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3) Which of the following sequences correctly depict increase in deformation and grade of metamorphism?
[Question ID = 5116]

1. Charnockite-> Chlorite schist -> Slate -> Hornblende gneiss [Option ID = 20463]
2. Slate -> Chlorite schist ->Charnockite-> Hornblende gneiss [Option ID = 20462]
3. Slate -> Chlorite schist $->$ Hornblende gneiss $->$ Charnockite [Option ID $=20464$ ]
4. Chlorite schist -> Slate -> Hornblende gneiss ->Charnockite [Option ID = 20461]

## Correct Answer :-

- Slate -> Chlorite schist -> Hornblende gneiss ->Charnockite [Option ID = 20464]

4) Which ocean current is not part of the oceanic gyre?
[Question ID $=5035$ ]
1. Kuroshio [Option ID = 20138]
2. Antarctic circumpolar current [Option ID $=20140$ ]
3. Gulf stream [Option ID = 20137]
4. North equatorial current [Option ID $=20139$ ]

Correct Answer :-

- Antarctic circumpolar current [Option ID = 20140]

5) Which one of the following ocean is decreasing in its total area for the past few million years
[Question ID = 5034]
1. Atlantic ocean [Option ID $=20133$ ]
2. Pacific ocean [Option ID $=20134$ ]
3. Indian ocean [Option ID = 20136]
4. Red sea [Option ID $=20135$ ]

Correct Answer :-

- Pacific ocean [Option ID $=20134$ ]

[^0]
## [Question ID = 5063]

1. an erosional feature formed at the top of bed at high energy condition [Option ID = 20252]
2. an erosional feature formed by movement of tools at high energy condition [Option ID = 20251]
3. an erosional feature found at the sole of bed formed at very high energy condition [Option ID $=20249$ ]
4. a depositional feature found at bed top [Option ID $=20250$ ]

Correct Answer :-

- an erosional feature found at the sole of bed formed at very high energy condition [Option ID = 20249]

7) The mass wasting is primarily related to: [Question ID = 5048]
1. Type of rock [Option ID $=20190$ ]
2. Water [Option ID = 20192]
3. Gravitational instability [Option ID $=20191$ ]
4. Dip slope [Option ID $=20189$ ]

Correct Answer :-

- Gravitational instability [Option ID $=20191$ ]

8) In response to the expansion of grasslands, mammals evolved
[Question ID = 5033]
1. hypsodont dentition [Option ID $=20132$ ]
2. bunodont dentition [Option ID $=20130$ ]
3. brachydont dentition [Option ID $=20129$ ]
4. selonodont dentition [Option ID $=20131$ ]

## Correct Answer :-

- hypsodont dentition [Option ID = 20132]

9) Pycnocline indicates the vertical distribution of [Question ID $=5032$ ]
1. Salinity [Option ID $=20126$ ]
2. Oxygen in the ocean water [Option ID $=20128$ ]
3. Density [Option ID $=$ 20127]
4. Temperature [Option ID $=20125$ ]

Correct Answer :-

- Density [Option ID = 20127]

10) Most ore minerals are represented by [Question ID = 5108]
1. Native elements and oxides [Option ID $=20431$ ]
2. Oxides and carbonates [Option ID = 20432]
3. Silicates and oxides [Option ID $=20429$ ]
4. Sulfides and oxides [Option ID $=20430$ ]

## Correct Answer :-

- Sulfides and oxides [Option ID = 20430]

11) The dynamically metamorphosed rock produced by localized frictional heating and shear melting is referred as: [Question $I D=5117]$
1. Pseudotachylite [Option ID $=20466$ ]
2. Mylonite [Option ID = 20467]
3. Enderbite [Option ID $=20465$ ]
4. Leptynite [Option ID $=20468$ ]

## Correct Answer :-

- Pseudotachylite [Option ID = 20466]

12) The mineral having highest hardness amongst following is [Question ID = 5103]
1. Calcite [Option ID = 20411]
2. Graphite [Option ID = 20409]
3. Quartz [Option ID $=20412$ ]
4. Corundum [Option ID $=20410$

## - Corundum [Option ID = 20410]

13) A base level is: [Question ID = 5086]
1. the lowest elevation to which a stream can cut its channel [Option ID = 20343]
2. a field marker that indicates a lake level [Option ID = 20344]
3. a device for measuring stream gradient [Option ID = 20341]
4. a device for measuring stream discharge [Option ID = 20342]

Correct Answer :-

- the lowest elevation to which a stream can cut its channel [Option ID = 20343]

14) Which form resembles human kidney? [Question ID = 5087]
1. Granular [Option ID $=20347$ ]
2. Reniform [Option ID = 20346]
3. Mammillary [Option ID $=20348$ ]
4. Globular [Option ID = 20345]

## Correct Answer :-

- Reniform [Option ID = 20346]

15) $A^{4} \mathrm{He}$ nucleus that escapes from a decaying heavy radiogenic isotope is called [Question $I D=5084$ ]
1. X- ray [Option ID = 20335]
2. Alpha particle [Option ID $=20333$ ]
3. Beta particle [Option ID $=20336$ ]
4. Gamma ray photon [Option ID $=20334$ ]

Correct Answer :-

- Alpha particle [Option ID = 20333]

16) What percentage of the earth's water is fresh water? [Question ID = 5079]
1. $50 \%$ [Option ID $=20313$ ]
2. $22 \%$ [Option ID $=20314]$
3. $7 \%$ [Option ID $=20315$ ]
4. $3 \%$ [Option ID $=20316$ ]

Correct Answer :-

- 3\% [Option ID = 20316]

17) Past seawater temperature can be reconstructed from the
[Question ID = 5040]
1. Oxygen isotopic composition of the calcareous foraminifera [Option ID $=20157$ ]
2. All of the these [Option ID $=20160$ ]
3. Carbon isotopic composition of agglutinated foraminifera [Option ID = 20159]
4. Carbon isotopic composition of the calcareous foraminifera [Option ID $=20158$ ]

## Correct Answer :-

- Oxygen isotopic composition of the calcareous foraminifera [Option ID = 20157]

```
18) The term "neotectonics" is related to earth movements during: [Question ID = 5052]
1. Permian [Option ID = 20206]
2. Quaternary [Option ID = 20207]
3. Triassic [Option ID = 20208]
4. Cretaceous [Option ID = 20205]
```


## Correct Answer :-

- Quaternary [Option ID = 20207]

[^1]$\qquad$ [Question ID = 5098]

1. Platinum Group Elements [Option ID $=20391]$
2. Lithium [Option ID $=20390$ ]

Correct Answer :-

- Platinum Group Elements [Option ID = 20391]

20) An erosional surface separates sedimentary strata dipping $60^{\circ}$ towards $\mathrm{N} 80^{\circ} \mathrm{E}$ from the overlying strata dipping $5^{0}$ towards $\mathrm{N} 45^{\circ} \mathrm{E}$. The structure is called: [Question ID = 5068]
1. disconformity [Option ID $=20269$ ]
2. paraconformity [Option ID $=20272$ ]
3. non-conformity [Option ID $=20270$ ]
4. angular unconformity [Option ID $=20271$ ]

## Correct Answer :-

- angular unconformity [Option ID = 20271]

21) Marble is a type of metamorphic rock that originates from: [Question ID = 5121]
1. Limestone [Option ID $=20482$ ]
2. Sandstone [Option ID $=20483$ ]
3. Shale [Option ID $=20481$ ]
4. Granite [Option ID = 20484]

## Correct Answer :-

- Limestone [Option ID = 20482]

22) What will be the effect of glacial period on the average salinity of the ocean [Question ID = 5027]
1. Increased [Option ID = 20105]
2. was the highest in the Indian Ocean [Option ID = 20108]
3. Decreased [Option ID $=20106$ ]
4. No change [Option ID $=20107$ ]

Correct Answer :-

- Increased [Option ID = 20105]

23) Sea water is saline because: [Question ID $=5039$ ]
1. $\mathrm{Na}^{+2}$ is abundant but $\mathrm{Cl}^{-}$is less abundant. [Option $\mathrm{ID}=20154$ ]
2. $\mathrm{Na}^{+2}$ has higher residence time compared to $\mathrm{Ca}^{+2}$ [Option ID $=20156$ ]
3. $\mathrm{Na}^{+}$and $\mathrm{Cl}^{-}$are most abundant cation and anion in seawater. [Option ID $=20153$ ]
4. $\mathrm{Ca}^{+2}$ is less abundant in sea water than $\mathrm{Na}^{+2}$ [Option ID $=20155$ ]

## Correct Answer :-

- $\mathrm{Na}^{+2}$ has higher residence time compared to $\mathrm{Ca}^{+2}$ [Option ID $=20156$ ]

[^2][Question ID = 5104]

1. Steno's law [Option ID = 20414]
2. Snell's Law [Option ID = 20416]
3. Bragg's law [Option ID = 20413]
4. Pauling's rule [Option ID $=20415$ ]

## Correct Answer :-

- Steno's law [Option ID = 20414]

25) Species with narrow range of salinity tolerance are known as [Question ID = 5043]
1. none of these [Option ID = 20172]
2. Euryhaline [Option ID = 20170]
3. Stenohaline [Option ID = 20169]
4. Oligohaline [Option ID = 20171]

[^3]26) A 'pancake'- shaped oblate strain ellipsoid is characteristic of:
[Question ID = 5066]

1. plane-strain deformation [Option ID $=20261$ ]
2. flattening deformation [Option ID $=$ 20262]
3. none of these. [Option ID = 20264]
4. constrictional deformation [Option ID $=20263$ ]

Correct Answer :-

- flattening deformation [Option ID = 20262]

27) The most important oil producing horizon in India's "Bombay High" is of [Question ID = 5082]
1. Miocene age [Option ID = 20325]
2. Proterozoic age [Option ID $=20327$ ]
3. Paleocene age [Option ID $=20326$ ]
4. Mesozoic age [Option ID = 20328]

Correct Answer :-

- Miocene age [Option ID = 20325]

28) Rocks produced by impact metamorphism may contain newly formed crystals of $\qquad$ .
[Question ID $=5122$ ]
1. Lawsonite [Option ID $=20485$ ]
2. Apatite [Option ID $=$ 20487]
3. Tremolite [Option ID $=20486$ ]
4. Stishovite [Option ID $=20488$ ]

## Correct Answer :-

- Stishovite [Option ID = 20488]

29) Enrichment of LILE-LREE and depletion of HFSE is commonly observed in: [Question ID = 5107]
1. Island Arc Basalt [Option ID $=20427$ ]
2. Alkaline Basalt [Option ID = 20428]
3. Mid Oceanic Ridge Basalt (MORB) [Option ID $=20425$ ]
4. Oceanic Island Basalt (OIB) [Option ID $=20426$ ]

## Correct Answer :-

- Island Arc Basalt [Option ID = 20427]

30) Gyres in the oceans are formed due to [Question ID = 5026]
1. Salinity difference in water across latitude [Option ID = 20102]
2. Oceanic upwelling [Option ID $=20104$ ]
3. Coriolis effect [Option ID $=20103$ ]
4. Temperature difference in water across latitude [Option ID = 20101]

Correct Answer :-

- Coriolis effect [Option ID = 20103]

31) Most dense seawater is present in the
[Question ID = 5031]
1. Antarctic bottom water [Option ID = 20124]
2. Arctic bottom water [Option ID = 20121]
3. North Pacific bottom water [Option ID $=20122$ ]
4. North Atlantic deep water [Option ID $=20123$ ]

Correct Answer :-

- Antarctic bottom water [Option ID $=20124$ ]

2. Channel lag [Option ID = 20260]
3. Debris flow [Option ID = 20257]
4. Slump [Option ID = 20258]

Correct Answer :-

- Channel lag [Option ID = 20260]

33) A cleavage that forms along the axial planes of folds on an earlier cleavage is known as:
[Question ID = 5078]
1. crenulation cleavage [Option ID $=20309$ ]
2. slaty cleavage [Option ID = 20310]
3. none of these. [Option ID $=20312$ ]
4. disjunctive cleavage [Option $\mathrm{ID}=20311$ ]

## Correct Answer :-

- crenulation cleavage [Option ID $=20309$ ]


## 34) Collision of India and Asia occurred around:

[Question ID = 5049]

1. $\sim 15 \mathrm{Ma}$ [Option ID $=20193]$
2. ~30 Ma [Option ID = 20194]
3. $\sim 65 \mathrm{Ma}$ [Option ID $=20196]$
4. $\sim 55 \mathrm{Ma}$ [Option ID $=20195]$

## Correct Answer :-

- ~55 Ma [Option ID = 20195]

35) India is one of the major producer of ores of; [Question ID = 5092]
1. Manganese [Option ID $=20367$ ]
2. Lead-zinc [Option ID = 20368]
3. Gold [Option ID $=20365$ ]
4. Diamond [Option ID $=20366$ ]

## Correct Answer :-

- Manganese [Option ID = 20367]

36) Resistivity sounding in groundwater exploration estimates:
[Question ID = 5109]
1. Both (a) \& (b) [Option ID = 20435]
2. Horizontal variation in resistivity [Option ID $=20434$ ]
3. Variation of resistivity with depth [Option ID $=$ 20433]
4. None of these [Option ID = 20436]

Correct Answer :-

- Variation of resistivity with depth [Option ID = 20433]

> 37) Remote sensing techniques commonly make use of the properties of emitted, reflected or diffracted by the sensed objects:
[Question ID = 5102]

1. Sound waves [Option ID $=20406$ ]
2. Electric waves [Option ID = 20405]
3. Electromagnetic waves [Option ID $=$ 20407]
4. Wind waves [Option ID = 20408]

## Correct Answer :-

- Electromagnetic waves [Option ID = 20407]

Correct Answer :-

- Accumulation of plagioclase [Option ID $=20454]$

39) The chemical composition of orthoclase is; [Question ID = 5089]
1. $\mathrm{Ca} \mathrm{Al} \mathrm{Si} 3 \mathrm{O}_{8}$ [Option ID $=20354$ ]
2. K Al O [Option ID $=20353$ ]
3. Ca Al O 8 [Option ID $=20356$ ]
4. $\mathrm{K} \mathrm{Al} \mathrm{Si} 3 \mathrm{O}_{8}$ [Option ID $=20355$ ]

Correct Answer :-

- $\mathrm{K} \mathrm{Al} \mathrm{Si} 3_{3} \mathrm{O}_{8}$ [Option ID $=20355$ ]

40) The drainage pattern in areas with folded sedimentary rocks is known as: [Question ID = 5055]
1. Parallel [Option ID $=20218$ ]
2. Annular [Option ID $=20220$ ]
3. Dendritic [Option ID = 20217]
4. Trellis [Option ID $=20219$ ]

Correct Answer :-

- Trellis [Option ID = 20219]

41) We get epsilon cross-stratification in [Question ID $=5064$ ]
1. Point bar deposit of meandering river [Option ID $=20254$ ]
2. Aggrading bar deposit of anastomosing river [Option ID $=20256$ ]
3. Transverse bar deposit of meandering river [Option ID $=20255$ ]
4. Longitudinal bar deposit of braided river [Option ID $=20253$ ]

Correct Answer :-

- Point bar deposit of meandering river [Option ID $=20254$ ]

42) We get botryoidal cement in carbonate rocks when there is [Question ID = 5058]
1. Deep burial diagenesis [Option ID $=20232$ ]
2. Sea floor diagenesis [Option ID $=20229$ ]
3. Phreatic diagenesis [Option ID $=20231$ ]
4. Vadose diagenesis [Option ID $=20230$ ]

Correct Answer :-

- Sea floor diagenesis [Option ID $=20229$ ]

43) The quantity of water that can be withdrawn annually and also the rate at which this withdrawal could be made without adversely affecting the inventory of the aquifer is called [Question ID = 5095]
1. Annual yield [Option ID $=20377$ ]
2. Percent yield [Option ID $=20378$ ]
3. Operational yield [Option ID $=20379$ ]
4. Monthly yield [Option ID $=20380$ ]

Correct Answer :-

- Operational yield [Option ID $=20379$ ]

[^4]```
- living fossil [Option ID = 20246]
```

45) A cross-stratified sandstone bed is a
[Question ID = 5056]
1. Diachronous unit formed by bedform migration [Option ID = 20223]
2. Diachronous unit formed by bedform aggradation [Option ID = 20224]
3. Synchronous unit formed by beform migration [Option ID $=20222$ ]
4. Synchronous unit formed by crossing of two bedforms [Option ID $=20221$ ]

## Correct Answer :-

- Diachronous unit formed by bedform migration [Option ID = 20223]

46) Below CCD which of following will not occur - [Question ID $=5081$ ]
1. Siliceous oozes [Option ID = 20321]
2. Radiolaria [Option ID = 20324]
3. Calcareous oozes, Foraminifera [Option ID $=20322$ ]
4. Diatoms [Option ID = 20323]

Correct Answer :-

- Calcareous oozes, Foraminifera [Option ID = 20322]

47) If two distinctly unrelated groups develop same morphological traits, the mode of evolution is known as [Question ID $=5061$ ]
1. convergent evolution [Option ID $=20243$ ]
2. parallel evolution [Option ID $=20241$ ]
3. monophyletic group [Option ID $=20244$ ]
4. divergent evolution [Option ID $=20242$ ]

Correct Answer :-

- convergent evolution [Option ID $=20243$ ]

48) A fine powdery rock flour produced by abrasion and milling along a brittle fault surface is called: [Question ID = 5106]
1. none of the above. [Option ID = 20424]
2. cataclasite [Option ID $=20421]$
3. breccia [Option ID $=20423$ ]
4. gouge [Option ID $=20422$ ]

Correct Answer :-

- gouge [Option ID = 20422]

49) The continental rise is: [Question ID $=5037$ ]
1. a portion of the mid-ocean ridge. [Option ID = 20147]
2. a flat-topped seamount. [Option ID = 20148]
3. an uplifted portion of the continent [Option ID $=20146$ ]
4. a wedge of sediment at the base of the continental slope. [Option ID $=20145$ ]

## Correct Answer :-

- a wedge of sediment at the base of the continental slope. [Option ID $=20145$ ]

50) The concept of punctuated equilibrium was proposed by [Question ID = 5125]
1. William Smith \& Nicholas Steno [Option ID $=20500]$
2. James Hutton \& Charles Lyell [Option ID $=$ 20497]
3. Niels Eldredge \& Stephen Gould [Option ID = 20498]
4. Charles Darwin \& Alfred Russell Wallace [Option ID $=20499$ ]

## Correct Answer :-

- Niels Eldredge \& Stephen Gould [Option ID = 20498]


## 51) Darcy's law states that

[Question ID = 5045]
2. Velocity is directly proportional to hydraulic gradient [Option ID = 20177]
3. Velocity is not related to the hydraulic gradient [Option ID $=20179$ ]
4. None of these. [Option ID $=20180$ ]

Correct Answer :-

- Velocity is directly proportional to hydraulic gradient [Option ID = 20177]

52) In steady state groundwater flow situation, the geometry of cone of depression:
[Question ID = 5047]
1. Does not change with time [Option ID $=20186]$
2. Fluctuates [Option ID = 20187]
3. Changes with time [Option ID $=20185$ ]
4. None of these [Option ID = 20188]

## Correct Answer :-

- Does not change with time [Option ID = 20186]

53) To look for U deposit we should explore: [Question ID $=5060$ ]
1. Limestone country [Option ID $=20239$ ]
2. Ultramafic suites of rocks [Option ID $=20237$ ]
3. Ocean floor rocks [Option ID $=20240$ ]
4. Granitic suite of rocks [Option ID $=20238$ ]

## Correct Answer :-

- Granitic suite of rocks [Option ID = 20238]

54) The sea level was approximately lowered during the last glacial maximum relative to the present around [Question ID $=5028$ ]
1. 1000 m [Option ID $=20112$ ]
2. 100 m [Option ID $=20109$ ]
3. 500 m [Option ID $=20111$ ]
4. 400 m [Option ID $=20110$ ]

Correct Answer :-

- 100m [Option ID = 20109]

55) Aragonite and calcite have same chemical composition. These represent; [Question ID = 5085]
1. Polytypism [Option ID = 20337]
2. None of the above [Option ID $=20340$ ]
3. Polymorphism [Option ID = 20338]
4. Pseudomorphism [Option ID $=20339$ ]

Correct Answer :-

- Polymorphism [Option ID = 20338]

56) In one limb of a map-scale fold, the axial plane cleavage dips at a shallower angle than the bedding. The fold is: [Question ID $=5073$ ]
1. a sheath fold [Option ID = 20291]
2. a reclined fold [Option ID $=20290$ ]
3. an overturned fold [Option ID $=20292$ ]
4. an upright fold [Option ID $=20289$ ]

## Correct Answer :-

- an overturned fold [Option ID $=20292$ ]


## 57) The longitudinal seismic waves are; [Question ID = 5100]

1. Rayleigh waves [Option ID = 20399]
2. Secondary waves [Option ID $=20398$ ]
3. Love waves [Option ID = 20400]
4. Primary waves [Option ID $=20397$ ]

[^5]www.FirstRanker.com
58) The SI unit of specific gravity is [Question ID = 5088]

1. Ohm [Option ID $=20349]$
2. $\mathrm{N} / \mathrm{cc}[$ Option $\mathrm{ID}=20351]$
3. No unit [Option ID = 20352]
4. $\mathrm{g} / \mathrm{cc}[$ Option ID $=20350]$

Correct Answer :-

- No unit [Option ID = 20352]

59) Total dissolved solutes of groundwater is a direct function of
[Question ID = 5042]
1. Electrical conductivity of the water [Option ID = 20167]
2. Intrinsic permeability of the formation [Option ID $=20165$ ]
3. Storativity of the formation [Option ID $=20166$ ]
4. None of these [Option ID = 20168]

Correct Answer :-

- Electrical conductivity of the water [Option ID = 20167]

60) The best grade chromite in India occurs in which state? [Question ID = 5093]
1. Rajasthan [Option ID $=20370$ ]
2. Karnataka [Option ID $=20369$ ]
3. Kerala [Option ID $=20372$ ]
4. Orissa [Option ID = 20371]

Correct Answer :-

- Orissa [Option ID = 20371]

61) The vast sandy desert covering $\sim 40 \%$ of Sahara and Arabian desert are known as sand seas or: [Question ID $=5054$ ]
1. Playas [Option ID $=20213$ ]
2. Erg [Option ID = 20215]
3. Reg [Option ID = 20214]
4. Bajada [Option ID $=20216]$

Correct Answer :-

- Erg [Option ID = 20215]

62) The term "ablation" in glacial geomorphology refers to [Question ID = 5053]
1. Equilibrium [Option ID = 20211]
2. None of the these. [Option ID $=20212$ ]
3. Losses [Option ID = 20209]
4. Accumulation [Option ID = 20210]

## Correct Answer :-

- Losses [Option ID = 20209]

63) The root system of crops in water-logged areas get [Question ID = 5097]
1. Photosynthesised [Option ID = 20387]
2. Enriched with nutrients [Option ID $=20386$ ]
3. Growth inhibited [Option ID $=20388$ ]
4. Decomposed [Option ID $=20385$ ]

## Correct Answer :-

- Decomposed [Option ID = 20385]

64) A discontinuous cleavage formed by selective dissolution of material along parallel planes, is called: [Question $I D=5070$ ]
1. crenulation cleavage [Option ID $=20279$ ]
2. slaty cleavage [Option ID = 20278]
3. disjunctive cleavage [Option ID $=20277$ ]
4. transected cleavage. [Option ID $=20280$ ]
```
- disjunctive cleavage [Option ID = 20277]
```

65) Nunatac refers to a landform found in [Question ID = 5124]
1. Barren granitic terrain [Option ID $=20495$ ]
2. Eolian environment [Option ID $=20494$ ]
3. Alluvial environment [Option ID $=20493$ ]
4. Glacial environment [Option ID $=20496$ ]

Correct Answer :-

- Glacial environment [Option ID = 20496]

66) The $\qquad$ texture is characteristic of rocks rich in acicular minerals whose orientation commonly defines an elongation lineation. [Question ID = 5119]
1. Nematoblastic [Option ID $=20473$ ]
2. Saccharoidal [Option ID $=$ 20475]
3. Helicitic [Option ID $=20474$ ]
4. Mortar [Option ID $=20476$ ]

## Correct Answer :-

- Nematoblastic [Option ID = 20473]

67) The lower 10 km of the atmosphere where most weather occurs is called: [Question ID = 5038]
1. Stratosphere [Option ID = 20150]
2. Ionosphere [Option ID = 20151]
3. Thermosphere [Option ID = 20152]
4. Troposphere [Option ID $=20149$ ]

## Correct Answer :-

- Troposphere [Option ID = 20149]

68) The development of complex suture pattern in Ammonoid reflected the [Question ID = 5083]
1. Changing sea water salinity [Option ID $=20330$ ]
2. Changing sea water temperature [Option ID $=20331$ ]
3. Changing sea water acidity [Option ID $=20332$ ]
4. Changing sea floor bathymetry [Option ID $=20329$ ]

## Correct Answer :-

- Changing sea floor bathymetry [Option ID = 20329]

69) El Nino southern oscillation is an
[Question ID = 5036]
1. Oceanic- atmospheric process [Option ID $=20143$ ]
2. Oceanic- atmospheric- land process [Option ID = 20144]
3. Oceanic process [Option ID $=20141$ ]
4. Atmospheric process [Option ID $=20142$ ]

Correct Answer :-

- Oceanic- atmospheric process [Option ID = 20143]

70) Saurischian and ornithischian dinosaurs are distinguished primarily by their [Question ID = 5072]
1. Food habit [Option ID $=20287$ ]
2. Pelvic structure [Option ID $=20285$ ]
3. Mode of locomotion [Option ID $=20286$ ]
4. Skull morphology [Option ID $=20288$ ]

Correct Answer :-

- Pelvic structure [Option ID $=20285$ ]

71) We are unlikely to construct a dam when; [Question ID = 5096]
3. the rocks are strong [Option ID $=20381$ ]
4. the rocks are impermeable [Option ID $=20382$ ]

Correct Answer :-

- the rocks are porous [Option ID $=20383$ ]

72) Force acting perpendicular to a plane will generate a stress, which will be:
[Question ID = 5075]
1. shear stress [Option ID $=20298$ ]
2. Normal stress [Option ID $=20297$ ]
3. none of these. [Option ID $=20300$ ]
4. both normal and shear stresses [Option ID $=20299$ ]

Correct Answer :-

- Normal stress [Option ID = 20297]

73) 



The above diagrams show the striping lineation (trace of bedding on axial plane cleavage) related to different types of fold. Identify the right combination of fold types from below:

## [Question ID = 5069]

1. 2) Recumbent fold, 2) Reclined fold, 3) Neutral fold, 4) Upright fold [Option ID $=20275$ ]
1. 2) Reclined fold, 2) Recumbent fold, 3) Upright fold, 4) Inclined plunging fold [Option ID = 20276]
1. 2) Non plunging inclined fold, 2) Reclined fold, 3) Plunging inclined fold, 4)Neutral fold [Option ID = 20273]
1. 2) Non plunging upright fold, 2) Plunging upright fold, 3) Reclined fold, 4)Recumbent fold [Option ID = 20274]

Correct Answer :-

- 1) Non plunging upright fold, 2) Plunging upright fold, 3) Reclined fold, 4)Recumbent fold [Option ID = 20274]

74) In the following diagram where will be the assemblage Gros $+\mathrm{Qtz}+\mathrm{Wo}+\mathrm{An}$ will be possible.

[Question ID = 5112]
1. In field M [Option ID $=20446]$
2. On the univariant line [Option $I D=20447]$
3. Nowhere [Option ID = 20448]
4. In field $N$ [Option ID $=20445$ ]
75) Choose the correct order of assemblages for the metapelitic rocks in a progrde Barrovian sequence;
I. Staurolite + kyanite + biotite + muscovite
II. Garnet+Muscovite + biotite + chlorite
III. Cordierite + sillimanite + K-feldspar + quartz
IV. Chlorite + muscovite + biotite + albite

Pick out the correct sequence representing successively higher grade of metamorphism:

```
[Question ID = 5118]
1. II- IV - I - III [Option ID = 20472]
2. II - I - III - IV [Option ID = 20471]
3. I - III -IV -II [Option ID = 20469]
4. IV - II- I - III [Option ID = 20470]
```

Correct Answer :-

- IV - II- I - III [Option ID = 20470]

```
76) Spinifex texture indicates:
Ouestion ID = 5115]
1. Very slow cooling of magma in plutonic conditions [Option ID = 20457]
2. Rapid cooling of magma as lava flows [Option ID = 20458]
3. Intermediate cooling in dykes [Option ID = 20459]
4. None of these [Option ID = 20460]
```

Correct Answer :-

- Rapid cooling of magma as lava flows [Option ID = 20458]

77) A thin section of an igneous rock contains phenocrysts ranging in size from 2-6 mm, and a groundmass consisting of crystals less than
0.05 mm in size. This rock texture may be appropriately described as
$\qquad$ porphyritic'. [Question ID = 5123]
1. Fine-grained [Option ID = 20489]
2. Fine- to coarse-grained [Option ID $=20492$ ]
3. Coarse-grained [Option ID $=20491$ ]
4. Medium-grained [Option ID $=20490$ ]

Correct Answer :-

- Fine-grained [Option ID = 20489]

78) Magmas move upward because of their
[Question ID = 5113]
1. Higher mafic mineral content than the surrounding rocks [Option ID = 20451]
2. Higher viscosity than the surrounding rocks [Option ID $=20452$ ]
3. Higher silica content than the surrounding rocks [Option ID $=20450$ ]
4. Lower density and higher volatile content than the adjacent solid rocks [Option ID = 20449]

## Correct Answer :-

- Lower density and higher volatile content than the adjacent solid rocks [Option ID = 20449]

[^6]80) Which of the following generally have good cleavage and react with acid [Question ID = 5110]

1. Carbonates [Option ID $=20439]$
2. Oxides [Option ID $=20438$ ]
3. Sulphides [Option ID = 20440]
4. Silicates [Option ID $=20437$ ]

## Correct Answer :-

- Carbonates [Option ID = 20439]

81) Which of the following mineral commonly occurs in metapelites? [Question ID = 5111]
1. Augite [Option ID $=20442$ ]
2. Labradorite [Option ID = 20444]
3. Glaucophane [Option ID = 20441]
4. Muscovite [Option ID = 20443]

Correct Answer :-

- Muscovite [Option ID = 20443]

82) Which of the soil order listed below indicates advanced stage of weathering? [Question ID = 5046]
1. Oxisol [Option ID $=20182$ ]
2. Vertisol [Option ID = 20184]
3. Inceptisols [Option ID = 20183]
4. Entisols [Option ID $=20181$ ]

Correct Answer :-

- Oxisol [Option ID = 20182]

83) Which of the climatic zone will be marked by the least chemical weathering and the thinnest soil profiles? [Question ID = 5044]
1. Tropical rainforest [Option ID $=20173$ ]
2. Deciduous and evergreen forests [Option ID $=20174$ ]
3. Savannas [Option ID = 20176]
4. Tundra [Option ID $=20175$ ]

Correct Answer :-

- Tundra [Option ID = 20175]

84) Which one of the following current flows equatorward [Question ID = 5029]
1. East Australian current [Option ID $=20116$ ]
2. Humboldt current [Option ID = 20115]
3. Leeuwin Current [Option ID $=20113$ ]
4. Agulhas current [Option ID $=20114$ ]

## Correct Answer :-

- Humboldt current [Option ID = 20115]

85) Which one of the following ocean current is relatively different from other currents [Question ID = 5030]
1. California current [Option ID $=20118$ ]
2. West Australian current [Option ID $=20120$ ]
3. Kuroshio current [Option ID = 20119]
4. Circumpolar current [Option ID = 20117]

## Correct Answer :-

- Circumpolar current [Option ID = 20117]

86) Tungsten is mainly extracted in India from [Question ID $=5091$ ]
1. Rajasthan [Option ID = 20364]
2. Karnataka [Option ID = 20361]
3. Gujarat [Option ID $=20363$ ]
4. Kerala [Option ID $=20362$ ]
87) Amphibole and biotite are commonly absent in rocks of $\qquad$ facies [Question ID = 5120]
1. Blueschist [Option ID $=20480$ ]
2. Granulite [Option ID $=20479$ ]
3. Epidote-amphibolite [Option ID $=20478$ ]
4. Greenschist [Option ID = 20477]

## Correct Answer :-

- Granulite [Option ID = 20479]

88) Which mineral will be first to crystallize from a silicate melt [Question ID = 5105]
1. Biotite [Option ID = 20419]
2. Diopside [Option ID = 20417]
3. Quartz [Option ID = 20420]
4. Enstatite [Option ID = 20418]

Correct Answer :-

- Enstatite [Option ID = 20418]

89) Formation of clay minerals through weathering of feldspars is related to : [Question ID $=5041$ ]
1. Chelation [Option ID $=20164$ ]
2. Sheeting [Option ID = 20163]
3. Hydrolysis [Option ID $=20162$ ]
4. Thermal expansion [Option ID $=20161$ ]

## Correct Answer :-

- Hydrolysis [Option ID = 20162]

90) Formation of permanent ice sheets over Antarctic region began at: [Question ID = 5051]
1. Late Oligocene [Option ID $=20203$ ]
2. Palaeocene [Option ID = 20201]
3. Early Eocene [Option ID $=20202$ ]
4. Early Oligocene [Option ID $=20204$ ]

## Correct Answer :-

- Early Oligocene [Option ID = 20204]

91) Which is the most common ore of lead? [Question ID = 5090]
1. Bauxite [Option ID $=20360$ ]
2. Sphalerite [Option ID = 20357]
3. Galena [Option ID $=$ 20358]
4. Chromite [Option ID = 20359]

## Correct Answer :-

- Galena [Option ID = 20358]

92) According to Anderson's theory of faulting, the Earth's surface is assumed as a plane of : [Question ID = 5071]
1. Principal strain [Option ID $=20281$ ]
2. Principal stress [Option ID $=20282$ ]
3. Maximum shear strain. [Option ID $=20284$ ]
4. Maximum shear stress [Option ID $=20283$ ]

## Correct Answer :-

- Principal stress [Option ID $=20282]$

93) Slickenside striations on a fault plane have a pitch of $90^{\circ}$. The fault is: [Question ID =5067]
1. an oblique-slip fault [Option ID $=20267$ ]
2. none of the above. [Option ID $=20268$ ]
3. a strike-slip fault [Option ID $=20266$ ]
4. a dip-slip fault [Option ID = 20265]
94) If, in a folded layered sequence, thinner layers show smaller folds and thicker layers show larger folds, the fold structure will be called: [Question ID = 5074]
1. polyclinal fold [Option ID $=20295$ ]
2. arrowhead fold [Option ID = 20294]
3. disharmonic fold [Option ID = 20293]
4. fan fold [Option ID $=20296]$

Correct Answer :-

- disharmonic fold [Option ID = 20293]

95) The arrangement of terrain features which provides attributes e.g. the shape, size and texture of objects, is called:
[Question ID = 5101]
1. Temporal variation [Option ID $=20403$ ]
2. Spatial variation [Option ID $=20402$ ]
3. Spectral variation [Option ID $=20401$ ]
4. None of these [Option ID = 20404]

Correct Answer :-

- Spatial variation [Option ID $=20402$ ]

96) The two limbs of a fold, when plotted as planes on a stereographic projection, intersect each other twice - both the intersection points lying on the periphery of the stereonet, diametrically opposite to each other. The fold is
[Question ID = 5077]
1. a horizontal (non-plunging) fold [Option ID = 20306]
2. none of these. [Option ID = 20308]
3. a reclined fold [Option ID $=$ 20305]
4. a steeply plunging fold [Option ID $=20307]$

Correct Answer :-

- a horizontal (non-plunging) fold [Option ID = 20306]

97) The dihedral angle between an inclined plane and any horizontal plane is called:
[Question ID = 5076]
1. heave [Option ID = 20303]
2. dip [Option ID = 20302]
3. none of these. [Option ID = 20304]
4. hade [Option ID $=20301$ ]

Correct Answer :-

- dip [Option ID = 20302]

98) The Palaeocene-Eocene Thermal Maxima was related to a rise of average temperature by:
[Question ID = 5050]
1. $10-20^{\circ} \mathrm{C}$ [Option ID $=20199$ ]
2. $20-30^{\circ} \mathrm{C}$ [Option ID $=20198$ ]
3. $0^{\circ} \mathrm{C}$ [Option ID $\left.=20197\right]$
4. $5-8^{\circ} \mathrm{C}$ [Option ID $=20200$ ]

Correct Answer :-

- $5-8^{\circ} \mathrm{C}$ [Option ID $=20200$ ]

99) The point of origin of an earthquake below the earth's surface is called [Question ID = 5099]
1. Isopoint [Option ID = 20394]
2. Focus [Option ID = 20395]
3. Isocentre [Option ID = 20393]
4. Epicentre [Option ID $=20396$ ]
```
- Focus [Option ID = 20395]
100) Calcite Compensation in the Atlantic ocean is at higher depth than that in the Pacific ocean, because
[Question ID = 5059]
1. Atlantic Ocean is deeper than Pacific ocean [Option ID = 20233]
2. Surface productivity in the Atlantic Ocean is higher than that in the Pacific ocean [Option ID = 20234]
3. There is less hydrothermal action in the Atlantic ocean compared to the Pacific Ocean [Option ID = 20235]
4. Mineralogy of carbonate sediments is different between the two oceans [Option ID = 20236]
```

Correct Answer :-

- Surface productivity in the Atlantic Ocean is higher than that in the Pacific ocean [Option ID = 20234]


[^0]:    6) Gutter cast is
[^1]:    19) The Bushveld Complex represents world's largest reserve of
[^2]:    24) Law of constancy of interfacial angles is also known as
[^3]:    Correct Answer :-

[^4]:    44) Gingko is a
    [Question ID = 5062]
    1. living fossil [Option ID = 20246]
    2. vertebrate fossil [Option ID $=20248$ ]
    3. invertebrate fossil [Option ID $=$ 20247]
    4. index fossil [Option ID $=20245$ ]
[^5]:    Correct Answer :-

[^6]:    79) Overturned cross-stratification is formed when
    [Question ID = 5057]
    1. A cross-stratified sand bed is penecontemporaneously liquefied and operation of overriding bed-hugging current occurs [Option ID $=20227$ ]
    2. A cross-stratified sand bed is penecontemporaneously liquefied [Option ID $=20226$ ]
    3. A cross-stratified sand bed suffers overturned folding [Option ID $=20228$ ]
    4. A sand bed is liquefied [Option ID $=20225$ ]
