UGC NET - ENVIRONMENTAL SCIENCE

MOCK TEST PAPER

PAPER - III

- *This paper contains 75 objective type questions*
- *Each question carries 2 marks.*
- *Attempt all the questions.*
- *Pattern of questions : MCQs*
- *Total marks : 150*
- *Duration of test : 2.5 Hours*

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PAPER – III

1. Griffithides belongs to

(A) Cambrian

(B) Ordovician

(C) Silurian

(D) Carboniferous

2. The twin- sun theory of the origin of the earth was advanced by

(A) Fred Hoyle

(B) Jeans and Jeffrey's

(C) Kuliper

(D) Von Schmidt

3. Relict oceanic crust is represented by

(A) Tholeiite

(B) Ophiolite

(C) Tektite

(D) None

4. Polarity reversals of the earth occur once in every

(A) 10 M.Y

(B) 100 M.Y

(C) 1 M.Y

(D) 11 M. Y

5. Contemporary volcanism and sedimentation is a characteristic of

(A) Eugeosyncline

(B) Miogeosyncline

(C) Parageosyncline

(D) Tephrageosyncline

6. When axial planes of folds dip directly down the axial surface they are termed as

(A) Homoclines

(B) Generative folds

(C) Accordion fold

(D) Reclined fold

7. Straight hinge line without ears is represented by the lamellibranch

(A) Pectin

(B) Exogyra

(C) Arca

(D) Unio

8. A cavity lined with minerals identical with those of the host rock is called

(A) Geode

(B) Agate

(C) Druse

(D) Septarian

9. Pink interference colours are typical to

(A) Garnet

(B) Augite

(C) Sphene

(D) Aegirine

10. Vindhyans occupy the time period between

(A) 1400 - 900 M.Y

(B) 900 - 570 M.Y

(C)1600 - 900 M.Y

(D) 2500 - 1600 M.Y1

11. Country rocks for Bauxite in Katni area are

(A) Vindhyans

(B) Gondwanas

(C) Deccan trap

(D) Precambrian

12. Tectonic disturbance is associated with

(A) Orthoconglomerate

(B) Paraconglomerate

(C) Petromict conglomerate

(D) Intraformational conglomerate

13. The end product of fractional crystallisation of a Basaltic magma is

(A) Gabbro

(B) Granite

(C) Dolerite

(D) Diorite

14. The most common minerals of banded iron ore are

(A) Magnetite and Haematite

(B) Haematite and Jasper

(C) Haematite and chert

(D) Magnetite and Chert

15. In a plunging fold where both bedding and cleavage dip in the same direction but cleavage shows gentle dips than bedding, the rocks are

(A) Right side up

(B) Overturned

(C) Cannot be determined

(D) Inclined

16. Back - arc basins are ..... Geosyncline

(A) Andean

(B) Meriterarrenean

(C) Himalayan

(D) Japan sea

17. Largest gravity anomalies are recorded at

(A) MOR

(B) Trenches

(C) Island arcs

(D) Continental rift basin

18. Surface manifestations of mantle plumes are

(A) MOR/ Arc

(B) Seamount/ MOR

(C) Seamount/ Volcanic islands

(D) None of the above

19. Oceanic ridges are called are oceanic ridges when they are

(A) Spreading centres

(B) Extinct

(C) Bounded by Volcanoes

(D) Seismically active

20. Blanket sands are associated with

(A) Quartz - arenite

(B) Arkoses

(C) Graywackes

(D) Calc – arennite

21. Rocks in which modal olivine exceeds 90% are termed

(A) Kimberlite

(B) Saxonite

(C) Websterite

(D) Dunite

22. The eutectic proportion 42 : 58 belongs to

(A) Orthoclase : Albite

(B) Orthoclase : Quartz

(C) Diopside : Enstatite

(D) Anorthite : Olivine

23. The two leading solvents in supergene enrichment are

(A) Ferric sulphate / Ferrous sulphate

(B) Ferrous sulphate / Sulphuric acid

(C) Ferric sulphate / Sulphuric acid

(D) Nitric acid / Sulphuric acid

24. Gold in Wynaad Gold field is associated with

(A) Amphibolites

(B) Pegmatites

(C) Hornblend - schist

(D) Iron Pyrites

25. The biggest linear basin of the Dharwar type in India is

(A) Sandur

(B) Shimoga

(C) Chitradurga

(D) Singhbhum

26. Magmatic carbonates are termed

(A) Carbonatites

(B) Kimberlites

(C) Komatiite

(D) Harzburzite

27. Porphyritic granites rich in orthoclase are called

(A) Adamellites

(B) Aplites

(C) Rapakivi texture

(D) Monazites

28. Skew twins are associated with

(A) Columbite

(B) Fluorite

(C) Calcite

(D) Staurolite

29. Channel bars indicate

(A) Graded streams

(B) Valley flats

(C) Braided streams

(D) Flood plains

30. The present day atmosphere and ocean are result of

(A) Cosmic precipitation

(B) Volcanic exhalation

(C) Primordial ocean and atmosphere evolution

(D) None of the above

31. When two continental plate weld, it is described as

(A) Suture zone

(B) Andesite line

(C) Island arc

(D) Subduction zone

32. The oldest sediments are of the age

(A) 100 mya

(B) 200 mya

(C) 2000 mya

(D) 400 mya

33. The body chamber filled with gas (air) in cephalopods is called

(A) Phragmacone

(B) Gyrocone

(C) Septa

(D) Siphuncle

34. The Gondwana flora belonging to Parzora stage is

(A) Schizoneura

(B) Phyllotheca

(C) Noegeropthiosis

(D) Gangamopteris

35. An objective of environmented audit is

(A) Raw material & waste minimization

(B) Energy conservation & monitoring

(C) To improve technical competency

(D) All of the above

36. Which of the following gastropods show both dextral and sinistral coiling?

(A) Physa

(B) Murex

(C) Fusina

(D) Helix

37. The earliest trilobites are characterised by

(A) A large pygidium

(B) Primitive condition of eyes

(C) Absence of genal angle

(D) Presence of genal angle

38. The main part of the echinoid test containing numerous plates is described as

(A) Peristome

(B) Apical angle

(C) Corona

(D) None of the above

39. The cretaceous period is marked by

(A) Disappearance of certain vertebrates

(B) Appearance of flowering plants

(C) Disappearance of flowering plants

(D) None of the above

40. The reservoir of Bombay High oil field is in

(A) Limestones

(B) Sandstones

(C) Shales

(D) None of the above

41. Which of the following is not a place for the occurrence of diamond?

(A) Golconda

(B) Rewa

(C) Panna

(D) Sivalik

42. Which of the following is used in steel hardening?

(A) Maganese

(B) Chromium

(C) Nickel

(D) Zinc

43. Indian iron and maganese deposits are mostly found in

(A) Palaeozoic

(B) Precambrian

(C) Mesozoic

(D) Cenozoic

44. East coast bauxite is mostly found in

(A) A.P

(B) Orissa

(C) A.P and Orissa

(D) A.P, Orissa and Tamilnadu

45. Assay value of gold is calculate in

(A) Percentage

(B) Gm / tonne

(C) Parts per million

(D) Any of the above

46. The most extensive felsic magnetism during the Vindhyan time was

(A) Malani volcanic

(B) Dras volcanic

(C) Bhimtal volcanic

(D) Deccan volcanic

47. Hipparian had

(A) 5 toes

(B) 2 toes

(C) 4 toes

(D) 1 toes

48. Rajmundry Sandstones and Cuddalore Sandstones are equivalents of

(A) Siwaliks

(B) Vindhyans

(C) Karewas

(D) Kurnools

49. The Precambrian boundary in Kashmir is located

(A) Above lolab Formation

(B) Below lolab Formation

(C) In the middle of lolab Formation

(D) None of the above

50. Diesal oil is a fraction obtained between

(A) 40-120 °C

(B) 180-250 °C

(C) 250 – 320 °C

(D) 280 – 360 °C

51. The formation Coral Limestone is found in

(A) Lower Baghs

(B) Upper Baghs

(C) Badhora beds

(D) None of the above

52. Magnesite deposits are commonly associated with

(A) Sandstones and Quartzites

(B) Peridotites and limestone/ dolomite

(C) Ultrabasic rocks only

(D) Granites and granodiorites

53. The most favourable sites for placer deposits are

(A) Upper reaches

(B) Lower reaches

(C) Middle reaches

(D) None of the above

54. Which of the following are the calcareous rocks associated with thermal metamorphism?

(A) Skarn

(B) Calcirudites

(C) Carbonatites

55. When the last whorl is so large that it covers all the other whorls, the condition is said to be

(A) Convolute

(B) Planispiral

(C) Globular

(D) Helicoidal

56. Absence of brachial skeleton and presence of pedicle opening on the ventral valve is typical of

(A) Atremata

(B) Neotremata

(C) Protremata

(D) Teletremata

57. Madreporic plate is a/an

(A) Genital plate

(B) Ocular plate

(C) Ambulacral plate

(D) Inter - ambulacral plate

58. Lepidodendron flora is

(A) Absent in lower Gondwana of India

(B) Present in lower Gondwanas of India

(C) Absent in Gondwanas of India as a whole

(D) Recorded in the upper Gondwanas of India

59. If Andesite undergoes weathering it will give rise to

(A) Greywacke

(B) Orthoquartzite

(C) Arkose

(D) Calcarenite

60. Feldspar is absent in

(A) Gondite

(B) Kodurite

(C) Khondalite

(D) Charnockite

61. The sharpest transition or inversion point occurs between

(A) Alpha quartz and beta quartz

(B) Tridymite and cristobalite

(C) Quartz and tridymite

(D) Quartz and cristobalite

62. The most common alteration product of plagioclase feldspars is

(A) Epidote

(B) Scapolite

(C) Chlorite

(D) Mica

63. Epidote shows an elongation along b- axis because it crystallises in

(A) Orthorhombic system

(B) Monoclinic system

(C) Triclinic system

(D) Tetragonal system

64. The age of Lignite deposits of Palana in Rajasthan is

(A) Miocene

(B) Eocene

(C) Oligocene

(D)Pliocene

65. If a tourmaline plate is placed over a dot the observer sees two dots, this is due to

(A) refraction

(B) reflection

(C) double refraction

(D) polarization

66. The approximate density of the Earth is

(A) 5.5

(B) 5.8

(C) 5.1

(D) 5.2

67. In a trickling filter biological method of domestic waste treatment a layer of biological community growing on the substrate is

(A) Algal film

(B) Bacterial layer

(C) Protozon community

(D) Zoogloea film

68. Which of the following is a fresh water lake?

(A) Wular

(B) Chilka

(C) Pulicat

(D) Dal

69. Calcium carbonate is generally formed due to

(A) Evaporation of water

(B) Precipitation

(C) Loss of CO_2

(D) All of the above

70. Which of the following is associated with subduction zones?

(A) Blueschists

(B) Amphibolites

(C) Eclogites

(D) Graywackes

71. Which of the following minerals exhibit 4 sets of joints?

(A) Galena

(B) Sphalerite

(C) Leucite

(D) Wavellite

72. The joints are perpendicular to the axial planes of fold axial planes of folds are described as

(A) Cross joint

(B) Strike joint

(C) Dip joint

(D) Diagonal joint

73. Sabal major is associated with

(A) Subathu

(B) Dagshai

(C) Kasauli

(D) Garbyang

74. Nummulites fossils are found in

(A) Subathu

(B) Dagshai

(C) Kasauli

(D) Shali

75. Cumbum phylites form a part of

(A) Cuddapah

(B) Kaurnools

(C) Vindhyans

(D) Bhaimas

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Answer	D	A	B	C	A	D	C	C	C	B	B	D	D	C	B	D	B	C	D	A
Question	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Answer	D	A	C	D	A	A	C	D	C	B	A	B	A	C	D	A	B	C	A	A
Question	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	D	A	B	C	B	A	B	A	C	C	B	B	A	A	A	B	A	C	A	A
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75					
Answer	A	B	B	B	C	A	A	A	A	A	A	A	C	A	A					

HINTS AND SOLUTION

1.(D) The Carboniferous Period lasted from about 359.2 to 299 million years ago* during the late Paleozoic Era. Griffithides belongs to Carboniferous.

2.(A) The twin- sun theory of the origin of the earth was advanced by Fred Hoyle. **Sir Fred Hoyle** FRS was an English astronomer noted primarily for his contribution to the

theory of stellar nucleosynthesis and his often controversial stance on other cosmological and scientific matters.

3.(B) Relict oceanic crust is represented by Ophiolite.An **ophiolite** is a section of the Earth's oceanic crust and the underlying upper mantle that has been uplifted and exposed above sea level and often emplaced onto continental crustal rocks. Moores and Vine concluded that the sheeted dike complex at To-dos could only form by a process similar to the seafloor spreading proposed by Vine and Matthews. Thus, it became widely accepted that ophiolites represent relict oceanic crust that had been emplaced on land.

4.(C)

A **geomagnetic reversal** is a change in the Earth's magnetic field such that the positions of magnetic north and magnetic south are interchanged. The Earth's field has alternated between periods of *normal* polarity, in which the direction of the field was the same as the present direction, and *reverse* polarity, in which the field was the opposite. These periods are called*chrons*. The time spans of chrons are randomly distributed with most being between 0.1 and 1 million years with an average of 450,000 years.

5.(A) Contemporary volcanism and sedimentation is a characteristic of Eugeosyncline. **Eugeosyncline.:-**A former marine zone, bordering an ocean basin, marked by very thick deposits of sediment in which the products of volcanic activity are associated with clastic sediments.

6.(D) Reclined folds: axes plunge at nearly same angle as the dip of the axial surface, plunge of the axis normal or at high angle to the strike of the axial plane.

7.(C) Straight hinge line without ears is represented by the lamellibranch Arca.

8.(C) Druses are small cavities that are lined with crystals of the same minerals that are found in the host rock. “Druse” may also refer to a surface carpeted with crystals, one with a drusy texture. The word is from German.

9.(C) Sphene: Very high positive relief. Typically shades of brown in thin section, less commonly colorless or yellow. Non- to weakly pleochroic in thin section; color and pleochroism more distinct in grain mount.

10.(B) Vindhyans occupy the time period between 900 - 570 M.Y.

11.(B) Country rocks for Bauxite in Katni area are Gondwanas. **Katni** (also known as **Murwara (Katni)** or **Mudwara**) is a town on the banks of the Katni River in Madhya Pradesh, India. he city has an abundance of lime and bauxite. It also has Ordnance Factory Katni of theOrdnance Factories Board which maufactures products for the Indian Armed Forces.

12.(D) Tectonic disturbance is associated with Intraformational conglomerate.

13.(D) The end product of fractional crystallisation of a Basaltic magma is Diorite. **Diorite** is a grey to dark grey intermediate intrusive igneous rock composed principallyof plagioclase feldspar (typicallyandesine), biotite, hornblende, and/or pyroxene. It may contain small amounts of quartz, microcline and olivine. Zircon, apatite, sphene,magnetite, ilmenite and sulfides occur as accessory minerals

14.(C) **Banded iron formations** (also known as **banded ironstone formations** or **BIF**s) are distinctive units of sedimentary rock that are almost always f Precambrian age.

A typical BIF consists of repeated, thin layers (a few millimeters to a few centimeters in thickness) of silver to black iron oxides, eithermagnetite (Fe_3O_4) or hematite (Fe_2O_3), alternating with bands of iron-poor shales and cherts, often red in color, of similar thickness, and containing microbands (sub-millimeter) of iron oxides.

15.(B) In a plunging fold where both bedding and cleavage dip in the same direction but cleavage shows gentle dips than bedding, the rocks are Overturned.Overturned fold--a fold in which the axial plane is tilted and beds may dip in same direction on both sides of the axial plane

16.(D) Back - arc basins are Japan Sea Geosyncline **Back-arc basins** are geologic features, submarine basins associated with island arcs and subduction zones. They are found at some convergent plate boundaries, presently concentrated in the Western Pacific ocean.

17.(B) Largest anomalies are associated with the trenches

- 10 km deep and filled with water rather than rock
- Not compensated as they are being loaded down dip

18.(C) Surface manifestations of mantle plumes are Seamount/ Volcanic islands.
Hotspots can be regarded as the surface manifestation of mantle plumes. The main characteristic features of the hotspots are their volcanism, topographic, geoid and heat flow anomalies.

19.(D) Oceanic ridges are called are oceanic ridges when they are Seismically active.
A Oceanic **ridge** is a general term for an underwater mountain system that consists of various mountain ranges (chains), typically having a valley known as a rift running along its spine, formed by plate tectonics.

20.(A)
Quartz arenites are usually white, but they may be any other colour; cementation by hematite, for example, makes them red. Characteristically, they are ripple-marked or cross-bedded and occur as widespread thin blanket sands.

21.(D)
Dunite is an igneous, plutonic rock, of ultramafic composition, with coarse-grained or phaneritic texture. The mineral assemblage is greater than 90% olivine, with minor amounts of other minerals such as pyroxene, chromite and pyrope. Dunite is the olivine-rich end-member of the peridotite group of mantle-derived rocks.

22.(A) The calculated average percentage by volume is 52 percent orthoclase to 48 percent albite- that is, 51 parts by weight of orthoclase to 49 parts of albite.

23.(C)
One of the more important ore-forming processes in which microbial action might play an important role is supergene enrichment. It occurs when relatively poor sulfide mineral deposits lie partly within the zone of oxidation above the water table and partly below the water table where molecular oxygen is excluded in the hypogene zone.Iron sulfide minearals in the zone of oxidation are oxidized to sulfuric acid and ferric sulfate.

24.(D)
Gold in Wynaad Gold field is associated with Iron Pyrites. The mineral **pyrite**, or **iron pyrite**, also known as **fool's gold**, is an iron sulfide with the formula FeS_2.

This mineral's metallic lusterand pale brass-yellow hue give it a superficial resemblance to gold, hence the well-known nickname of *fool's gold*. The color has also led to the nicknames *brass*, *brazzle*, and *Brazil*, primarily used to refer to pyrite found in coal

25.(A)

The Western Dharwar craton, a typical Archean lowgrade terrain, is characterized by the mature sediment-dominated greenstone belt of the Dharwar type. Two main divisions, viz. the older igneous Bababudan group and the Chitradurga group composed of conglomerates, quartzites, limestones, greywackes and associated manganiferous and ferruginous cherts, are identified. These group of sediments are deposited in three basins : the Shimoga, the Chitradurga and the Sandur basins. Banded

26.(A) Magmatic carbonates are termed Carbonatites
Carbonatites are intrusive or extrusive igneous rocks defined by mineralogic composition consisting of greater than 50 percent carbonate minerals.[1] Carbonatites may be confused with marble, and may require geochemical verification.

27.(C) Porphyritic granites rich in orthoclase are called Rapakivi texture. It is an igneous and metamorphic rock texture in which spherical potassium feldspar crystals are surrounded by a rim of sodium feldspar, both within a finer-grained matrix.

28.(D) Skew twins are associated with Staurolite. **Staurolite** is a red brown to black, mostly opaque, nesosilicate mineral with a white streak. It crystallizes in the monoclinic crystal system, has a Mohs hardness of 7 to 7.5 and a rather complex chemical formula:
$Fe^{2+}_2Al_9O_6(SiO_4)_4(O,OH)_2$. Magnesium, zinc andmanganese substitute in the iron site and trivalent iron can substitute for aluminium.

29.(C) A braided river is one of a number of channel types and has a channel that consists of a network of small channels separated by small and often temporary islands called braid bars or, in British usage, *aits* or *eyots*. Braided streams occur in rivers with high slope and/or large sediment load. Braided channels are also typical of environments that dramatically decrease channel depth, and consequently channel velocity, such as river deltas, alluvial fans and peneplains.

30.(B) The present day atmosphere and ocean are result of Volcanic exhalation. A volcanic exhalation is an emission of gas or ash from a vent in a relatively short burst. The most striking example of a volcanic exhalation were the emissions of gas (smoke) rings from Mt Etna in 2000.

31.(A) Suture zone is the area where two continental plates have joined together through continental collision. Suture zones are marked by extremely high mountain ranges, such as the Himalayas and the Alps.

32.(B) Sediment is a naturally occurring material that is broken down by processes of weathering and erosion, and is subsequently transported by the action of wind, water, or ice, and/or by the force of gravity acting on the particle itself. The age of the oldest sediments recovered by deep-ocean drilling is about 200 million years old.

33.(A)

The **phragmocone** is the chambered portion of the shell of a cephalopod. It is divided by septa into camerae.In most nautiloids and ammonoids, the phragmocone is a long, straight, curved, or coiled structure, in which the camarae are linked by a siphuncle which determines buoyancy by means of gas exchange.

34.(C) Gondwana flora were plants that evolved in Gondwana. Some of them are extinct but many have living descendents. Examples of Gondwana Flora are Proteaceae, Nothofagus and Myrtaceae. The Gondwana flora belonging to Parzora stage is Noegeropthiosis.

35.(D) Environmental auditing is a process whereby an organisation's environmental performance is tested against its environmental policies and objectives.
An objective of environmented audit is

- Raw material & waste minimization

- Energy conservation & monitoring
- To improve technical competency

36.(A) **Physa** is a genus of small, left-handed or sinistral, air-breathing freshwater snails, aquatic pulmonate gastropod mollusks in the family Physidae.These snails eat algae, diatoms and detritus. Physa gastropods show both dextral and sinistral coiling.

37.(B) Trilobite eyes were typically compound, with each lens being an elongated prism.The number of lenses in such an eye varied: some trilobites had only one, while some had thousands of lenses in a single eye. In compound eyes, the lenses were typically arranged hexagonally.The fossil record of trilobite eyes is complete enough that their evolution can be studied through time, which compensates to some extent the lack of preservation of soft internal parts.

38.(C)

Corona is a major part of skeleton that contains joined calcareous plates in shape f globule. The skeleton contains two aperture (pore) that is located in two against polles: one aperture that is named peristom with surround plate totally & is located in center of lover surface & another one is annulus & surround plates which are named periproct totally & are located in center of upper surface. Corona contains 20 plate row (10 pair row) that five paire rows from big plates form interanbulacrum region & five pair rows of small plates of region in name of region in name of ambulacrum.

39.(A)

The cretaceous period is marked by disappearance of certain vertebrates .The Cretaceous is usually noted for being the last portion of the "Age of Dinosaurs", but that does not mean that new kinds of dinosaurs did not appear then. It is during the Cretaceous that the first ceratopsian and pachycepalosaurid dinosaurs appeared.

40.(A)

Different oil and gas reservoirs namely, L-I, L-II, L-III, L-IV, L-V, basal clastics and fractured basement from top to bottom are present on the Mumbai High project field. L-II and LIII are primarily the limestone oil reservoirs of Miocene age, further classified into several layers.Bombay High has in place around 1,659 million tons of total reserves.

41.(D) Sivalik Hills are the range of the southern Himalaya Mountains extending about 1,689 km (1,050 mi) from southwest Kashmir through northern India into southern Nepal. The hills are noted for their extensive fossil remains. Sivalik is not a place for the occurrence of diamond is not a place for the occurrence of diamond.

42.(A) **Mangalloy**, also called **manganese steel** or **Hadfield steel**, is a steel alloy containing an average of around 13% manganese. Mangalloy is known for its high impact strength and resistance to abrasion once in its work-hardened state.Maganese is used in steel hardening.

43.(B) Precambrian rocks are enriched in manganese and iron ore which represents a significant resource of these metals. They are also extensively mineralised with gold most notably the Kolar gold mines located in Kolar.

44.(C) The important bauxite deposits occur with the 'high level' laterites in the following four regions of dissected table lands viz.
(1) The Eastern Ghats Orissa and Andhra Pradesh (East Coast Bauxite Belt)
(2) Plateaus bordering Bihar and Madhya Pradesh
(3) Maikala range of Madhya Pradesh (Amarkantak deposits)
(4) The Western Ghats

45.(B) Assay ton is a specialized unit of mass used by mineralogists in assaying (testing) ores for the presence of gold, silver, platinum, uranium, or other valuable metals. One assay ton equals 29.1667 grams. Assay value of gold is calculate in Gm / tone.

46.(A) The most extensive felsic magnetism during the Vindhyan time was Malani volcanic.

47.(B)

Hipparion was one of the most successful prehistoric horses of the Miocene epoch, evolving in North America about 20 million years ago and spreading as far afield as Africa and eastern Asia. To the untrained eye, Hipparion would have appeared almost identical to the modern horse (genus name Equus), with the exception of the two vestigial toes surrounding the single hooves on each of its feet.

48.(A) Rajmundry Sandstones and Cuddalore Sandstones are equivalents of Siwaliks.

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49.(C) The Precambrian boundary in Kashmir is located In the middle of lolab Formation.

50.(C) Diesal oil is a fraction obtained between 250-320 °C

51.(B) Limestone is a sedimentary rock composed mainly of calcium carbonate (CaCO3), usually calcite, sometimes aragonite. Additionally it may contain considerable amounts of magnesium carbonate (dolomite). Many limestones are formed by the deposition and consolidation of the skeletons of marine invertebrates.If limestones are built up from corals and coral fragments, they are called coral limestones. The formation Coral Limestone is found in upper baghs.

52.(B) Magnesite can be formed via talc carbonate metasomatism of peridotite and other ultrabasic rocks. Magnesite can also be formed by way of metasomatism in skarn deposits, in dolomitic limestones, associated with wollastonite,periclase, and talc.

53.(A) Placer minerals are transported up the beach in the swash where the backwash is only strong enough to remove lighter minerals, and thus they concentrate generally on the upper reaches of the beach.

54.(A) **Skarn** are the calcareous rocks associated with thermal metamorphism **.Skarn** is an old Swedish mining term originally used to describe a type of silicate gangue, or waste rock, associated with iron-ore bearing sulfide deposits apparently replacing Palaeoproterozoic age limestones in Sweden's Persberg mining district.

55.(A)

When the last whorl is so large that it covers all the other whorls, the condition is said to be convolute. It commonly refers to a special class of imbricate structures — those where the overlapping edges of leaves, scales or similar elements are spirally wrapped, each scale having one edge within the previous scale and one outside the next scale.

56.(B) Absence of brachial skeleton and presence of pedicle opening on the ventral valve is typical of Neotremata. Neotremata is an order of inarticulate brachiopods that have the peduncle restricted throughout life to the ventral valve or atrophied in the adults and are known from the Cambrian to the present.

57.(A) Madreporic plate is a/an Genital plate. Genital plate is the ventral plate on the tip of the grasshopper's abdomen; the cerci and genital structures are attached to or near this plate.

58.(C) Lepidodendron is an extinct genus of primitive (tree-like) plant. They were the first large land plants, and a major part of the coal forest tropical flora. It is absent in Gondwanas of India as a whole because the land level was raised by the pressure of the Gondwana continent against Laurussia, causing the zone of contact to be raised.

59.(A) If Andesite undergoes weathering it will give rise to Greywacke.

60.(A) Feldspar is absent in Gondite .

61.(A) The sharpest transition or inversion point occurs between Alpha quartz and beta quartz.

62.(B) Scapolite is actually a very common series of various minerals, but most deposits yield opaque material with little to no gemstone value. Scapolite is known to form in metamorphosed rocks as an alteration of plagioclase feldspar.

63.(B) Epidote shows an elongation along b- axis because it crystallises in Monoclinic system.

64.(B) The age of Lignite deposits of Palana in Rajasthan is Eocene.

65.(C) If a tourmaline plate is placed over a dot the observer sees two dots, this is due to double refraction.

66.(A) The approximate density of the Earth is 5.5.

67.(A) In a trickling filter biological method of domestic waste treatment a layer of biological community growing on the substrate is Algal film.

68.(A) Wular is a fresh water lake.

69.(A) Calcium carbonate is generally formed due to Evaporation of water.

70.(A) Blueschists is associated with subduction zones.

71.(A) Galena minerals exhibit 4 sets of joints.

72.(A) The joints are perpendicular to the axial planes of fold axial planes of folds are described as Cross joint.

73.(C) Sabal major is associated with Kasauli.

74.(A) Nummulites fossils are found in Subathu.

75.(A) Cumbum phylites form a part of Cuddapah.