **b.Refraction** c. Air bourne d. Gravity
15. Geiger – Mueller Counter is used in _____ method.
a. **Radioactivity** b. Gravity c. Seismic d. Magnetic
16. Mineral Radium can be detected using _____ method.
a. Seismic b. **Radioactivity** c. Gravity d. Electrical
17. The Gravimetric method can be used in _____ exploration.
a. **Petroleum** b. Gold c. Bauxite d. Uranium
18. Dynamites are used in _____ method.
a. Gravity b. **Seismic** c. Magnetic d. Electrical
19. Study of equipotential lines is done in _____ method.
a. Radioactivity b. Seismic **c. Electrical** d. Magnetic
20. The pitting method is associated with _____ .
a. **Sampling** b. Assaying c. Air-crossing d. Blasting
21. A secondary inclined opening driven upwards from a level to connect the upper level is called a _____.
a. **Raise** b. Winze c. Adit d. Chute
22. A primary vertical or non-vertical opening through the mine strata is called a _____.
a. **Shaft** b. Drift c. Winning d. Chute
23. The self-potential method in geophysical exploration is a type of _____ method.
a. Seismic b. **Electrical** c. Gravity d. Magnetic
24. The Resistivity method in the geophysical exploration is a type of _____.
a. **Electrical** b. Seismic c. Gravity d. Magnetic
25. A vertical internal connection between two levels and sublevels of a mine is called a _____.
a. Raise b. Shaft c. Adit **d. Winze**
26. The removal of the broken ore from an underground mine, leaving behind an open space is known as _____.
a. Raise b. **Stope** c. Adit d. Winze
27. An example of open cast mining is _____.
a. **Strip Mining** b. Horizon mining c. Tunnel d. Drift mining
28. Longwell Mining is associated with _____ mining.
a. **Coal** b. Gold c. Lead d. Zinc

B. Full Questions : (8 marks)

1. Describe the different geophysical method for prospecting in brief.
(Electrical, Magnetic, Seismic, Gravity methods)
2. Describe the different terminologies used in Mines.
(Winning, shaft, hanging wall, adit, draft, level, cross-cut, tunnel, raise, winze, ore basin, chute, stope, air-crossing)
3. Describe the different sampling methods.
(Random sampling, Grab sampling, Coning and Quatering, Pitting and Trenching)
4. Explain the Electrical methods for groundwater exploration.
(Schlumberger and Wenner method, use)
5. Explain the Gravity method for prospecting and mineral exploration.
(Gravity Anomaly, Gravimeter, Application – salt domes, ore bodies, geologic structures)
6. Describe Seismic Method of Prospecting.
(Reflection method – thickness of sediments, sediment type and sedimentation
Refraction method – fan shooting; Geophones)
7. Describe the Magnetic Method of Prospecting.
(Earth as a magnet, magnetic anomaly, instruments, ore minerals, archeology, military)

C. Notes : (4 marks)

1. Refraction Method
2. Coning and Quartering
3. Aerial Photographs
4. Gravity Anomaly (free-air, Bouger, Isostatic)
5. Open cast Mining
6. Underground Mining
7. Magnetic Surveys
8. False Colour Composite
9. Pitting and Trenching
10. Environmental consideration for mining
11. Seismic Reflection method
12. Wenner Configuration
13. Satellite imageries
14. Aeromagnetic methods

15. Quarry

16. Fan Shooting